



Faculty of Engineering and Technology

Urban Planning and Landscape Architecture Master Program

# **Land registration as a tool for urban development and urban planning (a case from Palestine).**

تسجيل الأراضي كأداة للتطوير الحضري والتخطيط العمراني (حالة دراسية من فلسطين).

This Thesis was submitted in partial fulfillment of the requirements for the master's degree in Urban Planning and Landscape Architecture from the Faculty of Graduate Studies at Birzeit University, Palestine

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*Dedicated to my precious husband, my  
beautiful children, my beloved parents, and my  
gorgeous brothers and sisters...*

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## List of Abbreviations:

(LWSC).....	Land and Water Settlement Commission
(FIG) .....	Fédération Internationale des Géomètres
(GIS) .....	Geographic Information Systems
(IT) .....	Information Technology
(GPS) .....	Global Positioning Systems
(UN) .....	United Nations
(FAO) .....	Food and Agriculture Organization
(LAS) .....	Land Administration System
(LIS) .....	Land Information Systems
(LIM) .....	Land Information Management
(RMA) .....	Resources Management Act
(DBMS) .....	Data Base Management System
(TPO) .....	Town Planning Ordinance
(MG) .....	Military Government
(MO) .....	Military Order
(HPC) .....	High Planning Council

## Abstract

The land registration process is a very important issue that plays an important role in the country's development process. Since ancient history, humans realized the importance of proving land ownership and proving properties. Thus, the land registration process played an important role in different aspects of the society's development.

Various changes through history have led to the emergence of social, economic, environmental, and political concepts that have greatly affected the land registration process. These changes have affected the land registration process to be a multiple purpose process. The urban development process and urban planning are among many issues that were greatly affected by the land registration process.

In Palestine, the land has remained a sentimental issue for a long time. Many lands in Palestine has not been legally registered with proper and clear ownership titles due to historic, legalistic, and political reasons. During the various regimes that passed on Palestine to the period that followed Oslo Accord, the process of registering lands in Palestine was subjected to many developments and changes that eventually led to register many of the Palestinian lands. This, in turn, has affected the development of the land sector, the exploitation of land resources and land use process. After several land registration projects that were implemented between 2007- 2013, there was an urgent need for improving the land registration process in Palestine. So, in 2016 a new projects and procedures for land registration process were implemented through the enactment of different legislations and setting up new institutional frameworks and procedures.

This research focuses on studying the land registration process in Palestine. The traditional task of the land registration process is to register land and prove ownership. While this research aims to

shed light on the development of the traditional function of the land registration process into a multi-purpose process, and it has focused in particular on its impact on the urban development process and urban planning in the West Bank after 2016.

The case study approach has been adopted to study and analyse the study sites in Palestine, which included two of the first projects that were implemented for the new land registration process, it included Abu Falah village and Bil'in village.

A lot of old and new cadastral maps were analysed, in addition to conducting multiple interviews, field visits, and collecting various information from several theoretical studies. This method helped develop integrated awareness of the land registration process and define its impact on the urban development and urban planning process in Palestine.

Finally, this study has demonstrated that the process of land registration in the West Bank after 2016 has contributed to a major transformation in the development of land sector. A set of guidelines for land registration procedures have been established for the registration of lands in Palestine. In addition, it has created a land information database that will assist in the decision-making process now and in the future. It also contributed to developing infrastructure, improving investments, and land markets. As a result, this research proved that the land registration process played an important role to create social, economic, political tools to improve urban development and urban planning in Palestine so far.

## Abstract in Arabic

تعتبر عملية تسجيل الأراضي منذ التاريخ القديم قضية مهمة للغاية، وتساهم في لعب دورًا مهمًا في عملية تنمية البلدان. لقد أدرك البشر أهمية إثبات ملكية الأرض وإثبات الممتلكات والحقوق. وبالتالي لعبت عملية تسجيل الأراضي دورًا مهمًا في الجوانب المختلفة لتنمية المجتمع.

أدت التغييرات المختلفة عبر التاريخ إلى ظهور مفاهيم اجتماعية واقتصادية وبيئية وسياسية أثرت بشكل كبير على عملية تسجيل الأراضي. وقد أثرت هذه التغييرات على عملية تسجيل الأراضي لتكون عملية متعددة الأهداف. تعد عملية التنمية الحضرية والتخطيط الحضري من بين العديد من القضايا التي تأثرت بشكل كبير بعملية تسجيل الأراضي.

في فلسطين، ظلت الأرض قضية حساسة لفترة طويلة. فلم يتم تسجيل العديد من الأراضي في فلسطين بشكل قانوني بألقاب ملكية واضحة لأسباب تاريخية وقانونية وسياسية. خلال الأنظمة المختلفة التي مرت بفلسطين حتى الفترة التي تلت اتفاق أوسلو، تعرضت عملية تسجيل الأراضي في فلسطين للعديد من التطورات والتغييرات التي أدت في النهاية إلى تسجيل العديد من الأراضي الفلسطينية. وقد أثر هذا بدوره على تطوير قطاع الأراضي، واستغلال موارد الأراضي وعملية استخدام الأراضي. بعد تنفيذ عدد من مشاريع تسجيل الأراضي بين عامي 2007 و 2013، كانت هناك حاجة ملحة لتحسين عملية تسجيل الأراضي في فلسطين. لذلك، في عام 2016 تم تنفيذ مشاريع وإجراءات جديدة لعملية تسجيل الأراضي من خلال سن تشريعات مختلفة ووضع أطر وإجراءات مؤسسية جديدة.

ركز هذا البحث على دراسة عملية تسجيل الأراضي في فلسطين. وتتمثل المهمة التقليدية لعملية تسجيل الأراضي في تسجيل الأراضي وإثبات الملكية. في حين يهدف هذا البحث إلى تسليط الضوء على تطوير الوظيفة التقليدية لعملية تسجيل الأراضي إلى عملية متعددة الأهداف، وقد ركز بشكل خاص على تأثيرها على عملية التنمية الحضرية والتخطيط الحضري في الضفة الغربية بعد عام 2016.

تم اعتماد منهج دراسة الحالة لدراسة وتحليل مواقع الدراسة في فلسطين، والتي تضمنت اثنين من المشاريع الأولى التي تم تنفيذها لعملية تسجيل الأراضي الجديدة، والتي شملت قرية أبو فلاح وقرية بلعين.

تم تحليل الكثير من الخرائط المساحية القديمة والجديدة ، بالإضافة إلى إجراء عدد من المقابلات والزيارات الميدانية وجمع معلومات مختلفة من العديد من الدراسات النظرية. ساعدت هذه الطريقة على تطوير الوعي المتكامل بعملية تسجيل الأراضي وتحديد أثرها على التنمية الحضرية وعملية التخطيط الحضري في فلسطين.

وأخيراً ، أظهرت هذه الدراسة أن عملية تسجيل الأراضي في الضفة الغربية بعد عام 2016 قد ساهمت في إحداث تحول كبير في تطوير قطاع الأراضي. حيث تم وضع مجموعة من المبادئ التوجيهية لإجراءات تسجيل الأراضي لتسجيل الأراضي في فلسطين. بالإضافة إلى ذلك ، أنشأت قاعدة بيانات لمعلومات الأراضي التي ستساعد في عملية صنع القرار الآن وفي المستقبل. كما ساهمت في تطوير البنية التحتية وتحسين الاستثمارات وأسواق الأراضي. في نهاية المطاف ، أثبت هذا البحث أن عملية تسجيل الأراضي لعبت دوراً مهماً في إنشاء أدوات اجتماعية واقتصادية وسياسية لتحسين التنمية الحضرية والتخطيط الحضري في فلسطين حتى الآن.

# 1 - Chapter One: Introduction

The land is a prerequisite for the existence and survival of the human being. Since the dawn of time, the land has been the source of basic human needs such as food, water, and safety. Therefore, the land is the basis for human survival, development, and establishment of different civilizations throughout history.

The idea of land ownership and title emerged as early as the third millennium BC. It developed prominently in early agricultural economies where there was a need to secure tenure of land owned by people (Hanstad, 1998). Population growth, increased land trade, and advanced land-use technology has led to the need for documented property rights (Feder& Nishio, 1998). There is no universal definition that defines what the concept of land registration includes and what it does not include. In general, land registration is a process of registering the interests recognized by the law for land (Zevenbergen, 2002). One important reference to land registration is cadastre, which is defined as a regularly organized database of property data under a particular jurisdiction system, this process is largely based on a comprehensive survey of land boundaries to prepare the cadastral map (Hanstad, 1998).

The process of land registration and cadastral must be carried out in an integrated manner so that it can be analysed, studied, and improved altogether. Land registration system might be perceived an information processing system, in addition to being a tool to provide legal security for land rights (Information is a basic branch of the system) (Zevenbergen, 2004).

During the last century, Palestine was controlled by different regimes that aimed to control lands and achieve their goals. Some of these regimes' laws still applied in Palestine to this day (Tamim, 2013; Barghouthy, 2016). Land registration in Palestine was one of the most important obstacles

to development. Palestine, unfortunately, had not had an efficient system of land information that contributes to land registration and needs identification. The land registration in Palestine was unable to play its role properly in the development process because of many obstacles facing the process of collecting, supplying, and processing of information in the correct manner. The development that the Palestinian society seeks today requires more information about its land. (ARIJ, 2005).

The Palestinian government, in cooperation with the World Bank (WB) and several donors, managed to register many Palestinian lands through a set of projects that were implemented after Oslo accord until 2013. Approximately 35% of the total area of the West Bank was registered before 2016, while the area of registered land in Gaza Strip was 87%. However, these projects were facing many obstacles and problems that hindered the registration of many lands effectively. The Palestinians have tried to solve these problems and confront them and benefit from previous experiences in future projects. 2016 was the beginning of the establishment of the Land and Water Settlement Commission (LWSC), land registration since then had undergone major changes, because of the results and achievements of its projects, which were very satisfactory compared to the previous stages (Barghouthy, 2016).

After 2016, and since the establishment of the Land and Water Settlement Commission (LWSC), land registration in the West Bank has undergone radical and substantial developments and changes.

## 1.1 Research Problem & Research Significance

The land registration process in Palestine was processed for decades in a slow and complex manner. Since 1994, land registration in Palestine has been supported by donors and international



agencies to prove land ownership. The land registration projects faced many political, social, and economical obstacles.

The land registration process in Palestine during the previous regimes aimed to achieve a traditional function that limited to guaranteeing ownership and rights of owners. There was no clear correlation between the land registration process and the planning process and its impact on urban development. Recently and especially since 2016 the land registration process undergoes a radical change and improvements to be a multi-function process in Palestine.

There is a paucity of published studies on land registration in Palestine since the beginning of the new projects that have focused on land registration. So, this study will focus on studying the land registration process in Palestine as a multi-function process to be a tool for urban development and urban planning. Correspondingly, the new land registration process in the Palestinian territories needs to be analyzed as follows:

- First, define the Problem: analyses and assess scientifically the previous land registration experiences, and define its role in urban planning and development in Palestinian territories. As most of the literature reviews, studies, reports cover land registration experience in Palestine till early of 2013 only, such as (MAS, (2013). OQR, (2013). Shalev, N. (2012), Tamim, N, (2013).
- Second, assessment of the current situation (during the existence of (WLSC) (since 2016): a set of case studies of land registration projects in Palestinian territories will be analyzed. The new practices of land registration will be assessed. These projects will be evaluated according to their achievements as a tool of urban development and their role in urban planning.

These two points will be the new academic addition for this research, and will be the core of it.

## 1.2 Research Hypothesis & Research Question:

This study is based on this argument: *If the land registration process improved and revised in Palestine in an efficient way, it will become an important tool in urban planning and urban development.*

The study aims to answer the following set of questions:

- What are the characteristics of the new land registration practices that helped to improve the land registration process in Palestine?
- What are the obstacles that prevent land registration process in Palestine from doing its proper role in urban planning and achieving the urban development goals?
- How does the current practices of (LWSC) differ from old practices, and how does it help to overcome old obstacles to improve the land registration process?
- What are the most important opportunities that help to enhance the land registration role in the development process and urban planning?

Eventually, the following main question must be answered

- ❖ *What are the primary guidelines of land registration process in Palestine that will lead to be an efficient tool in urban planning and urban development?*

## 1.3 Research objectives:

- The land registration process has an active and effective role in the undertaking of urban development and planning. In this context, the study of proper practices of land registration contributes to understand land registration practices that take place in Palestine today, and

its contribution to the process of urban planning and urban development. Therefore, this study seeks to:

- Analyse and study several land registration projects implemented so far in various Palestinian villages and cities (after 2016). In addition to highlight the impact of land registration projects in the process of urban development and urban planning.
- Developing effective tools to enhance the role of land registration in the process of urban planning and urban development in Palestine.

It is necessary to put a set of primary guidelines to exploit opportunities, and overcome obstacles in Palestine, to upgrade the role of land registration system to meet the economic, social and political goals of the Palestinian society, and improve the urban planning system to achieve the desired urban development.

#### 1.4 Methodological framework:

The research methodology helps answer the research questions and achieve its objectives. It also helps in understanding the research problem and analysing the obtained data. Multiple levels of collecting data and analysis are conducted to determine the impact of land registration on urban development and urban planning within the Palestinian context. However, the research focuses on understanding land registration projects in Palestine before and after the establishment of the Land and Water Settlement Committee (LWSC) in 2016. Therefore, presenting and studying a set of cases and projects of land registration within the Palestinian context considered a necessity.

This research depends on mixed method as follows:

- Quantitative: it includes the discrete data and measured data which is obtained through constructed interviews, spatial data, and maps. It concerns about numerical and statistical

inferences. Quantitative information has credibility, and it is objective and reliable. The values of the land areas, dates of projects, fees of land registration, time period of projects, and the different gained quantities has helped to establish conductor for land registration developments, and later indicate its impact on urban development and urban planning. These numerical data are collected and analysed to steer the research results.

- Qualitative: it includes descriptive data. In-depth qualitative data included descriptive material that extracts from conversations, in-depth interviews, and published documents. It helps to explain how and why the process of land registration will affect urban planning and urban development within the Palestinian context.

Qualitative data is collected from interviews of employees and officials in some government departments and the private sector. The semi-structured interview helps to gather any data that cannot be accessed except through these methods, which led to enriching research information. The case study approach is of great importance to achieve the goals of this study and to obtain an in-depth evaluation of the land registration issue within the Palestinian context. The case study approach examines the different views and various aspects that intervened in this process, whether from the local councils, the population, or LWSC.

The qualitative case study approach helps to explore a specific phenomenon within its context using different data sources, which ensures that the problem is explored through multiple aspects, it is a valuable tool for developing and evaluating this phenomenon and developing intervention (Baxter & Jack, 2008). The case study focuses on answering why and how questions for a phenomenon, the behaviour of participants cannot be manipulated in the study, but the study seeks

to cover the contextual conditions that have to do with the phenomenon being studied (Baxter & Jack, 2008).

The case study approach has collected data in several methods such as semi-structured interviews, spatial data, and observations. The case study is the research strategy that will focus on understanding the projects of land registration in Palestine after the establishment of the Land and Water Settlement Commission (LWSC). Correspondingly, two case studies will be examined to highlight the experience of land registration during the Palestinian Authority period, especially after the establishment of the Land and Water Settlement Committee (LWSC). The two Case studies that are selected:

- Abu Fallah village in Ramallah was one of the first projects that were initiated under the supervision of the Land and Water Settlement Commission (LWSC) in 2016. The idea of the project was purely Palestinian, and it was a new experience and initiative from the local community (Barghouthy, 2016). Abu Falah village was chosen for the study because it was considered as a pilot model for the new land registration process in Palestine, the project revealed the pros and cons of this process and determine its success and effectiveness points. Eventually, the project procedures turned out into a model for other Palestinian areas after the great success of it.
- Bil'in village in Ramallah was one of the finished projects in the early periods also. It is considered one of the most important projects because of the political situation, as it is considered a sensitive area because of its presence near the separation wall and the ongoing of land confiscations by Israeli forces. The land registration is studied in this area to determine its role in preserving and developing the Palestinian lands to achieve the desired urban development.

The case study approach that is conducted in this research helps to gain an adequate understanding of underlying causes, opinions, and motivations of the land registration projects in Palestine. This strategy helps also to detect different trends and identify the problem in-depth. Several ways are used to collect qualitative data, it includes, semi-structured or unstructured techniques like individual interviews, group interviews, and observations. This helps to understand the problem thus, developing ideas and opinions about the main issue. Eventually, case studies are analysed to test the hypothesis of this research (to be rejected or proven).

To understand the problem of research and the question of research, a number of selected techniques were used to collect different data for research in a logical and reasonable manner. The process of collecting data from different sources related to the research subject helped to build and test the hypothesis and finally evaluate the results as follows:

- The literature review: it helps to prepare the conceptual foundation or theory building to become the base for formulating the hypothesis. So that different data is collected from published books, scientific magazines, and online portals. Review the previous academic opinion helps to increased reliability and credibility. It helps to identify the relations between the various opinions and express them to understand the land registration process from different aspects. The knowledge and ideas that are developed about the subject of the research help identify the land registration process, the historical review, and the land registration process in different countries. The literature review is used in accordance with the objective, questions, and problems of research. Eventually, the hypothesis that is derived theoretically based on the literature review is as follows: *If the land registration process is improved and revised in Palestine in an efficient way, it will become an important tool in urban planning and urban development.*

- The interviews: discussed the land registration history, its progress in Palestine, and the impact of land registration in urban planning and urban development. It requires arrangements to make decisions about who should be interviewed and how these interviews are implemented. Interviews have been conducted with personnel working in governmental institutions officials of the land authorities and local government and private sectors employee. Interviews with various officials also help to obtain integrated information that cannot be obtained from other sources. These structural and semi-structural interviews help to identify the procedures of land registration and the reasons for its success in each case. They also help in specifying the various projects implemented after the land registration process and the different positive results at different levels. These interviews are conducted with the employees and officials in some governmental departments and the private sector as follows:

- Shawkat Al Bargouthy, the retired general director of the land registration department in his office in Al Bireh
- Abdullah Al-manasra, an employee in the planning section in water and land settlement commission.
- Mohammad Shoman, the coordinator of land registration project in Abu Falah village.
- Tawfiq Jabarin the general director of al-Mezan Company.
- Abdallah Al-Deek, the manager of the Water and Land Settlement Commission (WLSC).
- Masoud Dais the previous president of the village council of Abu Falah village.
- Basel Mansour the president of the village council of Bili'n village.
- Asma Mansour a member of the village council of Bili'n village.

- The spatial data and maps: these data are collected and analysed to understand the problem and visualize data in a spatial environment. It helps understand features in a specific place and reflects a phenomenon. These data also show the most important changes that have occurred in cadastral maps in an area over time. The analysis of maps, in general, are based on clarifying how the land registration interfered with the planning process of master plans of each study area. These maps used to be analysed to show how land registration can be an effective tool in urban planning to achieve the necessary urban development in Palestine.

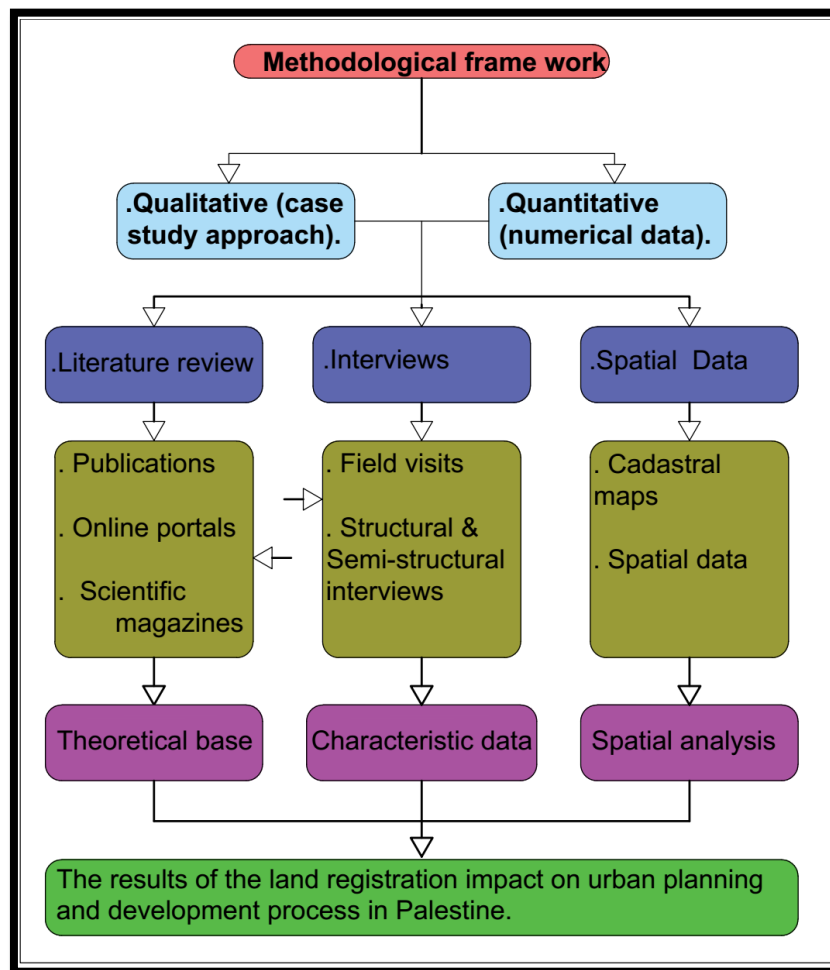


Figure (1): Illustrated the methodology of the research (author, 2019).



## 1.5 Research structure:

This research is divided into six parts:

- The first chapter is an introduction to research, it provides a background about the topic and elucidates the outline of research, and this chapter illustrates the research problem & research significance. It also includes an explanation of the research hypothesis, research question, research objectives, research methodological framework, and finally research structure.
- The second chapter consists of a literature review, which includes the previous theoretical frameworks that was presented in the field of research. It identifies the key terms of the land registration system and indicates the different overviews of authors regarding the importance of land registration in the planning and urban development process. Accordingly, this chapter discusses multiple international case studies.
- The third chapter includes the study site, it specifically contains a study of West Bank in Palestine. It explains the history of land registration in Palestine and overviewing the obstacles facing the land registration system in there, it discusses the land registration system, urban planning, and urban development in Palestinian territories.
- The fourth chapter embraces case studies, which includes a detailed study of the land registration process in Abu Falah and Bil'in village, the history of land registration in these areas and the new land registration process is examined to determine the impact of the land registration process on urban planning and urban development in these villages.
- The fifth chapter is analysis and discussion, it contains the analysis of various case studies, these case studies will be discussed and analysed within the framework of the theoretical concept presented in the literature review in chapter two.

- The sixth chapter, this chapter summarizes the achievement of the research objectives, it contains the conclusion and recommendations, and this chapter highlights the scope of future studies in the same field of research.

## 2 - Chapter Two: Literature review

### 2.1 Land Registration system:

The land is often described as the basis of wealth. It provides shelter, food, fuel, and minerals. The emergence of different civilizations was linked to land and its resources (Zevenbergen, 2002). However, land is considered as one of the most important non-renewable natural resources.

A land registration system can provide information necessary for land use planning and land policy. All lands are divided into rights and persons of rights holders. The land can be wholly state-owned or distributed individually to many owners (who could be an ordinary people, state, municipalities, church, companies, etc.). Land is a non-moving wealth and has a value that can be traded (Hepperle. et al, 2017).

One important term that linked to land registration is cadastre, which is defined as a regularly organized database of property data under a particular jurisdiction system. This process is largely based on a comprehensive survey of land boundaries to prepare the cadastral map, it was originally initiated for tax purposes but was subsequently used for land registration (Hanstad, 1998).

The process of land registration and cadastral must be carried out in an integrated manner so that maps can be analysed, studied, and improved together. The integration between cadastral system and land registration is called in many names, such as the land management system, which includes information related to land and its value, or it may be called a cadastral system or land registration system which includes the entire system (Zevenbergen, 2004).

Land registration closely linked to Cadastres process, which is a record of land information on land parcel and its uses, value, tenure, and boundaries (Zevenbergen, 2002). It is called a (fiscal

cadastre) when it is used for land tax purposes, while it is called (legal cadastre) when it is used for land registration purposes (land transfers process) (Hanstad, 1998; Zevenbergen, 2002; Enemark, 2004). The cadastral process is a technical recording that depends mainly on parcels, it contains information about the boundaries of the parcel, the area, and the location. Recently, this system contains land information and concerns the registration of land Interests, it is a geometric description that is associated with records describing the nature of the land, the value of the parcel and its improvements. Some countries contain a provision according to their cadastral regulation that do not allow parcels under a certain size to prevent the presence of any unusable areas or avoid ineffective cadastral activities. In the case of new urban developments, the mother land must be divided into parcels that follow a detailed development plan (Zevenbergen, 2002).

Fédération Internationale des Géomètres (FIG) that was anglicized to the International Federation of Surveyors, defines the Land Registration as an integrated system of updated land information, which are based on parcels. This system includes the register of interests of land such as restrictions, responsibilities, and rights. It also includes a geometrical description of land parcels, which are linked to records describing the nature of interests, ownership, value, and improvements of the parcel. It also helps in monitoring land management and land use such as planning and management, thus achieving sustainable development and improving the environment (Enemark, 2004).

Land registration deals with land interests, which include the land's improvements such as agriculture and constructions, these land interests are defined as land tenure. It is the basis of land ownership in any society and constitute its land law. These interests can be accurately identified by a set of maps based on surveying process for each unit. Clarity with respect to land tenure promotes the optimal exploitation of environmental resources (Zevenbergen, 2002).

The identification of land parcels is the infrastructure of this system because it helps manage the various aspects of the value of land, the acquisition of land or the use of land. Therefore, mapping, surveying, and traditional land registration may transcend its role as a provider of land information to the users of these information to meet economic, social and environmental requirements and objectives (Enemark, 2004).

The process of land registration guarantees the rights of land by titles or deeds, which means that there is a need for an official record, which is the registry of rights on land or works related to changes in the legal status of the land answering the question of who and how. While the cadaster is the regular repository of data of property within a given area based on a border survey so that the boundaries are shown on large-scale maps showing the nature, legal rights, size and value of the parcel, eventually cadaster answering the question of where and how much (Zevenbergen, 2004).

The land registration system may be an information processing system, in addition to being a tool to provide legal security for land rights. Information is a basic branch of the system, the land registration system includes several disciplines of legal, organizational and technical aspects, each branch is studied in several aspects related to law, management science, sociology, database techniques, survey and jurisprudence. The interrelationship between these different aspects is what constitutes an integrated system of land registration system that is multidisciplinary (Zevenbergen, 2004).

## 2.2 Land Governance system

The land governance system consists of three main components: land policy, land management (uses), and land administration, as shown in figure (2). The change associated with the dynamic

aspect of one of these components is found in the concept of land development. The consequences of land development will create new conditions for land policy, land administration and land management so land governance stimulate, organize and create work spaces for the actors in the land sector, so land governance system could be defined as an important and complex process for the government to supervise, direct and control the land sector by creating an action space to work on promoted activities (Hepperle. et al, 2017).

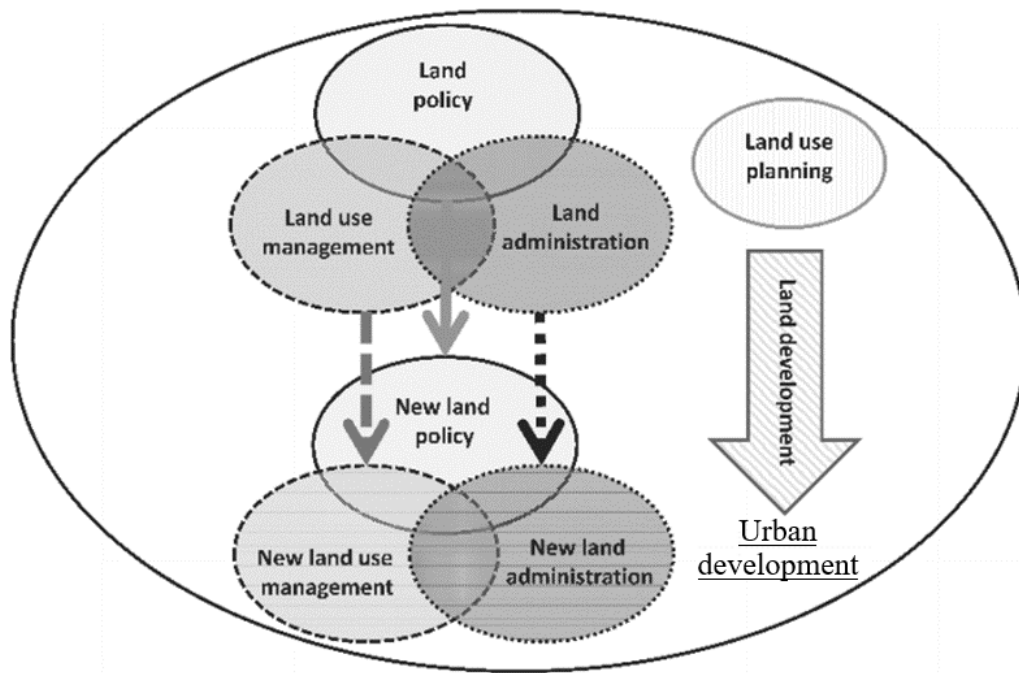


Figure (2): Land governance system and the dynamic change of its components (Hepperle. et al, 2017, conducted by author).

### 2.2.1 Land policy

Land policy is the process of creating a set of principles that would guide land use in a country, it clarifies all the procedures and rules that are applied in a legal way for land management, use, and development. Property rights are fundamental to the implementation of land policies (Hepperle, et

al, 2017). Land policies are part of national policies that promote economic development, political stability, social justice, and equity (Enemark, 2004).

### 2.2.2 Land Administration System (LAS).

Land administration is a process through which information, ownership, and value of land are identified, processed and disseminated when land management (land use) applied. It also embraces legal rules for land use related to a certain area (Mattsson & Mansberger, 2017). The functions of land administration could be divided into juridical administration, regulatory administration, Fiscal administration, and information management (Hepperle. et al, 2017; Steudler, Rajabifard, & Williamson, 2004).

According to Enemark (2004) and Hepperle. Et al (2017) there is a wide range of administrative processes involved in the land administration system:

- Land tenure: such as surveys, insurance, and allocation of rights in land, transfer of uses or property from one party to another, the management of disputes and complaints.
- Land value: estimating the value of land and property, separating, and managing disputes that are caused by the value of land or taxes in addition to the collection and administration of land taxes.
- Land use: controlling land use, based on land use regulations and planning policies at the local regional and national levels in the country, the need to manage and resolve land use disputes, as well as implementing land use regulations.
- Land development, this process includes land-use change through granting permits and planning permission, construction of infrastructure or implementation of construction planning.

These different processes are interrelated and affect each other, land information is the basis for the four previous processes, and it should contain data about topographic, spatial data, natural environment, natural resources, the built-up environment and the legal rights of the land. Based on this information, spatial data infrastructure is being developed at the national, regional and local levels and thus laying the foundation for the development of relevant standards, data and policies (Enemark, 2004). Through this documented and updated set of data and maps, the overall planning process and decision making become very easy and reliable (Hanstad, 1998).

The comprehensive process of Land Information Management (LIM) city-wide helps to provide an institutional and technological basis for integrating different topics of land information into a true resource for combining information about the land condition, use, value, and tenure. Eventually, these infrastructure needs constant updating as well as permanent maintenance (Enemark, 2004). In order to create such spatial enablement in the future, this requires increasing the focus of government's institutions on the involvement of utilities, spatial scientists and specialized companies to develop the spatial data of land administration (Williamson & Wallace, 2007).

The great developments in new spatial technologies create new opportunities for a new approach in the land administration system, the most important changes has been the transition from paper records to computer systems, currently, there are geographic information systems, spatial data infrastructure, multi-purpose information, alignment of information on built-up areas and landscapes, and layering for spatial information. The changes that have occurred in the tools and methods assured the dynamic relationship between human and land administration system as it is shown in figure (3) (Williamson & Wallace, 2007). The e-Land technology facilitates cross-functional interaction between governments so that services and information can be managed



through the Internet, while I-Land takes this process to an advanced stage so that governmental organizations use new information and processes in spatial identification (Williamson & Wallace, 2007).



Figure (3): Information Technology (IT) transformation of land administration (Williamson & Wallace, 2007).

### 2.2.3 Land management process (use)

The land management process (use) is related to the process of exploiting land resources in the best way possible by identifying suitable land uses, such as providing agricultural land to provide food and shelter, preserve environmental and cultural resources, or develop the different forms of real estate. In order to achieve this, tools have been developed to implement policies, including land readjustment, land management, urban planning, land tax and the management of public places, it includes administration, management and development (Hepperle. et al, 2017; Enemark, 2004).

The interaction of human community with land leads to many social, political, environmental, and economic concerns, which ultimately needed land management system to facilitate decision-making and implementation. An appropriate and effective land management is important for sustainable development where land is considered a personal treasure, a wealth, a consumer commodity, or a scarce social resource (Williamson & Grant, 1999).

The social and economic change of society make land uses more dynamic, therefore land uses are changed according to society needs, these changes are called land development, the most important tools that help to achieve land development are land policies, land use planning, and spatial planning (Hepperle. et al, 2017). Land records based on land parcels with specific and clear features are considered the most important factors in the process of land use. An efficient land registration system provides the maps, the data necessary for each unit of land, and lists of information about people who occupy the land, therefore it helps to facilitate and improve a successful planning system. The registration system also will improve the appropriate conditions for private development, which should be controlled with a clear and strict land uses regulation (Hanstad, 1998). Land management depend on the existence of a solid infrastructure of complete and up-to-date information on land from topographical and cadastral data of nature and built environment (Enemark, 2004). Land information is an important resource that must be managed effectively, it is a key component of land management to improve decision-making (Dube, 2013). As shown in figure (4), good, reliable, and updated land information affects the land policies, which directly affect land use. Planners and policymakers rely on this information to propose land policies and improving land use; therefore a good land policy leads to good use of land. Consequently, these land information and policies affect the land management and administration process (Hepperle. et al, 2017).

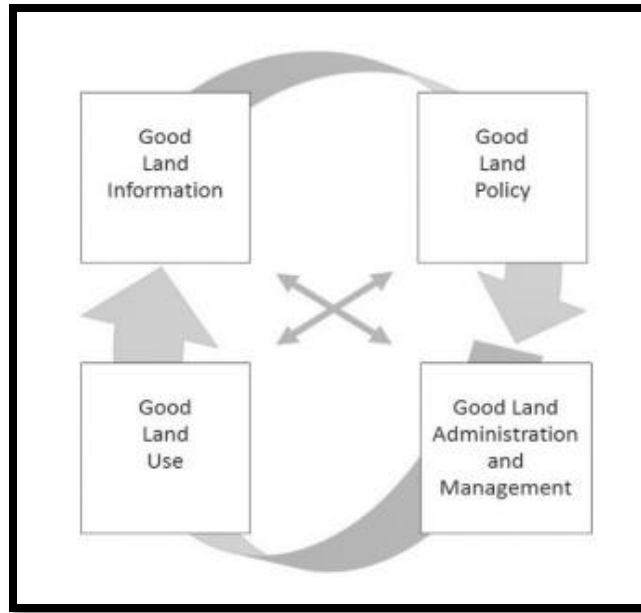


Figure (4): The positive effects of providing good land information (Hepperle. et al, 2017).

The establishment of a stable and interconnected spatial data infrastructure leads to identify a clear responsibility for data maintenance and promotion, reduce duplication and improve analysis. It also helps to develop sound decision-making processes at various levels of government, as well as developing a valuable information for society, the private sector and academic institutions, the public sector plays the role of coordinator for the development of spatial data infrastructure, while governments do the public good by initiating this process (Enemark, 2004).

### 2.3 Evolution of land registration system

The idea of land ownership and title emerged as early as the third millennium BC, the idea developed prominently in early agricultural economies where there was a need to secure tenure of land owned by people, some land titles dated back to more than 3000 BC. Many of Egypt's ancient rulers kept the land registry and were primarily intended to collect taxes (Hanstad, 1998).

The Bible referred to the idea of sealed deeds in the book of Jeremiah in 587 B.C. It told about the purchasing of land and regulating the transfer of property (Hanstad, 1998; Feder& Nishio, 1998).

There are two types of land registration systems which have developed throughout history, the first is the recording of deeds. The deeds registration dates back to the Roman culture, so it was common in many Latin European cultures such as Spain, France and other Latin American countries as well as in parts of Africa and Asia. This system was developed in Europe hundreds of years ago to prevent the double-sale of land, later it was the dominant system in United States (Enemark, 2004). This system was called (Land Recordation) in United States and it helped to record and register the documents affecting land interests (Hanstad, 1998). As land records were collected for tax purposes, the land registration process improved by the Emperor of France (extended to Western and Southern Europe) Napoleon I, it encouraged the establishment of cadastre in France in the early of 19th century in 1807 (Zevenbergen, 2002). These records had facilitated easy and efficient land transfer and helped to develop land registration systems which has become known as a comprehensive system of records relating to the legal rights of the land (Hanstad, 1998).

The second system is called the Title registration system. Title system is attributed to the German culture and to the Central European countries. The Title registration system was developed by Sir Robert Torrens, who developed the Torrens system in Australia in 1858 to secure lands rights in the New World. It has been applied in Australia, New Zealand, Western states of Canada and some Asian and African countries (Enemark, 2004). Torrens had put forward a new idea of land registration based on the state and conditions of actual ownership rather than just evidence of ownership. This system guarantees all the rights that may arise during the process of registering the land (Hanstad, 1998). This system has been applied in many British Commonwealth countries

including Canada and Europe, it has not been widely adopted in United States, but it was used for the first time in Illinois in 1897(Tamim, 2013). Land registry depends on the history and cultural development of the region or country. In Europe, for example, it arose as a start of taxation, while it was meant to guarantee rights when the Torrens system was established in Australia and the New World. Therefore, this system includes the identification of land parcels, registration of land rights, assessment of land and property, taxation, and control of current and future use of land (Enemark, 2004).

In Islamic world, there are many references in the Qur'an and the Sunnah of Prophet Muhammad (Prophetic Tradition) that stipulate and respect property rights, which were linked to the necessity of using the land to acquire property rights, which were divided into public, private and state properties (Sait & Lim, 2006). Islam had a great impact on the way the lands are divided into public properties, private properties, or state lands, all of which depend on the Noble Qur'an and the Sunnah of Prophet Muhammad as the basic constitution for developing legislation. So, the lands under state ownership are classified into public lands or state lands according to the land location, or the way of getting them. The other type, the private property that is classified according to the type of tax imposed on it (Ajwa, 2011). Two types of lands were known in the Islamic era. The first, which lies within the borders of villages and cities (urban areas), and these lands can be privately owned by people and includes homes, small roads, and yards. The second type, the lands located outside the boundaries of urban areas, and these lands are considered state lands. These lands can be rented to people to use them under certain conditions in exchange for such as paying tithes to the state. In the early days of Islam, land registration was not in the concept of the current modern, but there was a type of registration system that was limited to public lands and state lands that was used by private individuals (Tamim, 2013).

The two systems (deeds system and title system) differ according to the applicable judicial system and cultural development in the country. The judicial and cultural system depends on whether the country is based on the common-Anglo or Germanic law (Title system), or Roman law (the Deeds system), which of course reflects the country's colonial history (Enemark, 2004). The idea of the Deeds system involves registration of the transaction only, where owners are concerned about (who owns what), while the Title system is different, as it is concerned with the title itself to be registered and secured so that it explains (what is owned by whom) (Enemark, 2004).

The changing dynamic relationship between land and human beings over time has greatly influenced the development of land registration systems, and it was in response to general trends in community development in Western societies. In the feudal era, the land market was largely unfamiliar, but the systems and institutions were interested in connecting land owners with their land, while the industrial revolution and the growth of modern cities led to the development of the land market and the land was seen as a tradable asset, the development of Torrance systems which facilitated the process of transferring and securing property encouraged the development of land market, as a result of these global changes, the land is seen as a scarce resource for society, while land registration systems considered as a source of a comprehensive information concerning the combination of land and property use affairs. These main stages can be summarized in the development of Western society in agricultural, feudal, industrial, and informational revolutions, as shown in figure (5) (Ting & Williamson, 2001; Enemark, 2004). Developments in information technology have helped to bring major changes in the land registration process and helped to shape the modern role of land registration system as a multi-purpose system (Enemark, 2004). Greater population growth, increased land trade and advances in land-use technology have led to the need to document property rights (Feder & Nishio, 1998).

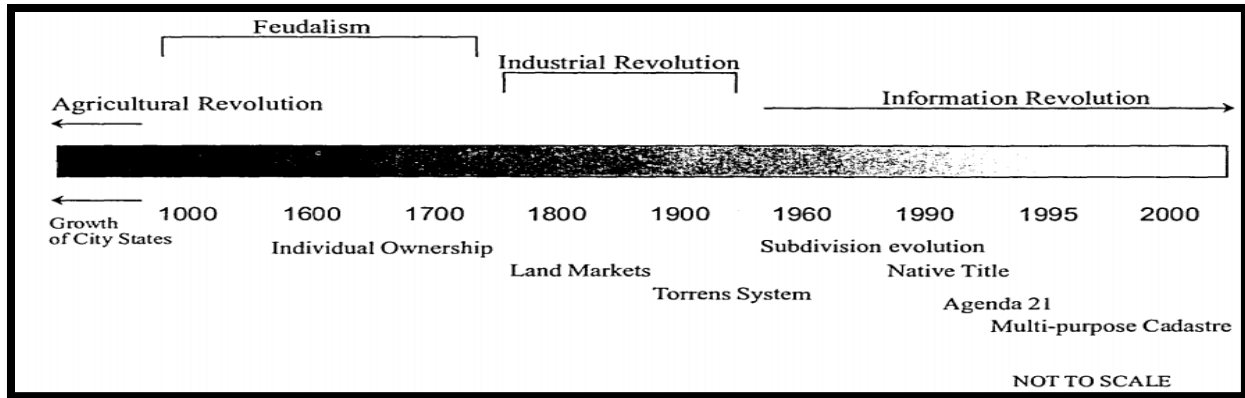


Figure (5): The evolution of the land registration (Ting & Williamson, 2001).

As well as the global changes that have greatly affected land management systems, namely globalization, economic reform, sustainable development, and the impact of information and technology (Ting & Williamson, 2001; Enemark, 2004; Steudler, Rajabifard & Williamson, 2004). Over the past decades, the concept of land registration has developed significantly due to global interest in social justice, sustainable development and environmental management, which need a comprehensive information about environmental conditions in a combination with other land-related data, as illustrated in table (1) (Enemark, 2004).

Table (1): Evolution of application for land registration of Western society (Enemark, 2004).

	<b>Feudalism - 1800</b>	<b>Industrial revolution 1800-1950</b>	<b>Post-war reconstruction 1950-1980</b>	<b>Information revolution 1980 -</b>
<b>Human kind to land evolution</b>	Land as wealth	Land as a commodity	Land as a scarce resource	Land as a community scarce resource
<b>Evolution of cadastral applications</b>	Fiscal Cadastre.  Land valuation and taxation paradigm	Legal Cadastre.  Land market paradigm	Managerial Cadastre.  Land management paradigm	Multi-purpose Cadastre.  Sustainable development paradigm

Land registration systems have been developing so that they can serve multiple purposes, by using modern Geographic Information Systems (GIS) and modern Information Technology (IT) (Enemark, 2004). A GIS system has its own data model, the effective spatial data model should allow the provision of information as follows: First, vertical relationships, through which data are available at detailed levels (the parcel level) and then at the general level (the neighbourhood level), the basic spatial units are created for analytical purposes. The second is horizontal relations, which allow data exchange at the local level between different data producers such as population, infrastructure, land use and land administration, this requires great compatibility between data to be able to merge and link databases. Significant advances in remote sensing and global positioning systems (GPS) have helped to make visual data such as land cover and land use easier than economic, social and demographic data. So that spatial information is obtained at little cost and short period (Cheng et al, 2006).

Many international organizations are fully aware of the importance of preserving land rights, such as United Nations (UN), the Food and Agriculture Organization (FAO) and the World Bank. These organizations recognize the importance of establishing a land administration system (LAS) as a basis for achieving environmental sustainability, social cohesion and economic development. An organization like (FIG) helped to understand of the role of land management in achieving sustainable development (Enemark, 2004).

## 2.4 Case studies of land registration process

The land registration process around the world has evolved through multiple stages and in different ways. Some countries have made great progress in the land registration process, and some countries are still at the beginning stage of improvements and renewal. These cases were studied to take advantage of countries' experiences to develop their land registration process. As these



countries have tried to overcome the obstacles and challenges in a manner that suits their capabilities and capacities. These cases have highlighted some practices and techniques to develop the land registration process to be an important tool in urban planning or urban development. Cases have been studied in India, Nepal, China, Turkmenistan, New Zealand, and other countries that have had experiments in developing land registration systems and consequently improving urban planning and urban development.

In Nepal, it was important to combine a registry organization and a survey organization in one place. So the process of land reform, survey, registration, land revenue, and management is done through the same offices, this helped to achieve works in a more cohesive and consistent manner, so the cooperation between government offices was necessary for the benefit of landowners and the public, therefore people could easily obtain land maps and information from one office in a quick manner (Hanstad, 1998).

In Turkmenistan, for example, which has an area of 491210 km<sup>2</sup>, the area of agricultural land was only 20%, and the registered lands could be estimated at only 5%, most of the residential and agricultural lands are owned by the government. The government began to grant a certain amount of land to people to promote agriculture and effective tax system, it relied on annual reports based on land information in relation to land category, tenant, soil information and other important information that helped to calculate statistical data for taxes and national decision making for the construction of roads and irrigation channels. These annual reports relied heavily on land use maps, which were considered a reference to the decision-making process. But the government found that these maps were relatively poor quality due to a discrepancy between the real land features and the map features, due to the poor quality of maps and the analogue method of production and slow

updating. For this reason, the government became aware of the need to renew land registration and land information management computerization to better land administration. In 2011 the government cooperated with Korean cadastral survey companies that applied satellite photogrammetric methods as an alternative solution to save time and cost and established a systematic land information management system. This technology became the infrastructure for users to manage and register land through Data Base Management System (DBMS), and the establishment of reference data for national decision-making and taxation (Hyunil & Handon, 2012).

In India, online land registration/record systems applied in some areas, this process benefited people, municipalities, and government. All land could be traced correctly across the internet in all India's states, this led to eliminating errors and encouraged transparency in land records. Many states had begun digitizing land records so that an online application form could be downloaded, or obtained from the concerned authority's offices, the documents are validated and then registered in a very fast and easy way (Sridharan, 2016).

In Ethiopia, the city of Arb Mench, land registration began two years after it was established in 1965. However, there was a problem with this old registration system, which did not specify the exact number of land plots, this had revealed the lack of accuracy and clarity in documenting, recording, and managing data in the city. It was impossible to rely on the land information available in decisions making. Therefore, the municipality started a survey in 2007, it included information of socioeconomic, locational, building characteristics, and the parcel's boundary coordination. This process helped to create a database that the government was able to benefit from in better land management and decision-making process (Dube, 2013).

In China, in early 1978, the People's Republic of China began a series of economic reforms which introduced an "open door" policy that led to a major change in the land tenure system, it gave a group of farmers the right to lease land for five years. In subsequent years, these economic reforms deepened to extend the lease contracts for 30 years, they have greatly increased the rate of urbanization, which reached 36% in 2000 and is expected to reach 50% in 2030. These reforms have led to a major shift in urbanization and thus led to the development of urban real estate to earn huge sums for governments and entrepreneurs. This has led to encouraging the state to lease land for up to 50 years for developers and users after paying the state through auction, tender or negotiation. Before the economic reform process and with the existence of the socialist system, it was not important to know the geographic location of the parcels, where the land market was not present, but as the land market developed, the exact location and value of the parcel was very important for the state and the developers. This great development formed significant challenges for Chinese urban planners related to rural migration to cities, the extension of urbanization at the expense of agricultural land and high population density, the lack of infrastructure, traffic congestion, and social strife increased the problem. As a result, land administration departments had been established in most Chinese cities under the same jurisdiction as the urban planning department. These departments developed a gradual information system for the management of land information of possession, value, and use (Cheng, et al, 2006).

In Uganda, the population have increased from 6 million in 1962 to more than 35 million in 2015, the land became a scarce resource and that increased conflicts. This situation necessitated the need for the land registration system and the development of the land administration system in the country. Since 2010, a project had been implemented which called (the project of design, supply, installation, and implementation of the Land Information System and securing of land records).

This project established an effective land management system, facilitated the provision of basic land services, and improved the security of land tenure. The computing system for land records had been a priority in this project, the employee relied on the computer in all transactions instead of manual guidance, this helped to implement electronic transactions faster and more accurately and avoid human errors. The land registration in Uganda reduced conflicts, developed land secure, provided access to credit, and encouraged investment, eventually, this process improved land use and land management and facilitated the development of planning initiatives and physical planning, later on, it improved urban development, urban infrastructure, and housing projects, and it preserved the environment (MLHUD, 2016).

In New Zealand in 1991, it has used a new planning approach to improve land administration. This approach downgrades the town and country approach<sup>1</sup>, which has been applied in many British Commonwealth countries for urban planning, New Zealand approved Resources Management Act (RMA), which radically changed the basis of environmental planning and replaced a set of environmental planning, management, city planning, and country planning laws. This act aims primarily at achieving sustainable development goals it gives priority to the management of natural and physical resources. The city can be considered as a physical resource to be managed in an integrated and sustainable manner within a planning framework that focuses on nature and the built environment. Emphasis was placed on the integrated role of regional councils, which depended on the role of local authorities in land use planning within this hierarchy (Ting & Williamson, 2001; Memon & Gleeson, 1995).

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<sup>1</sup> This traditional approach is derived from the British approach, which involves organizing and monitoring urban development and protecting valuable rural landscapes, the important tool for implementing this approach was the land use plan, which is managed by local authorities. Zoning schemes are used to guide the spatial pattern of urban and rural land use (Memon & Gleeson, 1995).

## 2.5 The establishment of land registration

Land registration systems differ from one country to another in terms of actors, structures or processes, but today governments is seeking to create a unified, multi-purpose system that integrates differences related to land rights and land use regulations (Enemark, 2004).

In general, the land registration system is a complex process because it involves many legal provisions, technical activities, and organizations whose work overlaps with each other. This endeavour has become interdisciplinary, it includes lawyers, surveyors, (Information Technology) IT specialists, economists, and planners (Zevenbergen, 2002).

Before applying land registration system in any country, the advantages, disadvantages, and resources available should be determined to support or impede such a system. For instants, the right time to establish a formal land registration system is the most difficult thing that can developing countries face, these countries need to mobilize their limited financial and administrative resources to start working on land registration... There is a set of conditions that if found in any country considered an indication of the need for a land registration system, and there are some conditions that must be provided for the successful application of this system, these circumstances are thus summarized as (Hanstad, 1998):

- If the failure to secure the land title restricts development in country. The farmer or owner is not encouraged to develop or exploit his land in any way if it does not guarantee its ownership.
- If the land market activated, as the increase in population means there is an activity in inheritance and the sale of land. The Economists point out that, the existence of the land market is an important factor in production, when the potentials and energies are properly exploited.

- If there is a high proportion of land-related disputes. Where uncertainty about the property boundaries of different people and multiple heirs is a source of disputes and disputes among individuals, these conflicts are a waste of resources, money and energy.
- If there is a need to establish a credit base in the country ,where land improvement and marketing of agriculture depend on the existence of property rights by farmers to obtain agricultural credit , it is also difficult to get housing because of the difficulty in obtaining a housing loan in exchange for land is locked
- If there is a desire to redistribute land, as securing land rights helps ease land restructuring, reform, and provide land titles to beneficiaries who are granted lands.

The process of land registration depends on the tools and people within the institutions of any country, the number of organizations and the tools type responsible for this process varies from one country to another, and it depends on the possibilities available in each country to achieve the best results for the land registration. Therefore, Land registration is linked to three important aspects: legal, organizational, and technical (Zevenbergen, 2002).

The land registration system shall contain a system to automatically notify the registrar of all transactions and succession of the courts, authorities and notaries, particularly in the case of inheritance, in addition to the tax privileges placed on the land (Hanstad, 1998). Accessibility to obtain the desired information needs a system designed for the benefit of the user and not only of the benefit of the information producer (Zevenbergen, 2002). There are three characteristics that must be in public registries: independence, efficiency, and effective access to information (Hepperle. et al, 2017).

According to Hanstad, (1998) any process to establish a land registration system goes through four major steps and all these processes are related to each other:

- Firstly, the initial determination of existing land rights.

The land rights must be verified with different methodologies, the first methodology is the adjudication process to verify the rights existing in the plot and the restrictions to which it is subject, this is an important process, and a committee can be appointed, consisting of an adjudication officer who is authorized to make the necessary decisions, a survey officer who survey the borders of each parcels, a registration officer for taking notes and a demarcation officer who mark the boundaries of the parcels. This committee is working with a committee of residents to keep the various parties updated on the issue. Adjudication process involving an issuing the decisions through publicity, in order to give all parties of the interests of the land a sufficient time to object or collect and submit evidence and claims. It should allow the parties concerned to appeal within a certain period of these decisions. When these appeals are settled, the results are entered into the Land Registry as a final statement of the official land rights. The second methodology is the registration of the grants of the state, in the absence of a judicial claims to assert land rights, the state was granted the land by law or by its own initiative (Hanstad, 1998).

- Second, the process of demarcation of the borders of the land.

The second stage of land registration is border demarcation, which depends on legal and technical aspects, the border is demarcated in two ways, the first is to install the exact boundary sites on the existing ground and permanently identify them by using aerial survey and accurate ground survey, The second is to use the features of the ground to determine the boundaries of the land that can be observed by land survey or aerial photographs, the first method is more accurate but expensive (Hanstad, 1998).

- Third, the full survey of the land for measuring and mapping.

The survey is very necessary for accurate land registration system, the location of the parcels can be determined accurately to produce maps that assist in the land administration process. There are several ways to conduct the survey in developing countries, the least expensive method is usually used (Hanstad, 1998).

- Finally, a full description of land shares and land tenure rights.

The description of the land is done by reference to the plan of the survey or the map of the registry or a plan drawn on the same register ,the description of the land also consists of a simple reference number linked to the city, the street and the house where the land is located ,the description also includes the shape and size of the parcel, as well as the approximate location of the parcels and some information on the adjacent parcels to illustrate the relative location of the parcel ,this precise description helps to move the border in cases of uncertainty and break the dispute, it also helps planners and assessors to define and collect land areas . The description of the land may be based on drawings, verbal or numerical descriptions (Hanstad, 1998).

## 2.6 The consequences of land registration

Land is the most important resource for society and country, land registration system contributes directly to improving public administration and land administration (Hanstad, 1998). The process of land registration must be understood from various aspects to achieve its objectives on the widest scale. This system attends to achieve more than traditional goals and to become a multi-purpose system. Land registration provides important information for each parcel which is one of the most important assets, especially when development processes require extensive use of scarce areas of



land. Achieving the desired objectives of the land registration process is evidence that this system works effectively (Zevenbergen, 2002). There are many benefits to land registration system depending on the prevailing conditions in the country and the type of land registration system that is being established.

### 2.6.1 Economically

When the authorities prove the property titles of the population, this will increase their security and their ability to obtain official authority from the local government to develop self-financing projects and open the possibility of public-funded projects (Schaefer, P & Schaefer, C, 2014).

Most experts believe that land registration is an important process to develop market economy and activated land market. Ensuring land rights contributing in making land transfer a safe and fast process (Hanstad, 1998; Schaefer, P & Schaefer, C, 2014). The more accurate individuals' titles are, the more valuable they are to lenders, governments, and society. (Schaefer, P & Schaefer, C, 2014). The similarity of information between the buyer and the seller in the land transactions increases market efficiency and supports a legal system capable of imposing property rights (Feder& Nishio, 1998). This process helps to use the land more appropriately and facilitate the development of effective and consistent land policies (Hanstad, 1998). The economic impacts of land registration allows for higher value uses of land (Feder& Nishio, 1998).

A series of studies that included a group of international countries from Asia, Africa and Latin America showed the impact of land registration on the economic process whether by encouraging investment or increasing land prices, improving land, increasing housing prices and encouraging agricultural production, as shown in figure (6) (Feder& Nishio, 1998).

Around 1880, America became one of the world's largest economies, fuelled by capital investments such as livestock, railways, industry, and housing, which relied mainly on secure property rights (Schaefer, P & Schaefer, C, 2014). Land registration is also a basis for improving land tax, the successful tax system is based on an efficient land registration system that provides the maps and information necessary for each unit of land, thus helping to create a fairer system that would facilitate the identification and punishment of tax evaders. At the local level, the improved and successful local revenue and tax collection system enhances the effectiveness of local authorities and institutions which stimulates governments to implement administrative decentralization system (Hanstad, 1998).

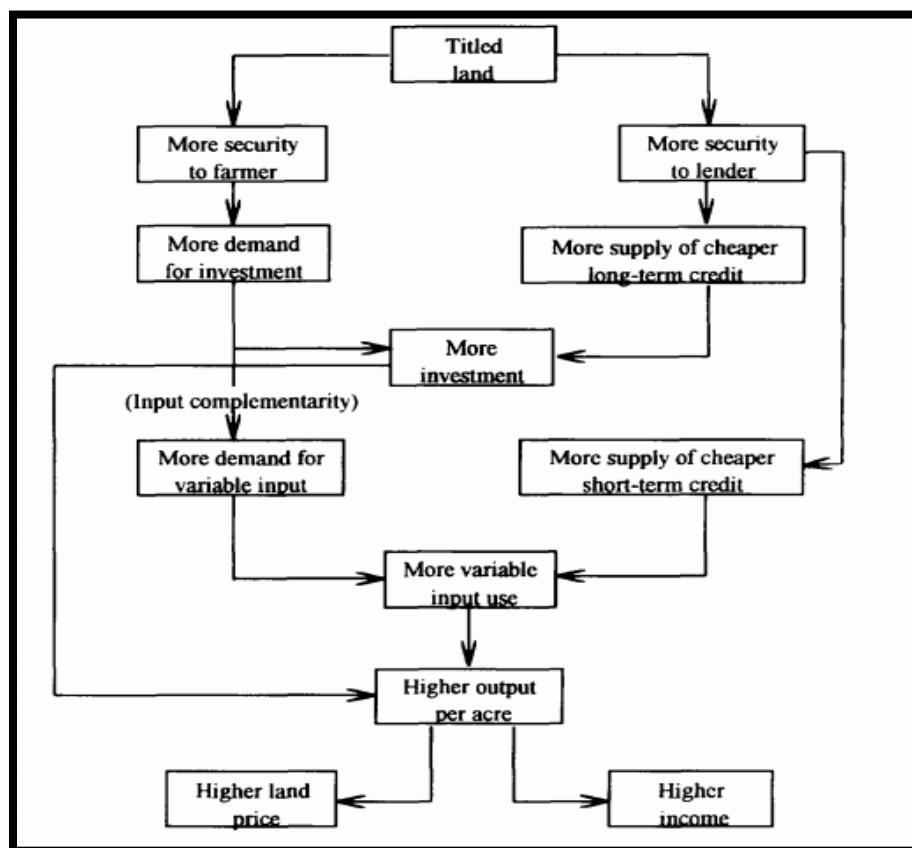


Figure (6): Conceptual framework of the economic benefit of land registration (Feder& Nishio, 1998).

### 2.6.2 Agrarian

Land registration ensures tenure security, which is of great importance to prove property rights, especially agricultural lands, and thus stimulate investment, agricultural development, and productivity hence, improving the economy (Hanstad, 1998; Feder& Nishio, 1998).

Providing appropriate conditions for private development, such as securing tenure and access to credit as agrarian reform laws are difficult when there is no accurate information on land tenure (Hanstad, 1998).

Land registration also ensures greater access to credit, which encourages farmers to seek loans with less risk due to trustworthiness. It also helps to speed the handling and transfer of land transactions reliably at a lower cost and time without resorting to legal experts to prove ownership (which is a costly and long process) (Hanstad, 1998 ; Feder& Nishio, 1998).

### 2.6.3 Socially

It helps to develop municipal services, like infrastructural projects, the public utility companies such as water and electricity services are hesitant or unwilling to provide services for the unregistered lands which do not have a formal address. Consequently, it is not possible to identify its customers (Schaefer, P & Schaefer, C, 2014). The well-designed and efficient land registration system contributes in reducing disputes and litigation on land which means a better social relation away from the courts. According to Feder& Nishio (1998) one of the most important social aspects addressed by this system is equality and poverty alleviation, which helps to protect the weaker segments of society, the community also becomes more familiar with formal processes which make it easier for citizens to access officials and financial means to carry out registration procedures.

#### 2.6.4 Urban planning and urban development

The process of economic development is fundamentally linked to the land-use change process, where assets can be transferred or partitioned, existing activities are strengthened, new structures or equipment are installed, eventually some forests become farms, and some farms become settlements and some settlements become urban areas which is the home of half of the world's population (Schaefer, P & Schaefer, C, 2014). The cadastral system helps in land management and the land use which is very necessary in planning and other administrative purposes to achieve sustainable development and environmental protection (Zevenbergen, 2002). Land records based on land parcels with specific and clear features are deemed as the most important factors in the process of land use (Hanstad, 1998).

The need for spatial planning requires many laws for land administration systems to manage land reform, redistribution, or subdivisions. The regulation of land use has led to the provision of public utilities (providing the appropriate infrastructure of water, sanitation, electricity, etc.) and increased efficiency by directing land development. Land use relies on tools such as maps (on a wide and comprehensive scale) and the registration data of each parcel. So urban planning is considered as one of the most important applications based on land registration (Ting & Williamson, 2001).

Information provided by land registration process forms the basis of land information systems (LIS), which ensures the legal security of the owner and the buyer, it needs precision, completeness and constant updating in order to achieve its desired objectives (Zevenbergen, 2002).

Planning is a tool that helps local governments and national governments regulate land use and achieve desired development in an effective manner, therefore, the planning process needs the

appropriate implementation tools. Land management and land policies are responsible for developing such tools, the most important tool of implementation is to make planning results legally binding for land users (Hepperle. et al, 2017). Knowledge of the basic information about the land is considered the basis of the planning process, which helps to redistribute land use according to the planning regulations and laws in the country. Land use is developed through direct actions such as zoning, urban public development, irrigation projects, land integration, protection of ecologically sensitive areas, etc. (Hanstad, 1998). The urban planning process needs a comprehensive assessment of economic, environmental, demographic and social aspect, therefore the data that is obtained from land registration should include land tenure, land value, characteristics of buildings, demographic data, and spatial distribution of infrastructure (Cheng, et al, 2006). The concept of land development refers to how urban land is used either in the form of buildings or different activities. The urban development of the city is heavily influenced by the land development process, which in turn affects the economic, political and social structure of the country, the land development process includes a range of influences such as land ownership, the nature of finance and investment, organization of construction, developer and consultants (Yeh & Wu, 1996).

Land development including executive components is considered the dynamic factor in the land sector. Land development potentially includes two types, the first type is the development of land within the currently allowed rights and uses, and the second type is the development of land within the changes in rights and uses, development here falls within the scope of land administration and becomes a prerequisite for managing the uses of new land, The first type concerns physical changes and the second relates to changes in rights (Hepperle. et al, 2017). The internal structure of the city changed due to the development of land, which in turn contributes to changing the type of land use

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or the density of development of land parcels in the city, the land development process includes a number of transactions between different landowners (Yeh & Wu, 1996).

Eventually, land development involves a variety of methods to change land uses, including land rights, to create the necessary activities, this process may require changes in land policy, land administration or land use management (Hepperle. et al, 2017).

Urban developments are one of the main components of the landscape, which should be given considerable attention in the planning and research process of development and conservation of lands. The details obtained and the spatial resolution is a fundamental and important tool but understanding how humans use these lands and how to develop them is a complex process, correspondingly, it is not only a mapping of urban cover. The improvement process depends on the ability to analyse the extent and changes that will occur on the surface of the land, analyse how urban developments will be distributed through the landscape, how they relate to the population and qualify the types of development (Martinuzzi & Gonzalez, 2007).

### 3 - Chapter Three: Study site – Palestine

In Palestine, there are significant obstacles to any process of urban development. The inherited legacy from successive foreign regimes weakened the process of planning and urban development. The process of registering and managing land in Palestine was one of the major obstacles of development. Palestine unfortunately did not have an efficient system of land information that contributes to land registration and needs identification. The development that the Palestinian society seeks today requires more information focused on land, where the investment of the Palestinian government or the individual projects of industrial, agricultural, and commercial are constantly increasing. Land registration was unable to play its role in the process of planning and urban development properly, there was many problems facing the process of collecting, supplying and processing land information due to the existence of many obstacles and overlaps (ARIJ, 2005).

Palestine has been subjected to many regimes over the past century (Ottoman, British, Jordanian, Israeli), whose goal of enacting laws was to impose its control and achieve its interests. Most of the laws applied to date in Palestine have been inherited from these regimes (Tamim, 2013; Barghouthy, 2016).

#### 3.1 The Ottoman period:

The Ottoman was influenced by Islamic teachings in establishing laws for land ownership and was partially influenced by French land rules (Tamim, 2013). Most of Palestinian lands in the Ottoman period was vested as state ownership, the land code was imposed in 21 April 1858, Land code aimed to increase agricultural production and tax return, thus in 1859 the first governmental land registration (which was called Tapu) started in Palestine, it was a registration of deeds system at first (Tamim, 2013, Shehadeh, 1982), this was achieved through the identification of property on

land and the registration of its legal owner when paying the Tabu fees, the owner gets the title deed (Shehadeh, 1982).

The Ottoman Land code divided the land into five categories, the three main categories called, Mulk, Miri, and Mawat, they were classified according to the geographical location, functional characteristics of land (such as land use and nature), as well as spatial characteristics of land. There were also two subtypes called Matruk and Waqf which were classified according to the use of land (Shalev, 2012; Shehadeh, 1982).

The five categories are as:

1. Mulk: These lands were allocated to individuals and have formed 5% of the Palestinian land (Tilsen, 2003). These lands included the houses locations inside villages and towns, or plots of land which was no more than half a dunum (500 m<sup>2</sup>) that were located on the borders of villages and towns, and suitable for housing (Shehadeh, 1982; Stein, 2017).
2. Miri: included the lands that were owned by the state, it represented the largest proportion of the Palestinian land, it may be the agricultural land confiscated by the state because of non-cultivation by the owners, and if the individuals wanted to obtain it again they must cultivate and pay taxes (Tilsen, 2003). These lands are owned by the Sultan and it include pasture lands, forests, and fields, they were located near villages (Shehadeh, 1982). Mahlul land was a Miri land that was left uncultivated for more than three years and transferred to be state land (Stein, 2017).
3. Mawat: Included vacant lands which according to Ottoman law fall within the distance from which the voice of man cannot be heard from the nearest point of villages or towns (Shehadeh, 1982). The land belongs to the state, it was considered as a wasteland, individuals were able to turn these lands into Mulk until 1858 with the permission of Sultan, and after 1921 they can



turn it into Miri by cultivating it for a given period of time and paying for it (Tilsen, 2003; Stein, 2017). It may include mountainous, rocky, or grazing lands that are not owned by anyone under a deed title (Shehadeh, 1982).

4. **Matruk:** The land belongs to the state but has been classified for public purposes. It is located between the villages and may be used as public roads or common pastures (Shehadeh, 1982). The state has the power to convert a Miri lands into Matruk to use them for public facilities (Tilsen, 2003; Stein, 2017).
5. **Waqf:** Included the lands that dedicated to religious purposes (Shehadeh, 1982; Tilsen, 2003; Stein, 2017).

Many landowners have ignored the idea of land registration because they do not trust government legislation and do not want to give the government any authority over their land , the majority relied on the traditional oral method of proving the ownership , they believed that by doing so they avoided taxes and registration fees (Tamim, 2013; Tilsen, 2003).

The Ottoman land code had many drawbacks, which made it difficult to settle disputes over land, The land was registered according to the wishes of the owner and not compulsory, it did not rely on cadastral survey, measurements or maps so it was impossible to determine the boundaries of the properties accurately, the lands often were not registered in the name of the rightful owner in addition to the presence of a large number of Musha<sup>2</sup> lands, this process has led to the concentration of land by a few individuals or the state ( Tilsen, 2003). Land registration (Tapu) offices were closed in the period of 1917-1920, whereas no transactions in immovable property were allowed, and most of the land documents were transferred to Turkey (Tamim, 2013).

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<sup>2</sup> Musha land is undefined land parts in a common property, lands were held by a corporate body and it was a system of collective holding ,it is collective land tenure (Tamim, 2013)

Land laws, such as the Land Code Act, have helped to control the physical growth of cities and villages and their direction which attended by population growth and modern needs. The previous land classification process has helped to define a law to develop the control over public land, as well as the laws that were subsequently issued to develop road construction. In 1877, special laws were enacted to establish and form local municipalities and to grant them the powers that determined land for public use and public utilities. It also has the task of monitoring construction and development through issuing building permits for streets and houses. The Ottoman rule in Palestine governed the process of urban and rural development through a set of regulations and institutions but without a specific planning system or clear legislation for urban planning, Ottoman planning ignored social and economic aspects and focused on physical aspects (roads and buildings) (Khamaisi, 1997).

A system of building permits in cities was issued in 1868 and 1891 to allocate some land for road construction and regional development (Khamaisi, 1997). The ownership laws of land and the restrictions imposed on land use became a key factor in the development process in Palestine, it played a major role in understanding the development of urban and rural planning according to reorganize ownership of the land. The planning focused on the physical aspects in terms of roads and buildings without a structured planning system and legislation, especially in cities (Abdulhadi, 2016; Krunz, 2009).

### 3.2 The British Mandate:

The British regime inherited the earlier laws that were legislated by the Ottomans. The existing registration system was the system of registration of deeds (Shaw, 1946; Shehadeh, 1982).

In 1920, the British government formed the Land Registration Department, which became responsible for all the tasks that assigned to Tabu offices in Ottoman government. The offices have been reopened for residents to register their land under the Land Transfer Ordinance (LTO), Government approval was required for such operations (Tamim, 2013).

The survey ordinances were implemented in the same year in order to provide greater accuracy in the demarcation and cadastral procedures, which is the effective basis in the land registration process. A survey department has been established in 1920 and the country has been fully covered by the triangulation network. The land parcels were carefully identified on a plan and important maps and surveys were provided (Tamim, 2013). The survey began in the Gaza Strip and Beer Al-Saba' area (which did not extend to the north of Beer Al-Saba'). So, the maps prepared in 1930 for topography covered only the north of the country from the large midriff area as shown in figure (7) (Gavish, 2005).



Figure (7): The Major Triangulation system in Palestine in 1946 (Gavish, 2004, conducted by author).

The villages were the main target of survey process, it had been divided into blocks and then into parts called parcels, each parcel was given a number. The Parcel areas were determined, and block plans were prepared by the Surveying Department for the final registration process. These plans have shown the size, shape, and location of parcels in blocks. Coordination between the various departments had been developed to ensure that the land information was consistent. Registration departments continued to use the deeds registration system until the Torrens registration system was introduced in 1928. A separate folio was prepared for each parcel relating to all ownership information and a certificate issued to the title holder, the two systems were operated side by side (Tamim, 2013). Most of the workers in the field offices were Jews and British which helped to achieve the Zionist and British goals in facilitating Jewish control over land, and selling the land to the Jews (Ajweh, 2011). Many of Mawat land was transferred to the state land, the Musha lands were divided among the owners to increase the land owned by private owners and encourage the sale of land to the rich Jews under the pressure of economic conditions imposed by the British Mandate (Tamim, 2013).

In conjunction with the land registration and survey process, the Town Planning Ordinance (TPO) was issued in 1921. It has helped to monitor urban physical development and has placed the planning authority in the control of local governments. It has been a restrictive central system , a number of detailed physical plans have been prepared for many Palestinian cities and have been based on land division according to the land use and regulations to direct and control physical growth , this order was amended in 1936, which has added the regional level to the planning system and prepared plans , outline plans were prepared for 25 Arab villages, eight of them located in the West Bank, the Israeli and Jordanian governments used the (TPO) after 1948 to draft their planning

and building law (Khamaisi, 1997). The TPO of 1921 and 1936 was no different from the Ottoman laws in terms of the powers and functions of the local government. (Krunz, 2009).

Palestine was divided into six districts to implement (TPO) of 1936, and to facilitate the issuance of building permits, zoning, and development. The planning consultant prepared and approved outline plans for all pre-1948 municipalities, nine of which were in the West Bank. The district plans for the northern part of the West Bank named (S-15), it was approved in 1948. While district plans for Jerusalem (Rj-5) was approved in 1942 which covers the rest of West Bank. Figure (8) shows the four zoning area (development, agriculture, nature reserve and state domain) (Khamaisi, 1997).

The process of proving land rights ownership and building rights, stipulated in the (TPO) of 1936 forms the basis to obtain building permission from local governments, which was determined according to the land uses in the physical plans, eventually, many villages had no prepared plans during the mandate period and the district plans remained the basis for building permits (Khamaisi, 1997). The local plans for towns were prepared and implemented through municipal authorities ,local planning committees became responsible for issuing permits for planning and monitoring, as well as space development within the town area when the British Mandate ended in 1948 (Abdulhadi, 2016).

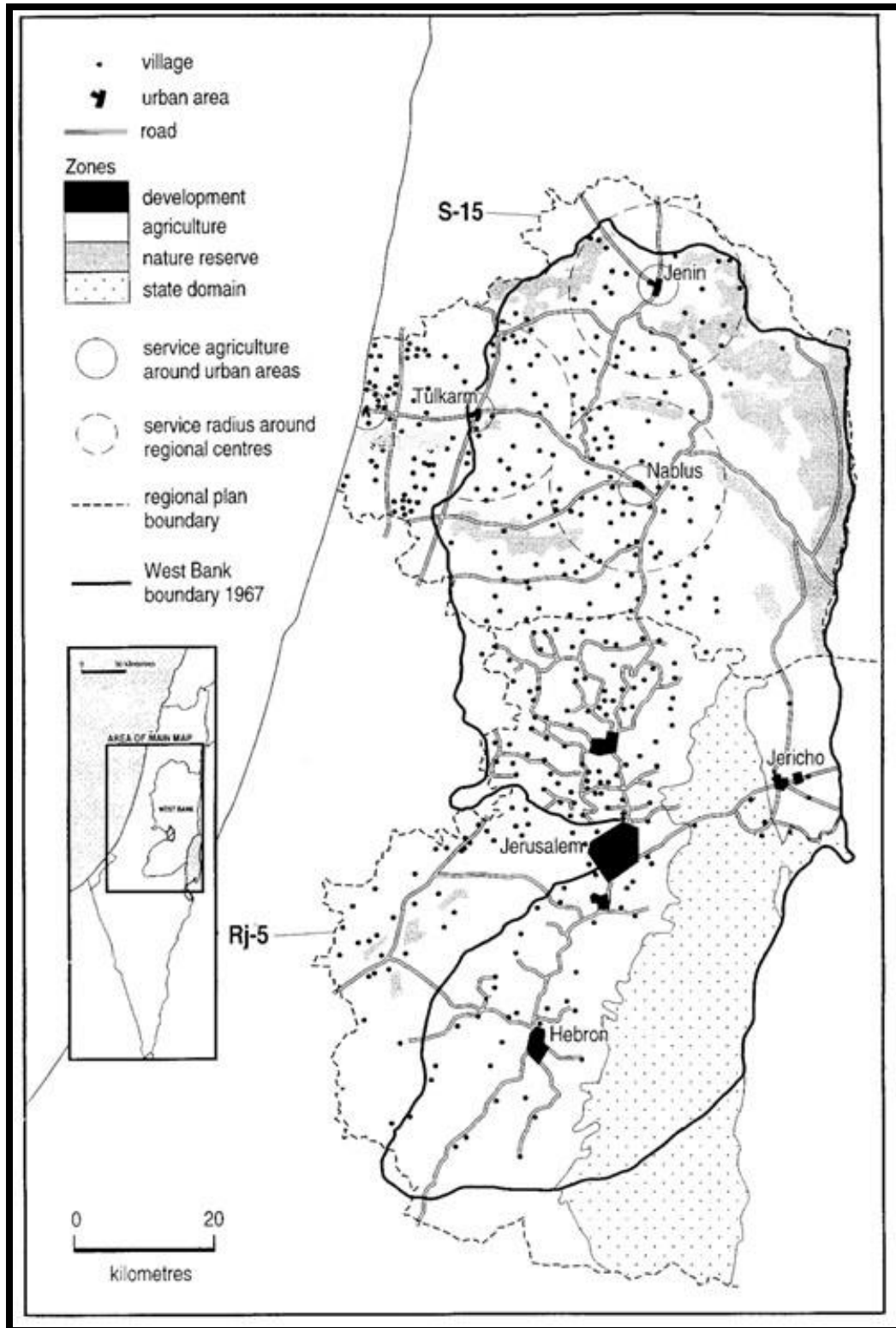


Figure (8): District plans of (Rj-5) and (S-15) (Khamaisi, 1997, conducted by author).

### 3.3 Land laws in the Jordanian era (1948-1967)

The Jordanian authorities started to establish the basic administrative infrastructure to fully extend land policies in the East Bank to the West Bank, the Jordanian military ruler appointed a director for land registration and surveying. The policies adopted during the Jordanian period and from 1949 to June 1967 are the reproduction of land policies in eastern Jordan in late 1927 of the British mandatory policies and the land system established by the Jordanian government in the West Bank. These laws have had a major impact on landowners and have led to major changes in registration processes, land taxes, surveying, and land ownership (Fischbach, 1994).

Work has continued on the preparation of cadastral maps for delimitation and mapping of land, the division of Ottoman land categories still existed, but some regulatory amendments were adopted between 1951 and 1953 to work according to Title system (Shehadeh, 1982; Tamim, 2013).

In 1952, amendments to the Land and Water Settlement Law No. 40 were passed, this law was called (Land and Water Settlement Law of 1952). The term "land and water settlement" means the settlement of all issues and disputes related to any right to own land or water, or a right thereof, or any related rights that are capable of registration (Magam, 2020).

This law was presented through a set of articles that showed the procedures that must be taken since the beginning of the process of registration of land and the settlement of land and water. This law conducted the powers of the director or the commissioner to conduct the settlement, it also displayed the method of making claims and objections, their duration and the powers of the magistrates' courts to decide disputes regarding the land (Magam, 2020).



According to this law any other Jordanian or Palestinian legislation issued before the enactment of this law has been cancelled to the extent that these legislations are contrary to the provisions of this law. In addition to approving laws regarding the identification and opening of roads and the identification of prohibitions for public property (Magam, 2020).

The Jordanian authorities focused most land registration operations in the northern part of West Bank, starting from the village of Tubas in Nablus (Fischbach, 1994). It helped to register nearly a third of the West bank territory, as Albargothy (2016) illustrated, most of these lands were in Jenin area. Jordan's land policy was of great importance in the future of the West Bank, especially documents prepared between (1952 -1967) (Fischbach, 1994).

Jordanian laws defined the term of state lands in two Jordanian laws. The first was passed in 1961 and deals with the protection of state lands and properties. The other was passed in 1965, it deals with the administration of state property. The first law considered the state's lands as all immovable properties registered in the name of the state treasury or registered as *Mahlul*<sup>3</sup>lands, and any other lands registered as *Mawat* lands but not forested land (whose protection falls on the forestry department). According to the law of 1965, the law defines state property as all movable property that is used or owned by the state in accordance with the laws in force. The director of the Land and Survey Department undertakes the task of managing all lands and property of the state (Shehadeh, 1982).

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<sup>3</sup> Ottoman definition of vacant lands with unclear ownership (Shehadeh, 1982).

In 1964 the Law No. (40) of 1952 was modified according to law No.22. This law was named (the Amending Law of 1964 of Land and Water Settlement Law). Through it, a set of amendments and new articles were added (Qanon, 2020).

Jordanian authorities have agreed to register land that has not been registered in the previous periods(Ottoman and British), therefore it prevented duplication in land registration documents .In 1967, a decision was issued to close all land registration departments and prevent any transaction of immovable property, eventually all land registration process were stopped (Ajweh, 2011). During the Jordanian period 38% of the West Bank was officially registered (Khamaisi, 1997).

Jordan inherited the legacy of British planning until 1955 which was based on the (TPO) of 1936, with some modifications, three main districts were announced: Jerusalem, Nablus and Hebron. The law mandated the Minister of the Interior to establish a central planning committee and establish the Supreme Planning Council to be responsible for the planning of buildings, towns and villages, this law was amended in 1966 and the most important amendments were the exclusion of the prime minister from the planning system, and the abolition of the Central Planning Committee as well as the need to prepare detailed regional and local plans (Khamaisi, 1997; Krunz, 2009). In terms of planning authorities and institutions, Law No. 79 of 1966 included three levels of authority, the National level representative of the Minister of the Interior and the Supreme Planning Council, the Regional level representative of the establishment of building committees in regions, cities and villages, and finally the Local level representative of the formation of local committees to organize cities and local areas (Za'roub, 2014).

The Jordanian authorities did not play a major role in planning of Palestine, it did not make major changes to the planning systems of the British Mandate, no plans were prepared for the villages,

and the structural plans prepared by Jordanian ignored the needs of the population demographic development and their social and economic needs. The authorities failed to allocate enough lands for the public buildings and economic activities, which led to the reduction of industrial and economic developments, the Jordanian authorities has been ignored development of the road network, which commensurate with the needs of the future and the increasing vehicles, resulting in traffic crises experienced by Palestinian cities have been established to this day, restrictions on urban development have been established as in the British era ,there was no development in planning and construction due to the limited development of the Palestinian communities as a result of migration from villages and towns. Jordan gave priority to the development of the Eastern Bank and did not pay much attention to the West Bank. In addition, there was little awareness of the importance of planning. The plans that was established under the British mandate still valid, which led to the exploitation of the Israeli occupation when issuing building permits (Abdulhadi, 2016).

Gaza Strip became under Egyptian administration, which kept the British laws of 1936 with partial amendments (Krunz, 2009). In 1955, the Egyptian Civil Administration issued a law guaranteeing the implementation of the existing Palestinian laws prior to 1948. This means that the Municipalities Law in 1936 and the Village Administration Act of 1944 will continue to be implemented, and the protected councils in this period were limited to the Gaza and Khan Yunis districts and the three village councils (Za'roub, 2014).

### 3.4 Land registration under Israeli occupation 1967-1994

Since the establishment of Israel in 1948, it has enacted a series of land laws, which have focused mainly on legislation affecting the property rights of the Arab population. These laws can be

divided into three sections, initial Emergency Regulations, Absentee<sup>4</sup> Property Laws, and the laws enacted to legitimize further acquisition of Palestinian land. a series of emergency laws were put in place to legitimize land confiscation for Israel, for example, it repealed the 1948 land transfer regulation retroactively until 18 May 1939 where all transactions that have been done since then have been cancelled, In addition to the law of the abandoned areas which is the areas left by the original inhabitants(those who fled or were expelled from their lands ) and occupied by Israel, so that the government has the right to issue instructions to act on these land properties. In addition to declaring some areas as “closed security zones” and expelling its inhabitants, it was then declared as “uncultivated land” and confiscated by the Israeli Ministry of Agriculture. All the land and properties confiscated under the Absentee Property Law were later transferred to Israeli government agencies, called the “Custodian of Absentee Property” (Dajani, 2005).

In 1967 the Israeli Government took over all the area of Palestine, many state legislations released to control lands included Mawat, Matruk, and abandoned Miri, these lands represented about 70% of all Israeli-controlled Palestine, the Mawat lands accounted for over half of the State lands, Matruk lands were sometimes registered in the name of Mandate officials which later become State Lands as well (Tamim, 2013). The Israeli authorities issued several Military Orders (MO) regarding the registration of land and its uses to serve the interests of the Israeli occupation and facilitate the establishment of Israeli settlements on the Palestinian territories (Ajweh, 2011). MO were used to temporarily clear certain lands of inhabitants; and after a specified time such lands were then declared uncultivated lands, thereby transferring full legal title to the State (Tamim,

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<sup>4</sup> The absentees are defined as "any Palestinian person found at any time between 16th and 29<sup>th</sup> of November 1947 as a citizen or visitor in one of the surrounding Arab states or in Palestine (outside the area declared as Israel) or any armed person (Dajani, 2005).

2013) .In 1968 MO no. 291 was issued to stop all land registration processes under the Jordanian Land Law (Khamaisi, 1997).

When land registration offices were reopened, these offices were part of the Ministry of Justice, which played the role of inspector on the land registration process to know the amount of land registered for the Palestinian, while the survey offices were a part of the Ministry of Housing, which played a major role in determining land uses according to their political objectives (Barghouthy, 2016). The figure (9) shows the registered land in the West Bank till 1979 (Shalev, 2012).

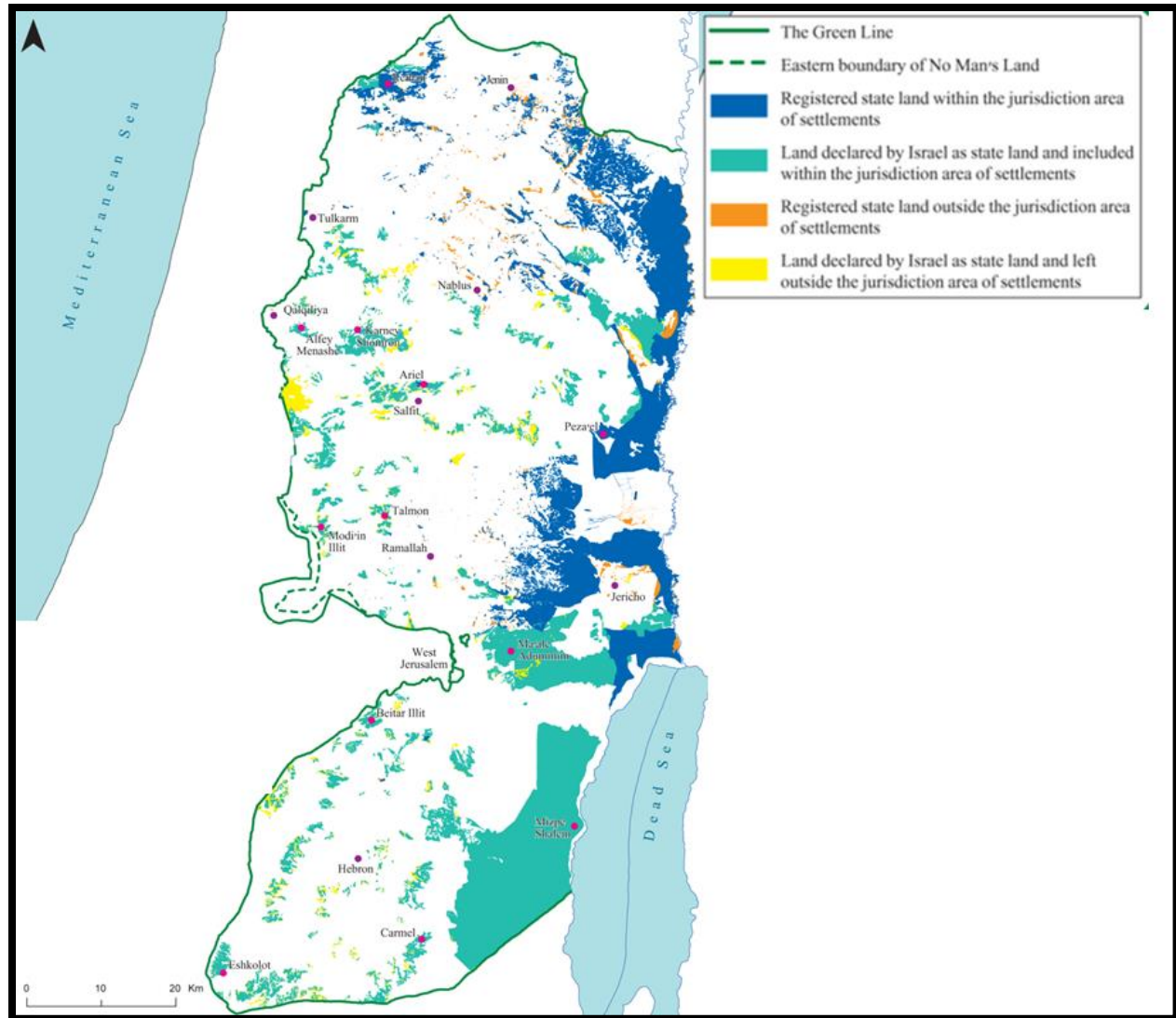


Figure (9): West Bank map that shows the registered land in 1979 (Shalev, 2012).

In 1987, the population of the West Bank and East Jerusalem was approximately 1,204,000. There was a need to increase the built-up areas within urban communities, therefore Israel established a Civil Administration instead of the Military Government (MG) (which was imposed in the beginning of the occupation) by Military Order (MO) no 947, which led to big changes in the planning process in West Bank areas (Khamaisi, 1997).

The Israeli policies have constrained urban and rural growth in Palestine by refusing to grant many building permits in the absence of full plans for most of the West Bank areas (Khamaisi, 1997; Abdulhadi, 2016). The lands registered in the Ottoman era were not accepted by the Planning Committee to issue building permits due to a difference between the name of the applicant for the building permit and the name on the land title and the absence of clear land border. The process of revoking the conditions for issuance of permits was very difficult, there was a great difficulty in asserting ownership of the land and determining the size of the land (which was a condition of a building permit) due to many of the social, economic and political factors that Palestinian experienced previously, this process has greatly hindered the development process and led to increase the number of buildings constructed without permits (Khamaisi, 1997).

The process of proofing ownership was a prerequisite for approval of land parcel schemes and detailed plans, these plans should be prepared by the owner of the land with the need for a building permission to expand building area. Municipal councils had the power of the local planning committee and therefore obtaining building permits was easier than rural areas, in addition to the existence of outline plans for some cities that was prepared in previous years (Khamaisi, 1997).

The former British mandate regulations prevented the granting building permission to more than one building on the original plot, any amendment to add a new building requires a detailed plan for High Planning Council (HPC) approval, and the (HPC) rejected any construction outside the built-up areas of the villages or in agricultural areas (which represent most of the village's land). These planning committees did not fully carry out their duties and did not prepare detailed plans for the districts, municipalities, or villages, nor did they add any new areas of construction beyond the boundaries of existing urban areas. (HPC) tended to rely on British law to grant building

permits, ignoring population growth and economic development, these changes have led to the emergence of new needs and conditions and social changes that include the growing need for new development areas and housing areas (Khamaisi, 1997).

### 3.5 After Oslo accord in 1993

In 1993, after the signing of Oslo Accords<sup>5</sup> which divided the Palestinian territories to three zones (area A, area B, and area C). The Palestinian Authority inherited all previous laws which was a mixture of traditions and rules (Tamim, 2013). The Palestinian Authority re-activated the Jordanian laws and procedures that were used before 1967. The land management process has been divided among different government agencies. Things remained ambiguous until 5/6/2002, when a presidential decree No. 10 issued and ordered to establish the Palestinian land authority (PLA) in Gaza, Land registration departments have been merged (Which previously existed in the Ministry of Housing and the Ministry of Justice) to operate under the PLA while survey department became a subsidiary of the Palestinian Council of ministers (MAS, 2013, Barghouthy, 2016).

Some of land registration records and files handled to Palestinian authority. In 2004 the PLA issued an order to unify the laws of land administration in Gaza and West Bank, in four ordinances bill of land authority law, bill of land rights law, bill of registration act and bill of acquisition of general purpose law (Ajweh, 2011). Jenin area was the highest proportion of recorded lands in West Bank

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<sup>5</sup> This accord stipulated a partial withdrawal of Israel from the Palestinian territories that occupied in 1967, the Palestinian territories were divided into three zones according to the following division: Area A is under full control of the Palestinian Authority and consists primarily of urban Palestinian areas, Area B is under Palestinian civil control and shared Palestinian and Israeli security control and includes the vast majority of the Palestinian rural areas, and Area C is under full Israeli control, Palestinian agencies are responsible for education and healthcare (Abdelhamid,2006).



as 98 to 99% of the territory of the province was registered in the land authority, while the governorates of Ramallah and Al Bireh and Nablus do not exceed 25 % (Barghouthy, 2016).

Upon the establishment of the Palestinian Authority and as a result of the Oslo Accords, the Palestinian Authority divided the territories into 16 governorates in the Gaza Strip and the West Bank adopted the Jordanian planning system as in law 79 which was divided into three level of authorities, and gave additional responsibilities to local authorities to build the state of Palestine. Planning and administration, legislation and laws were based on existing laws before the Palestinian Authority, such as the Local Authorities Buildings Act of 1996 within the boundaries of the approved areas for towns and villages and as well as the law of building and management of lands outside the approved organization borders in 1996, in addition to the formal approval of the law of common services councils and the law of the regional planning committees (Krunz, 2009). The number of local authorities divided between municipalities, village councils and project committees has increased significantly since the arrival of the Palestinian Authority. Municipalities have been classified into four categories A, B, C and D considering the number of populations, capacities, municipal activities and services available (Krunz, 2009; Abdulhadi, 2016).

### 3.6 The current situation

After the disengagement between the West Bank and Gaza in 2007, the authorities start to focus on the West Bank improvement, as a result, the land authority department was initiated in West Bank and the work started to focus on the projects of land registration there, according to the limited capabilities, the staffs, financial, etc. The World Bank and Finland started an empirical project to fund the land registration project in three areas Betonya, Beir Nabala, and Qarawa Bani

Ziad. According to the results of this project, the fundamental institutes initiated a document that shows the main problems and recommendations for the next projects in the area (Barghouthy, 2016). After that project, the Palestinian authorities started to implement an independent project which depended on Palestinian authority funds, and focused on Bethlehem, Beit Jala, and Aldoha, during working on the project the World Bank offered to start working on Dura. This created a dispute between the land registration department and the World Bank and resulted in forming the settlement Commission with a juridical presidency, this settlement commission played a supervisory role over the projects, that performed by different parts (Barghouthy, 2016).

In 2012 Law No. 2 was issued regarding the fees of land registration and transfer, this law standardized fees for transactions related to the parcel registration process and transferring. The fees were estimated as (1%) of the value of each parcel which was separated from the original land (Barghouthy, 2016, Al-Deek, 2019).

The absence of land registration is followed by many negative problems. For instance, until 2013, 25 % of court cases in Palestine were the result of land disputes (MAS, 2013).

However, until 2013, the main projects carried out by the Land Authority in cooperation with the World Bank and the external donors were about 50% in area A, and 24% of area B, as shown in table (2). Ramallah area project included three villages (Qarawat Bani Zeid, Beituniya and Bir Nabala), Salfit Project, Hebron Project (Dura) and Bethlehem Project (MAS, 2013; Barghouthi, 2016).

Table (2): The distribution and areas of the registered in West Bank until 2013(MAS, 2013).

	West Bank		Area A		Area B		Area C	
	Km 2	%	Km 2	%	Km 2	%	Km 2	%
Total area	5,700	100	1,000	100	1,250	100	3,450	100
Registered land	1,900	%33	500	%50	300	%24	1,100	%31

According to MAS (Palestine Economic Policy Research Institute) (2013) and OQR (Office of the Quartet Representative) (2013) there were many obstacles that faced land registration in Palestinian territories:

- The Palestinian civil jurisdiction is still limited to Areas A (18% of West Bank area) and B (22% of West Bank area), as well as obstructing the registration of land in these areas due to the unstable political situation.
- Israel's obstacles to the registration of land in Area C. Area C (about 60% of the West Bank ) 68% of the land has not been surveyed .The Israeli occupation is taking a series of actions that hinder the registration of land in these areas , like high registration fees compared to the fees in areas A and B (estimated at 5% of land value) ,the process of assessing the value of land (which is carried out by Israeli assessors) is very high cost, and finally determine the minimum area that can be plotted by 0.01 Km<sup>2</sup>, which is impossible for most farmers and owners of small land because they do not have those large areas.
- Inefficient court system and complex legal systems. The Palestinian government inherited a series of complex, chaotic land registration laws and multiple land registration documents that does not reflect the real status of property. There are about 26 land laws in the Palestinian territories.
- The high cost of land surveying and land registration and the complexity of the operation.

- Weak institutional capacities, the need for huge technical support, and large numbers of experience, efficient and qualified staff.
- The presence of a large percentage of land owned by expatriates. in Salfit 50% of the land is the property of expatriates
- Ambiguous / mismatch between the necessary land for development projects and land registration.
- Heritage issues are also an obstacle to land registration.

The percentage of Palestinian land registered until 2016 was 35% of the total area of the West Bank (5.6 Km<sup>2</sup>), while the area of land registered in Gaza Strip (0.365 Km<sup>2</sup>) is 87% (Barghouthi, 2016). On 22/3/2016, the Land and Water Settlement Commission (LWSC) was established, which aimed at registering lands and resolving disputes related to registration of Palestinian lands and waters. This department was assigned to administrate all Palestinian lands to achieve national, social and economic goals. To save time and effort and achieve the desired objective, the authority started initiatives in cooperation with public sector partners, including municipalities, local councils and ministries, in addition to private sector. There are still some 3600Km<sup>2</sup> of Palestinian lands that have not yet been registered (Shakarna, 2018).

According to Al-Deek (2019) the importance of this phase lies in achieving a set of great advantages:

- Projects are done without the intervention of foreign donors.
- Projects are done as an initiative of the local population and depends on their active participation.
- The land registration process seeks to achieve the goals of sustainable development and improving urban planning.

The number of land registration projects which was completed so far is 18 projects, while the number of unfinished projects are 103, and the number of projects constantly increasing. So far, 640Km<sup>2</sup> have been surveyed in the West Bank while the areas whose documents have been completed was estimated up to 215.377Km<sup>2</sup> (Al-Deek, 2019).

The staff number has been increased to 400 in field offices, while the number of staff in the Ministry is approximately 200 (Al-Deek, 2019).

Al-Manasra (2018) explained that, in the Palestinian territories which don't have land registration, the planning process still relies on aerial images or intuition maps, which are inaccurate, do not reflect the realistic boundaries and nature of land, so the plans were far from reality and characterized by many technical problems.

According to Al-Deek (2019) the land registration process is done separately from urban planning process, but there are a big cooperation between the land and water settlement commission and the Ministry of Local Government (MOLG)<sup>6</sup>. There is coordination between the local governments, LWSC, and MOLG to adjust any discrepancies between the cadastral maps and the existed or developing master plans. The adjustment process needs more time, effort, and money. Eventually, the absence or delay in the preparation of cadastral maps for Palestinian territories is one of the biggest obstacles of the planning process.

There are many obstacles that prevent proper urban planning and thus impede the achievement of desired development process, the large population increase versus the limited land available under

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<sup>6</sup> MOLG has been responsible for planning at the local level (villages and municipalities) within Areas A and B, It also manages planning and urban development in terms of preparing Master plans and monitoring the work of planning and construction carried out by municipal and village councils (Abdelhamid, 2006).

this political situation led to the misuse of urban development, the uncontrolled urban development of urban areas and the spread of urban sprawl within landscapes and around cities have greatly exacerbated urban problems and have led to poor decision making (Abdelhamid, 2006; sha'at, 2005).

In August 31, 2019, The Palestinian government announced the cancellation of land categories of Oslo as A, B and C, and it considered that all the Palestinian territories under the Palestinian Authority. The Palestinian Authority will grant building permission in all areas of the West Bank according to population growth and not based on Israel's classification of those areas (i24news, 2019).

Accordingly, efforts began to register lands in Area C, and thus trying to find appropriate mechanisms to register even the lands confiscated by Israel in the West Bank (Al-Deek, 2019).

The government also tried to cancel the governmental registration fees that were dependent on the value of the parcels to motivate the citizens to register their lands (Al-Deek, 2019).

## 4 - Chapter Four: Case study

### 4.1 Abu Falah Village

Abu Falah is a Palestinian village located in the north east of Ramallah Governorate. Its bordered by Turmus'ayya village to the north, Al Mazra' al-Sharqiya to the west, Al Mughayyir village to the east, and Kafr Malik and Al Mazra' al-Sharqiya to the south (ARIJ, 2012). The village population in 2018 was 4,394 (PCBS, 2018).

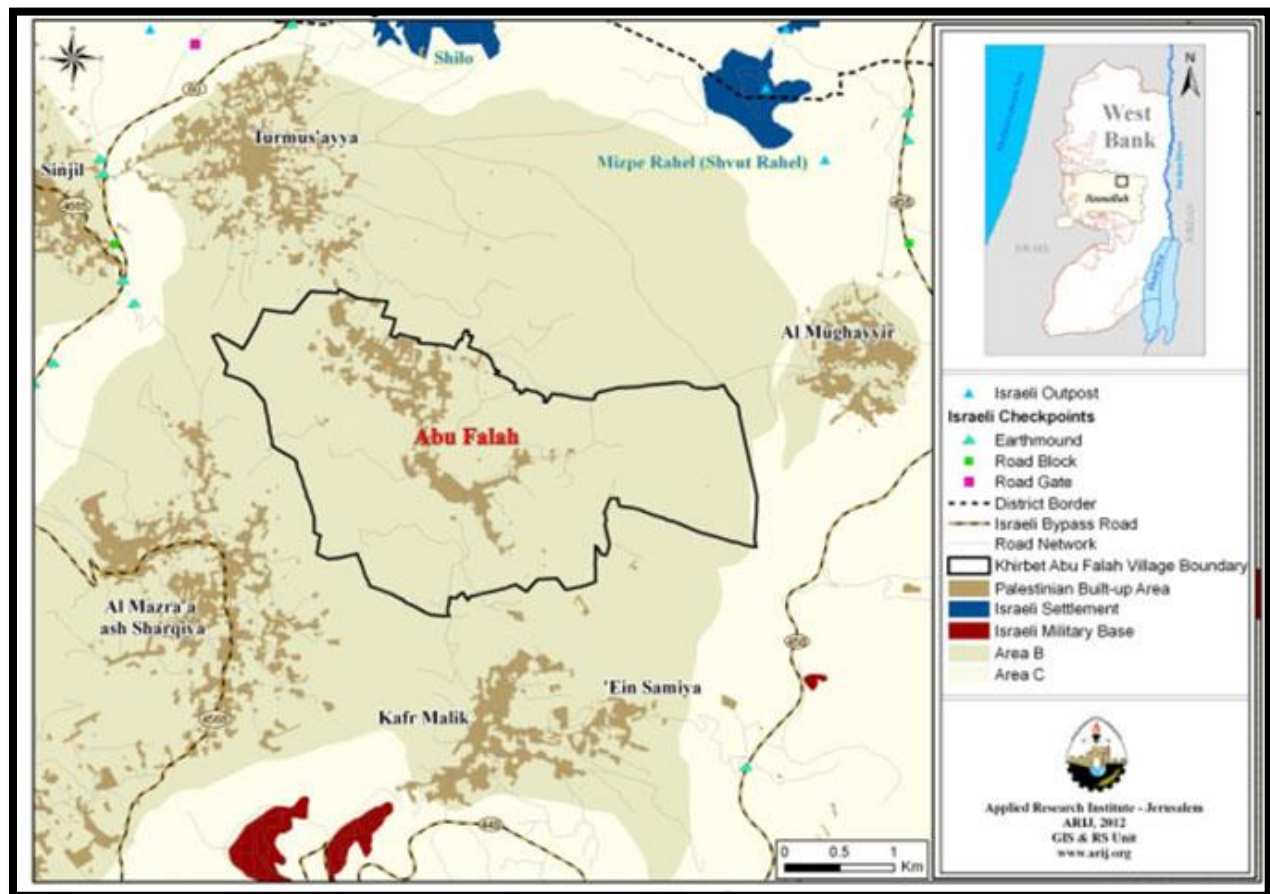


Figure (10): Abu Falah location and borders (ARIJ, 2012).

The village was established 250 years ago, its residents descend from the Jaradat family from Karak in Jordan (ARIJ, 2012). The village passed through all previous historical period and it was

affected by the policies and regulations of each period. The area of village is approximately 8,245 dunums<sup>7</sup>, about 691 dunums as residential services, 4,649 dunums arable land (ARIJ, 2012). In the British period and Jordanian period most of the village lands were registered and surveyed (Abu Falah Village Council, 2016). Most of the village land is in area (B) figure (10), which means that most of the lands are under the Palestinian authorities. During the Jordanian period Abu Falah village land had only 0.1% that was registered as state land figure (11). The land registration of 1963 covered most of the village land (Shalev, 2012).

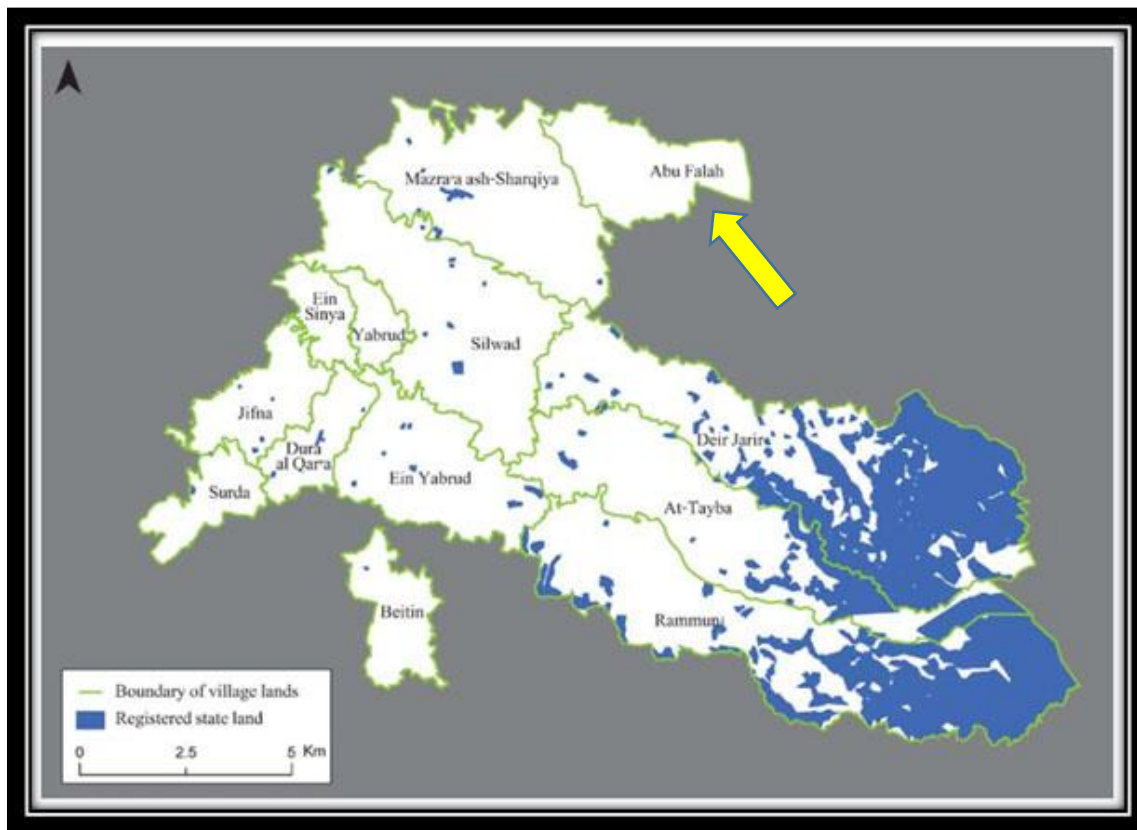


Figure (11): Land registered as state land during Jordanian period in Ramallah Governorate (Shalev, 2012).

<sup>7</sup> One dunum equals 1,000 square meters.



Maps have been prepared for most of the village lands after the land registration process in the Jordanian period. These maps divided the village to 9 blocks, and each block was divided to small parcels which were given a number and a defined border, figure (12) (Shoman, 2019).

The cadastral maps just determined the village root (old town) borders, parcels borders and the street's locations. The existed buildings were not identified, maps were only available as a hard copy and they have not been updated since 1963 (Shoman, 2019).

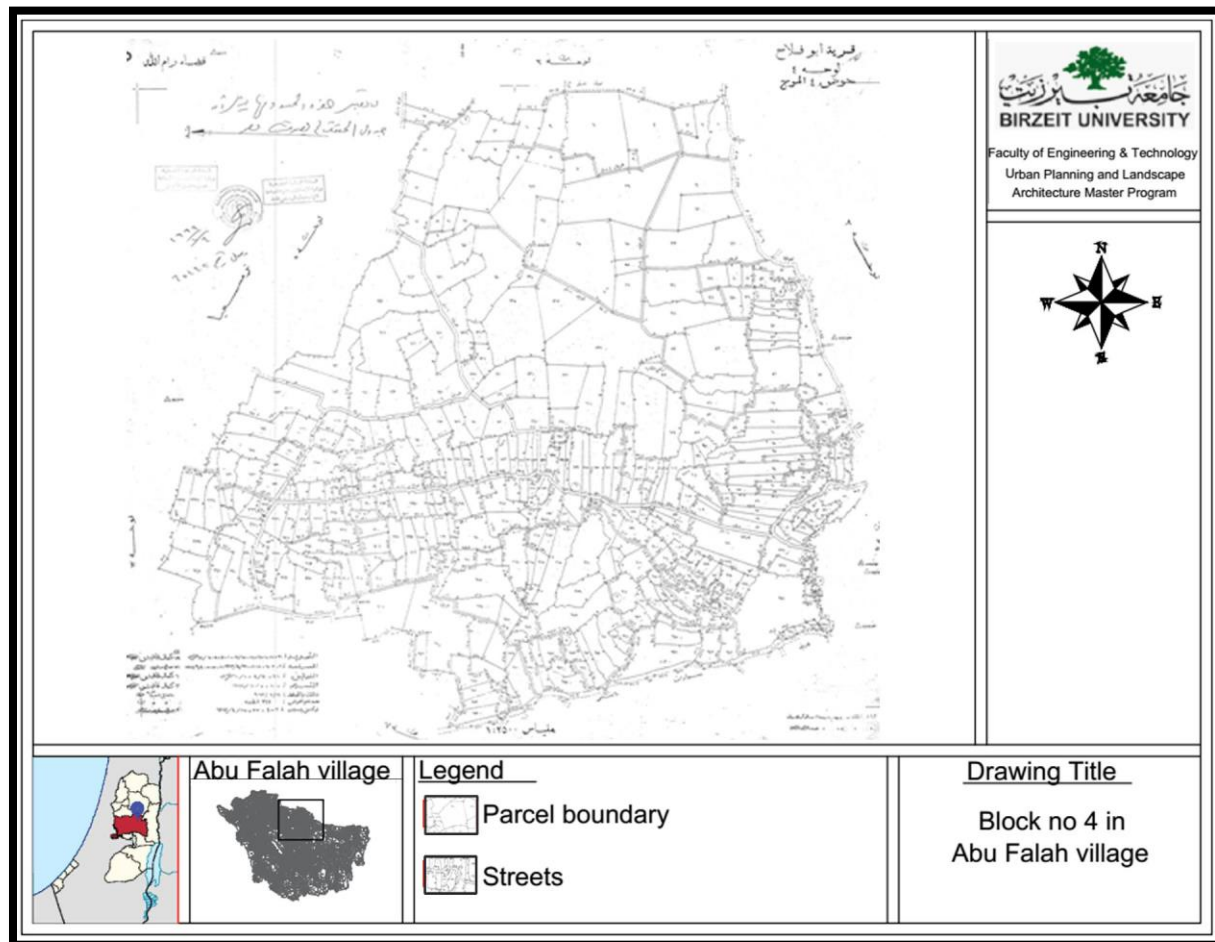


Figure (12): Block no 4 in Abu Falah village (Abu Falah Village Council, 2016).

On 2 July 2016, a project was initiated to modernize the land registration process in the village, it was one of the pilot projects where the Palestinian Land Authority tried to implement new

procedures in land registration process. This project relied on cooperation between the local population and the government. The purpose of the project was to finish the land registration in a cheaper, faster, and easier way and the project was managed and supervised by Palestinian government employees (Deek, 2019; Shoman, 2019).

The WLSC provide the council with the documents needed, while the council prepared the offices, computers, staffs. As the government cancelled the governmental fees for land registration, there was the cost of the fees imposed by the municipal and village councils based on the cost of the survey process and the rent of employees and registration offices. In Abu Falah village it was estimated as 20 Jordanian Dinar for each parcel (Al-Deek, 2019; Shoman, 2019).

The government held a number of workshops and community meetings to raise community awareness about the advantages of land registration. It also used the social media (such as Facebook ) to communicate with people , this process led to increased cooperation between citizens and government employees, and helped to complete the process in a fast and efficient manner (Shoman, 2019).



Figure (13): One of the community meetings with the village council in 2016(Facebook site, 2016).

The council appointed a project supervisor to coordinate with different stakeholder of the project and to communicate with the Settlement commission employees (Al-Deek, 2019; Shoman, 2019).

The Council also appointed local committees, the first one is the supporting committee which was responsible for solving the contentions and disputes between individuals. While the second one is the adjudication committee which was designated to identifying the parcel's borders and its owners (Shoman, 2019). The Council hired a surveying specialized firm to complete the surveying works, while (WLSC) appointed officials and director to supervise and guide the land registration and surveying process. The surveying process contributed in field measurements, calculations, and demarcations (Al-Deek, 2019).

The land of the village was divided into 11 new blocks depending on the old 8 blocks, each block with an area more than 450 dunum were divided to various quarters. Approximately 9600 dunums were surveyed within nearly ten months, the land registration offices documented all land ownership data on computers, prepared all the cadastral maps, and issued the land titles in the name of the new land owners (Al-Deek, 2019; Shoman, 2017).

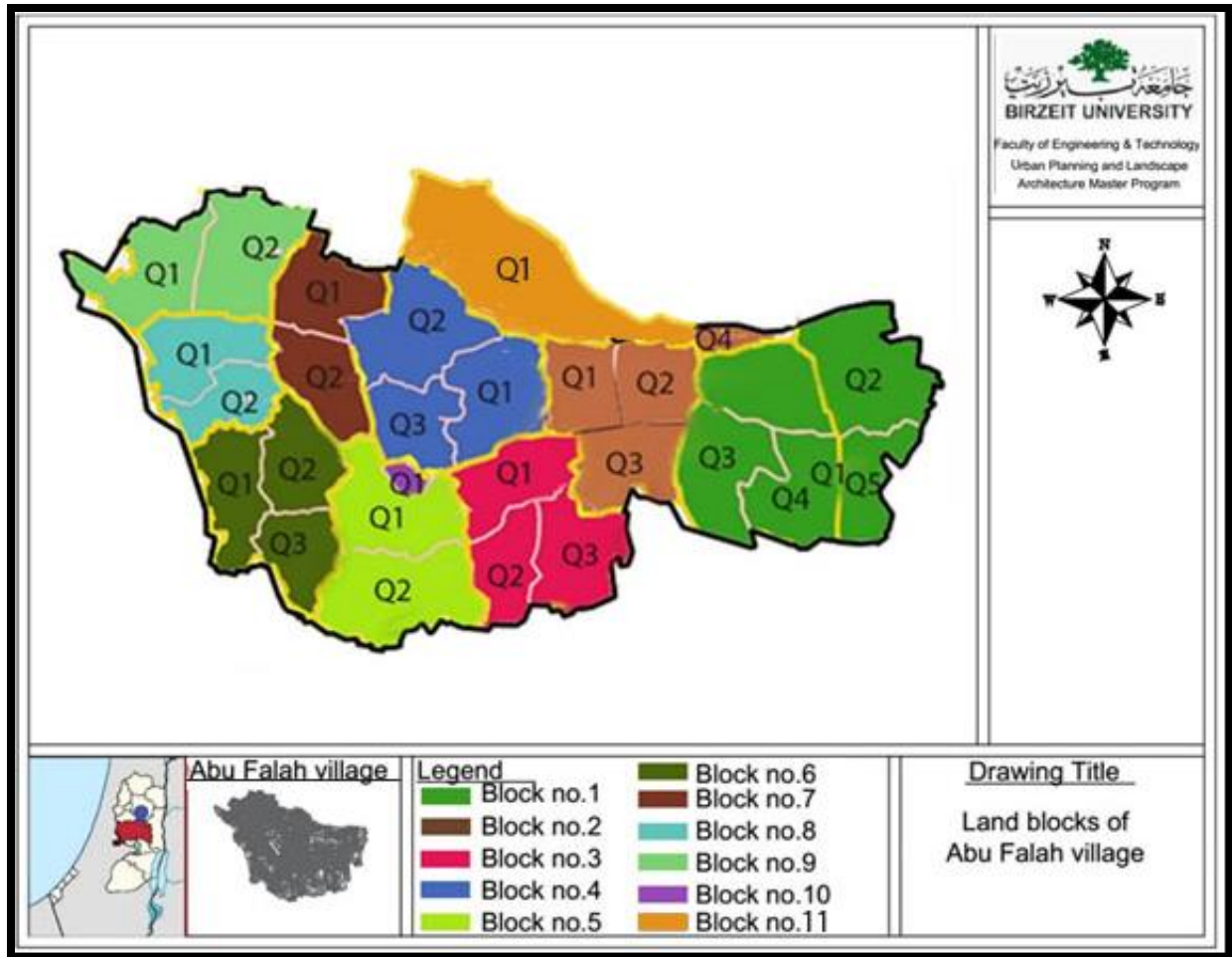


Figure (14): Land blocks of Abu Falah village (Author, based on cadastral maps from LWSC, 2019).

Lands have been registered, and about 90% of the land conflicts have been resolved, eventually, the necessary cadastral maps were prepared, and the residents received the land title at the end of the project (Al-Deek, 2019; Shoman, 2017).

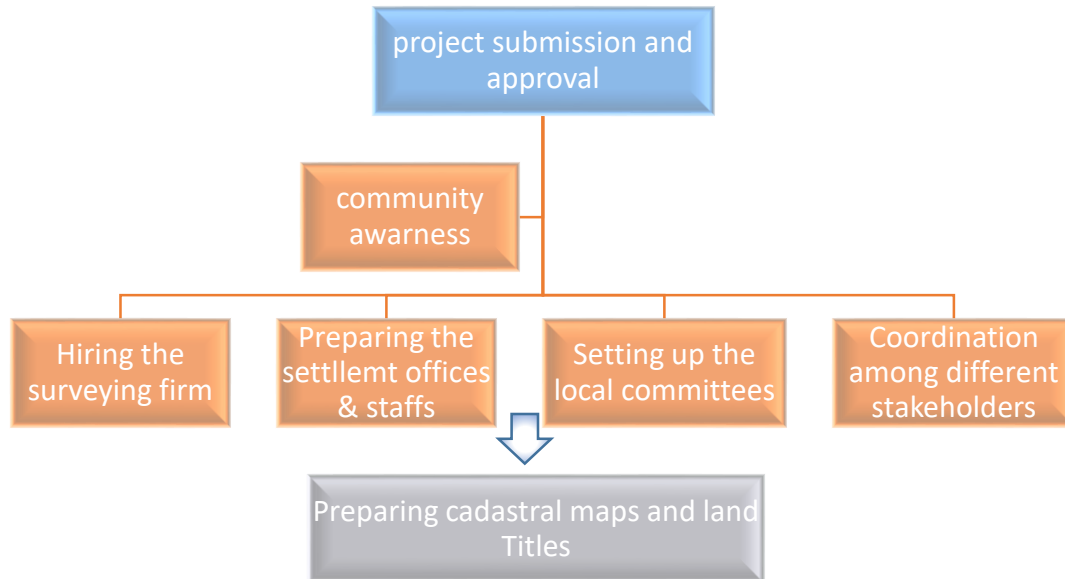


Figure (15): Land registration procedures in Abu Falah village (Author, 2019).

Previously, the old cadastral maps were used to prepare the master plan of the village, while the modern aerial images were used to identify the locations of the buildings on these maps. Unfortunately, parcels and building boundaries were unclear, figure (16). Subsequently, these maps were inaccurate. As a result, the planning process was inconsistent with the existing situation and it took a lot of time and effort.

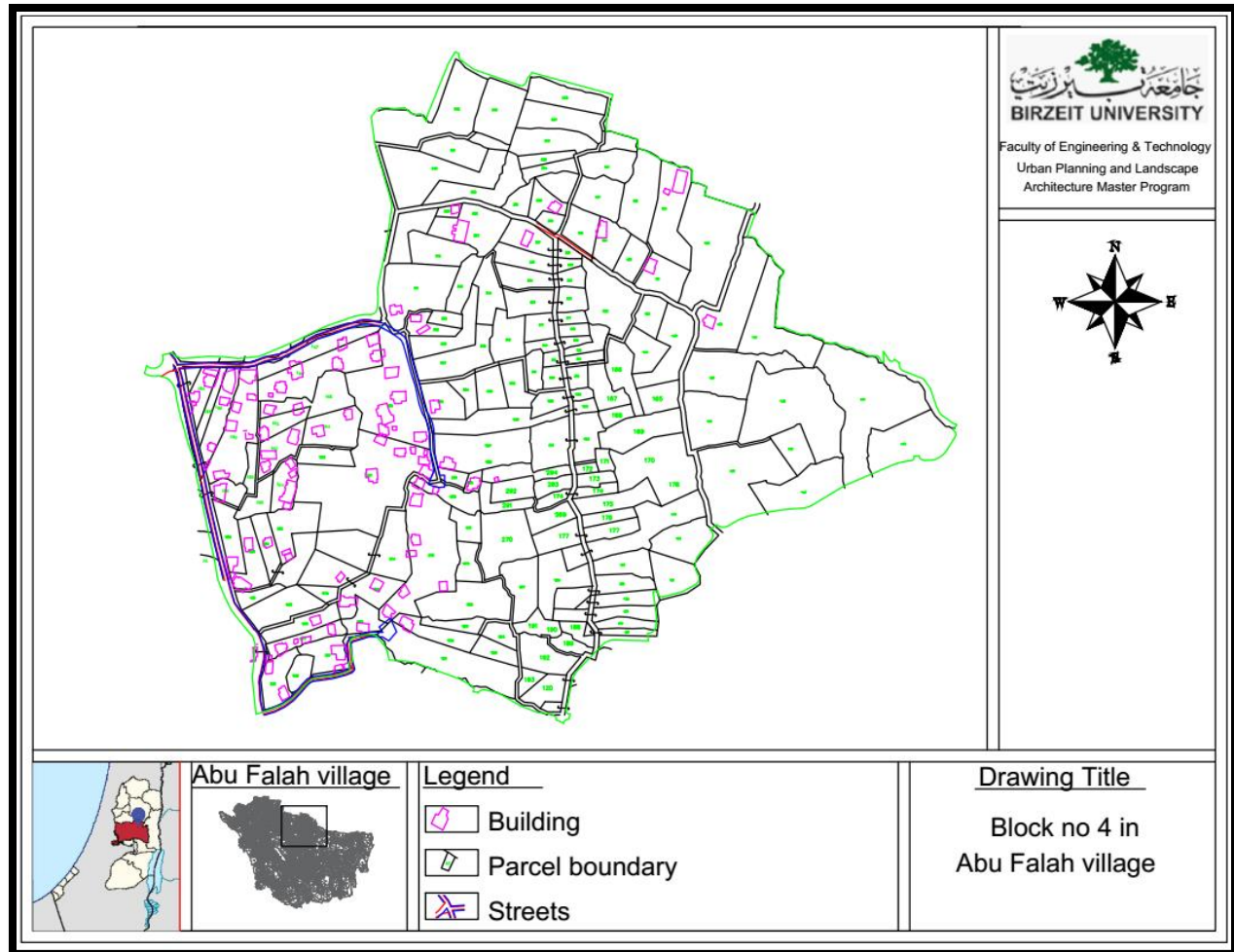


Figure (16): The old map of Quarter (2) Block no (4) in Abu Falah village (Abu Falah Village Council, 2016).

After the completion of the land registration process, serious work has been undertaken to improve the village's master plan<sup>8</sup> (which is not ready yet). New areas were added to the new master plan taking into consideration the natural urban expansion of the village, while the areas outside the master plan were classified as high-value agricultural land. The work on the new master plan has

<sup>8</sup> Many developing countries still rely on master plans to guide urban development and expansion, (called blueprint plans or end state plans). However, master plans are still a tool to guide land use in addition to the regulation, the development control system, and the building standard (Dube, 2013).

been carried out in accordance with the new cadastral maps, these maps showed the boundaries of each parcel, building, and streets, figure (17) and (18). This process has helped improve the planning process and make it easier and faster (Shoman, 2019).

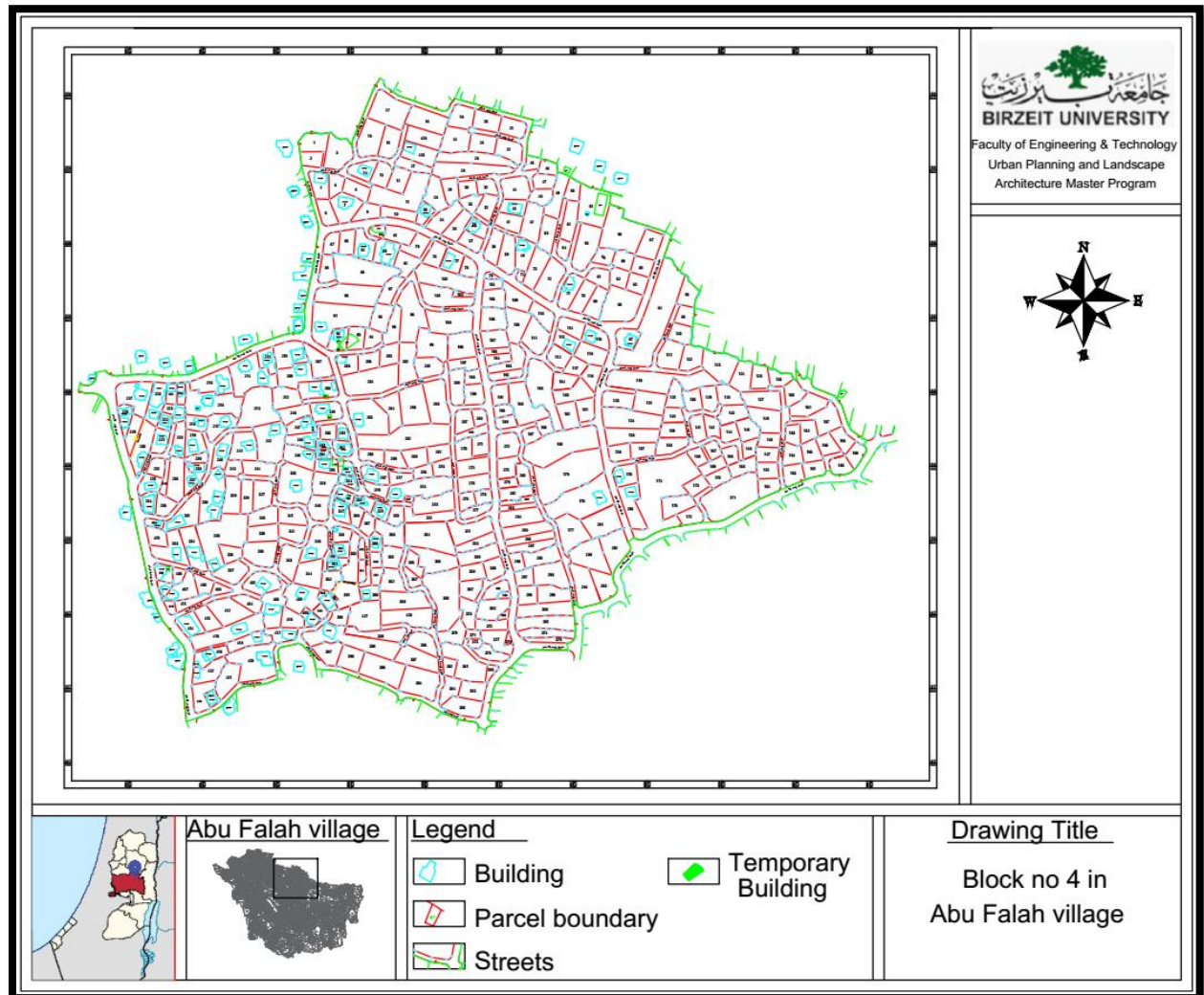


Figure (17): The new map of Quarter 2 Block no 4 in Abu Falah village (Abu Falah Village Council, 2016).

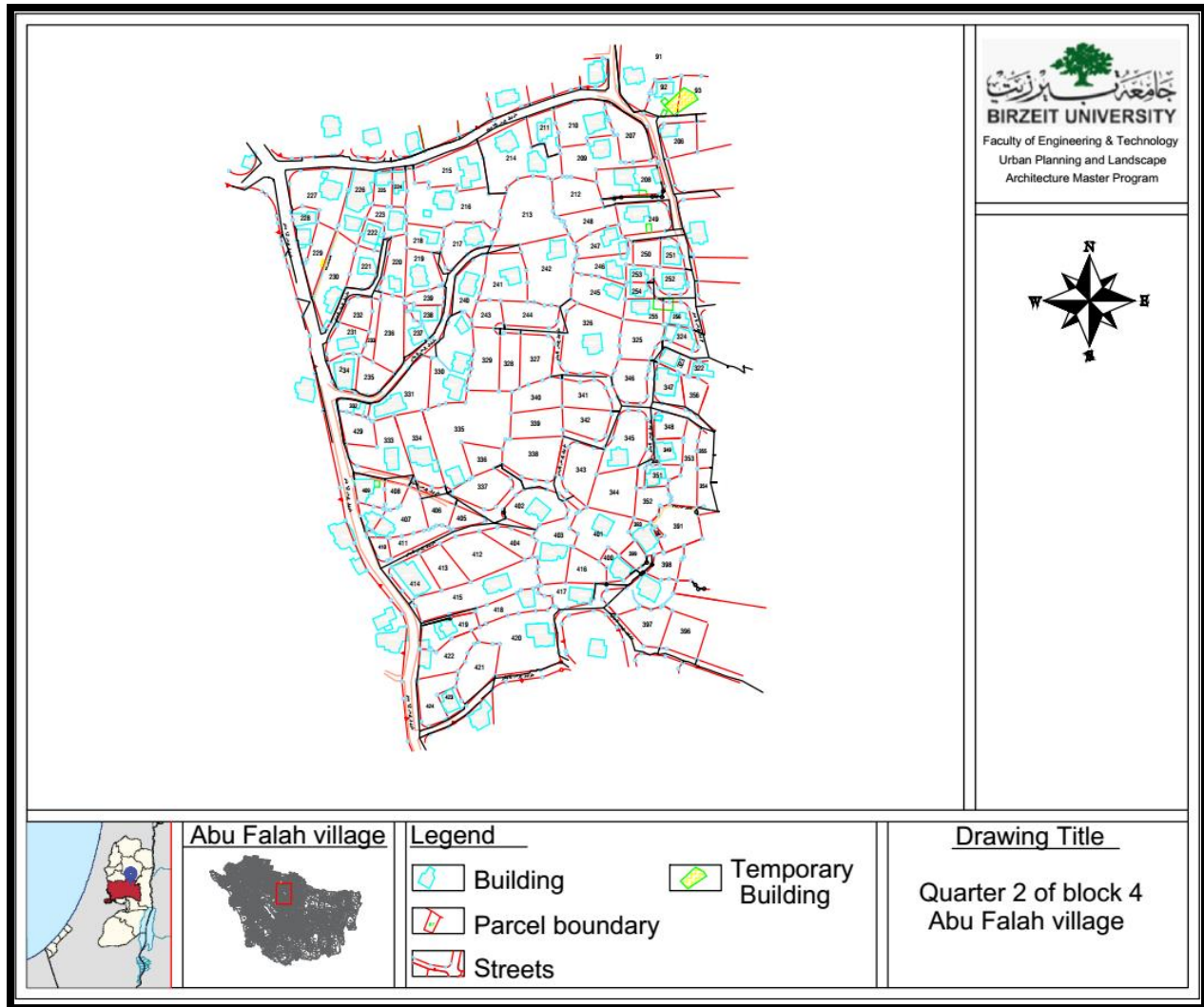


Figure (18): A part of Quarter 2 of block 4 in Abu Falah village (Abu Falah Village Council, 2016).

The land registration process helped to facilitate the process of granting building permits for new buildings, it gave the village council the ability to follow up the new building construction and prevent infringements on public rights. This process helped organize building construction in the village and prevent illegal structures in many places. Correspondingly, electricity and water services would be constructed only by obtaining a building permit (Shoman, 2019).



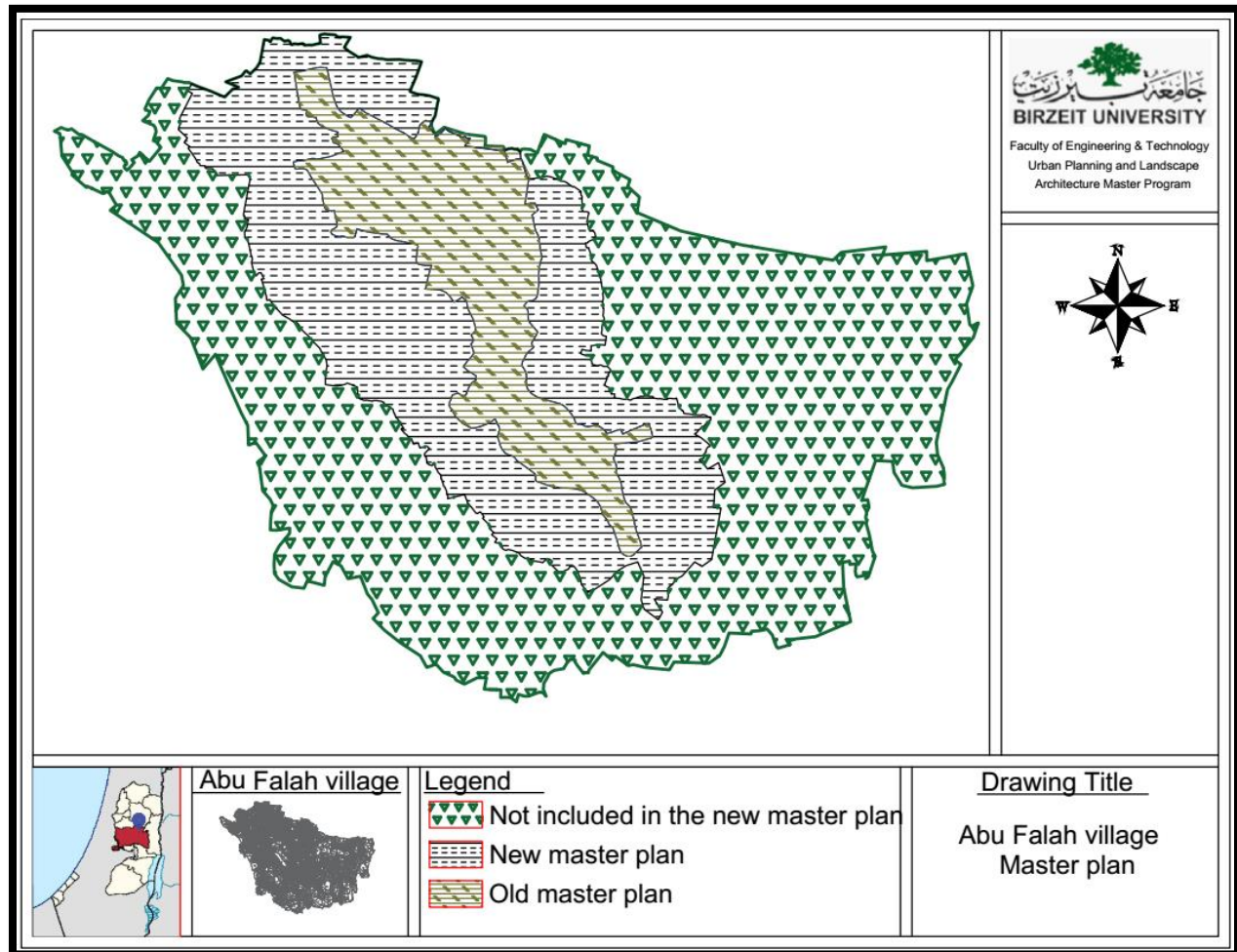


Figure (19): The boundaries of the old master plan, and the new master plan after the land registration project (Author, based on cadastral maps from LWSC, 2019).

Most of international donor's demand from the local councils to have full approval from the population to the development process, the land registration helped to achieve this by determining the boundaries of each land and guaranteed the rights of individuals. Therefore, in cooperation with the local community, the council was able to remove all infringements of buildings on the main streets and expanded them. Eventually, the land registration process helped to implement

several infrastructure projects, such as the renovation of the main street, agricultural roads, the main entrance, and the main water and electricity lines (Dais, 2019).



Figure (20): Removing building infringement on streets and paving agricultural roads (Abu Falah Village Council, 2019).



Figure (21): Expansion and asphaltting of the main and sub-streets (Abu Falah Village Council, 2019).



Figure (22): Developing and lighting the main entrance of the village (Abu Falah Village Council, 2019).

The power line was developed from the antenna to ground, and the water network and street lighting were renovated (Abu Falah Village Council, 2019).



Figure (23): Development of the power line from antenna to ground, and the renovation of water network (Abu Falah Village Council, 2019).

The Ministry of Agriculture has supported farmers with the different types of crops, as part of the greening program of Palestine (Abu Falah Village Council, 2019).

The land registration process has also helped to encourage investment and developed private sector projects because of the clarity and certain land rights. One of these projects is the suburb of Al-Mirmiya which was proposed ten years ago to develop a typical neighbourhood in the village. There were many objections from landowners on roads paving, which led to cancel the project. After the completion of the land registration process, the parcel's boundary and the paved road become clearer. The project has been submitted again, and it is now in the early stages of implementation. This project is one of the first residential projects that is implemented in the village as a typical planned neighbourhood, figure (24) (Shoman, 2019).

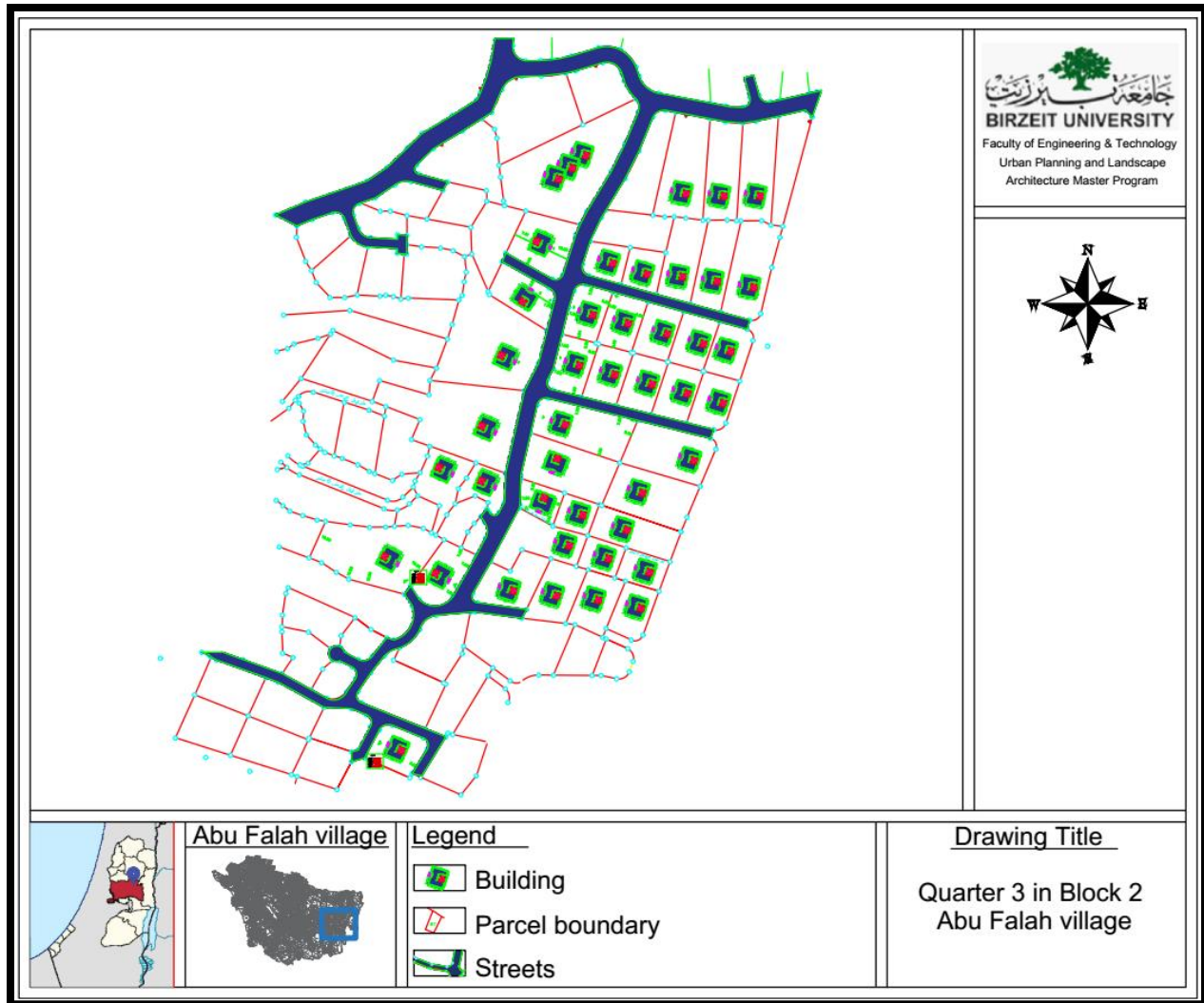


Figure (24): A part of quarter 3 in Block 2 in Abu Falah (Al-Mirmiya suburb site plan) (Shoman, 2019).

In like manner, the land distribution to the heirs and insuring land ownership for the new owners helped to resolve many conflicts. It also helped to empower women to obtain their land rights from their families, as 90% of the village women took their land portions (Dais, 2019).

After the land registration process a set of application forms for parcel description were issued, these forms used by the village council for selling and purchasing lands, thus about 40 application

forms were released by the end of 2017, while 150 application forms were issued in 2018, and until 6-10-2019 about 156 application forms were issued. These increased numbers of land description application forms indicated the activation in the land market in the village. Therefore, Land registration improved the land market in the village, as buying and selling have become more secure and safe (Abu Falah Village Council, 2019).

## 4.2 Bil'in Village

The village of Bil'in is located 12.6 kilometers west of Ramallah, It is bordered to the north by the village of Deir Qadis and Kharbatha Bani Harith, from the west by Neilin, Saffa from the south, and Kafr Neama from the east (ARIJ, 2012).

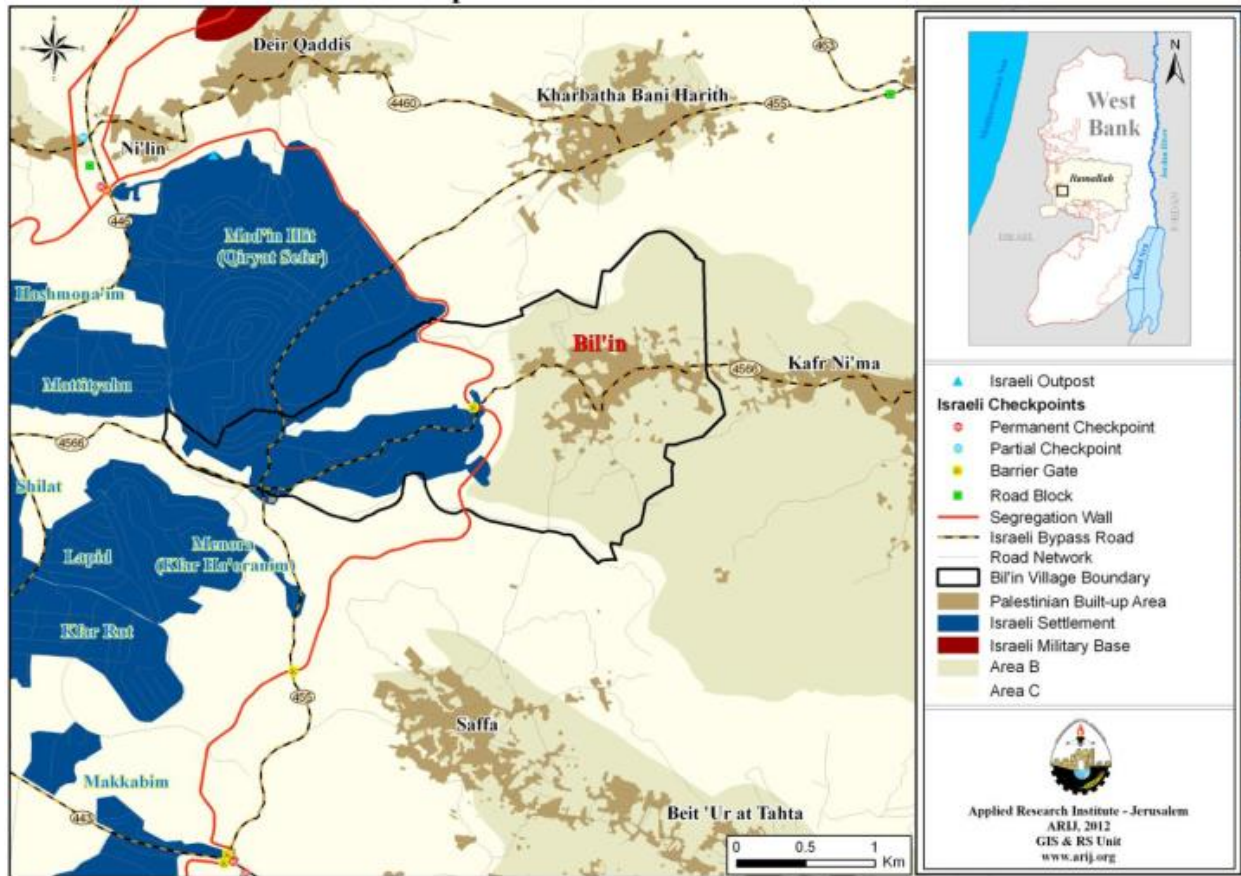


Figure (25): Bil'in location and borders (ARIJ, 2012).

Since 1996, Bil'in has been governed by a village council, which until today is in charge of running the village issues (ARIJ, 2012). The population of the village in 2018 is 2,137 (PCBS, 2018).

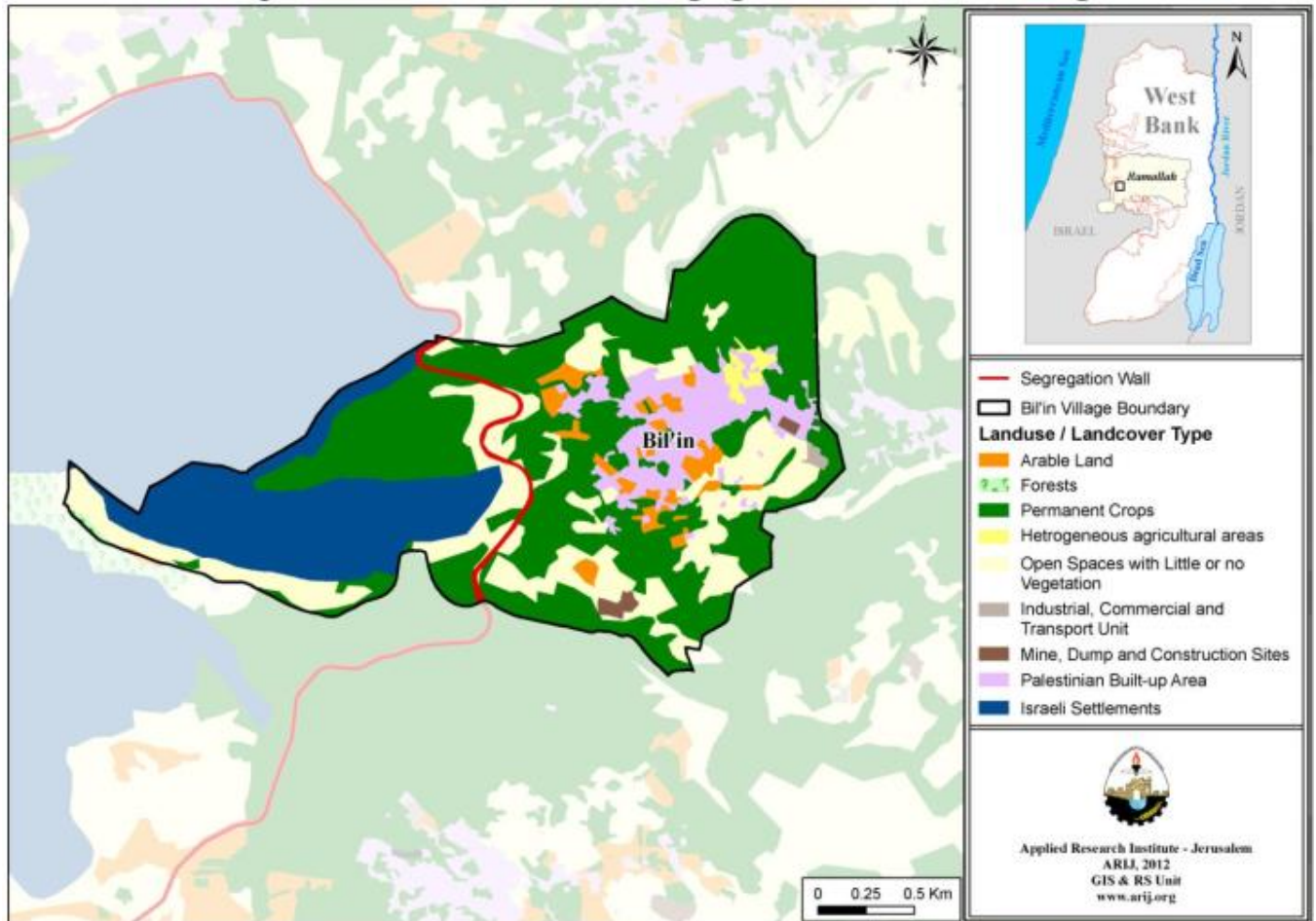


Figure (26):Bil'in land use land cover (ARIJ, 2012).

The area of the village is 4659 dunums, the agricultural land is 2351 dunums, while 390 dunums are allocated for residential services .the lands of the village are located in areas classified as (B) and (C) according to Oslo Accord, table (3). Most of the area (C) are agricultural lands or open spaces, so Palestinians are prohibited from construct any building there unless they obtain approval from the Israeli civil administration. Many of the area (C) lands were confiscated behind the Israeli separation wall<sup>9</sup>, and several military orders have been issued to confiscate many of the village's

<sup>9</sup> In 2002, the Israeli government decided to build a separation wall in the West Bank, its route was set on the border of several Israeli settlement in the West Bank, which led to the violation of many Palestinian human rights (Hareuveni, Stein, & Reich, 2012).



land. These lands were used to become a state land and to establish Israeli settlements (ARIJ, 2012).

Table (3): The distribution of village lands according to Oslo accord (ARIJ, 2012).

Area	Area in dunums	Percent of Total village area
Area A	0	0
Area B	2396	51.4
Area C	2264	48.6
<b>Total</b>	<b>4,660</b>	<b>100</b>

The confiscated land is estimated at 60 % of Bil'in land (Purkiss, 2013). The separation wall and the land confiscation in parallel with the population increase led to the scarcity of the Bil'in land, resulting in the reduction of commercial investment projects and the development of agriculture or housing projects, this situation hindered the urban development process of the village (Hareuveni, Stein, & Reich, 2012).

In March-2017, the land registration process in the village of Bil'in started, this process aimed to prevent the confiscation of more lands by Israelis, preserve village's land, and improve property ownership (Mansour, 2019). The village lands were not recorded at any previous stages (Ottoman, British or Jordanian), this was the first land registration project in the village. Thus, the land registration process was new for the community, therefore the council tried to take advantages from the previous experiences of other villages like Abu Falah. The most important points that were implemented in this project were initiating local committees and public awareness of the project's importance (Bil'in village council, 2019).

The council was unable to provide the necessary equipment for the project, so the council has submitted a tender for conducting the survey work. The Council added a new committee of lawyers from the village people who were familiar with the legal situation and land prices. These lawyers have prepared all the required documents and operated the registration process in an efficient and quick manner. These procedures facilitated the land registration process in the village and helped to complete the process successfully and efficiently (Mansour, 2019).

The cost of the fees imposed by the village councils based on the cost of the survey process, and the rent of employees, and registration offices was estimated as 80 Jordanian Dinar for each parcel (Mansour, 2019).

As for the lands behind the wall, many initiatives have been put forward to register them in the name of their owners, or as Waqf land. Many proposals were suggested to register these lands in the name of the Palestinians. It was very difficult to access or survey these lands because it included Israeli settlements, so the council and the WLSC suggested using the Aerial images to show the land's location for each owner. The purpose of this process is to preserve these lands significantly without going into the traditional steps of the land registration process (Bil'in village council, 2019).

The Council has submitted a tender for the completion of the survey works by a specialized surveying office, the land was divided to 11 blocks, Bil'in was divided into blocks that were divided into parcels directly without a need to divide them into quarters (because the area of their blocks range from 450 dunums to 700 dunums), as shown in figure (27) (Mansour, 2019).

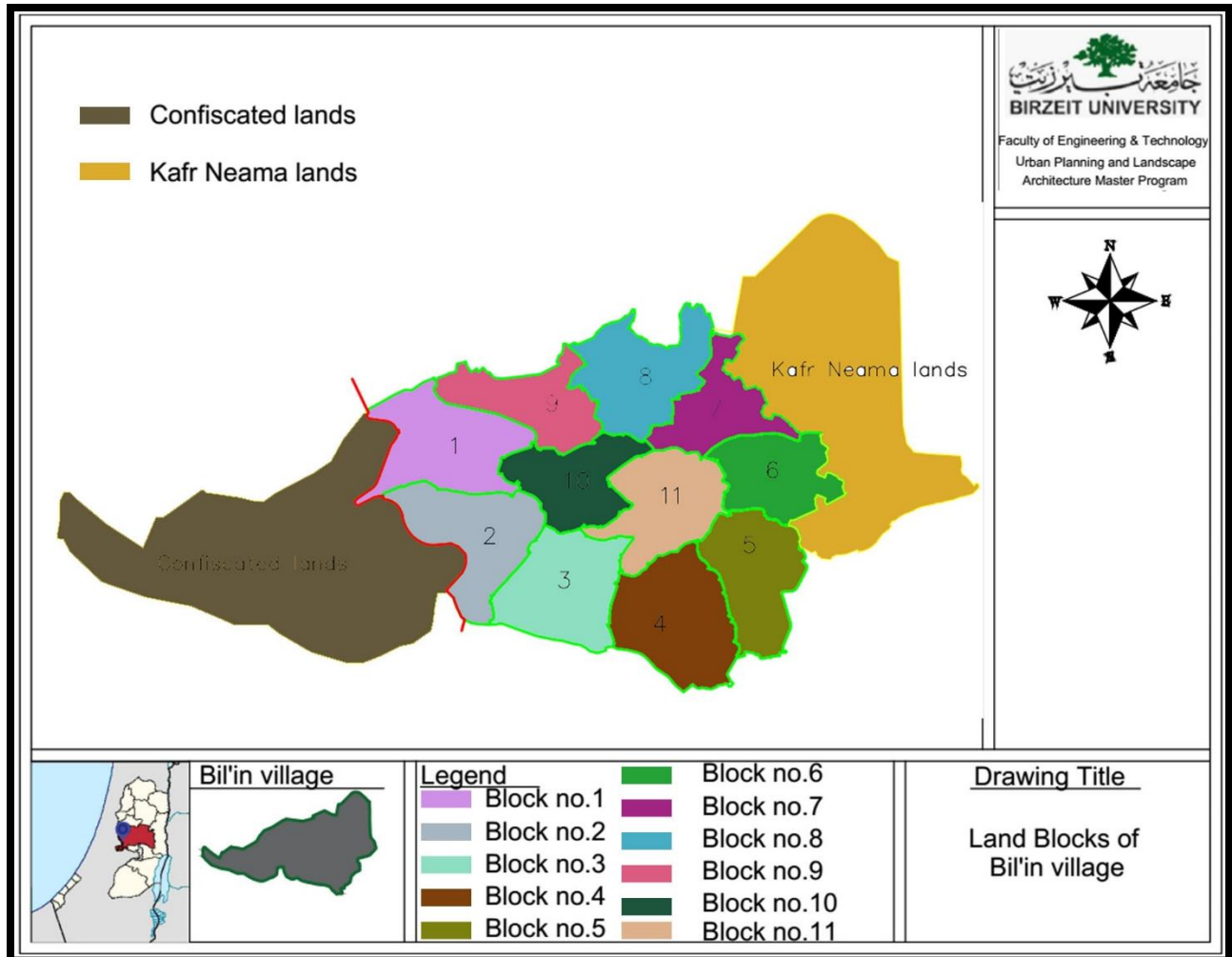


Figure (27): Land Blocks of Bil'in village (Author, based on cadastral maps from LWSC, 2019).

As a result of the land registration process, 11 blocks were surveyed in six months, while the registration document (land title and cadastral maps) were finished in 25-7-2018 (Mansour, 2019).

As shown in figure (28) the cadastral map of block no. 2 showed the boundaries of buildings, the type of property, the boundaries of each parcel, and existing and proposed streets.

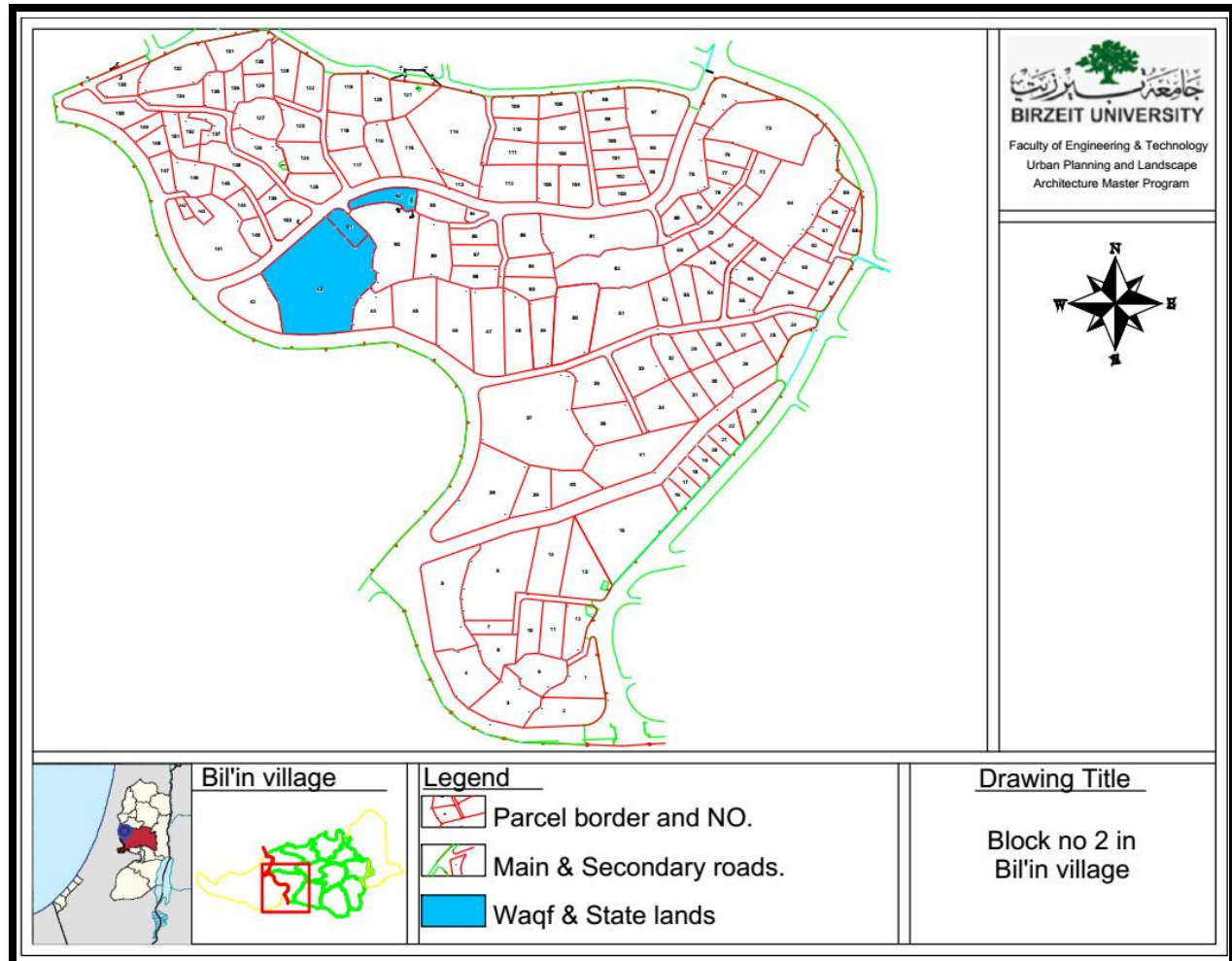


Figure (28): The cadastral map of block no 2 in Bil'in village (Author, based on cadastral maps from LWSC, 2019).

According to Mansour (2019), there were several factors that helped land registration. The most important point was the work of the local committees, which helped to resolve the various disputes among the residents, in addition to the committee of lawyers. The project coordinator who follows-up with the WLSC, the population, and the village council helped to accelerate the land registration process. Community meetings and social media, such as Facebook, have also contributed significantly to communicate and cooperate with the population. The WLSC team was also provided by engineers, lawyers, a settlement commissioner, and a data logger.

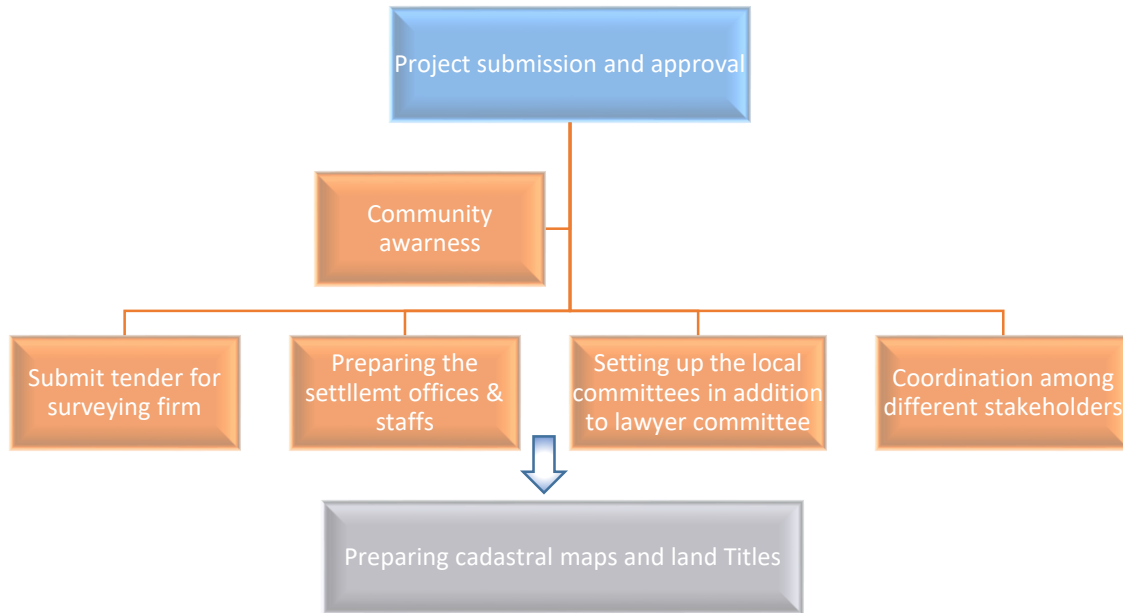


Figure (29): A model of the modified land registration procedures in Bil'in (author, 2019).

The land registration procedures were flexible and could be modified according to each village's economic and social situation. Thus, the councils could propose new committees, or appoint new staff who commensurate with the needs and capabilities of each village.

The land registration process produced clear cadastral maps of streets and land parcels in the village. The existence of the new land divisions and the new proposed streets require updating the master plan of the village based on those changes. Therefore, the village council has worked to modify the master plans to be more accurate and closer to reality. About 600-800 dunums were added to the new master plan to accommodate the future urban growth and the population needs, figure (30) (Bil'in Village Council, 2019).

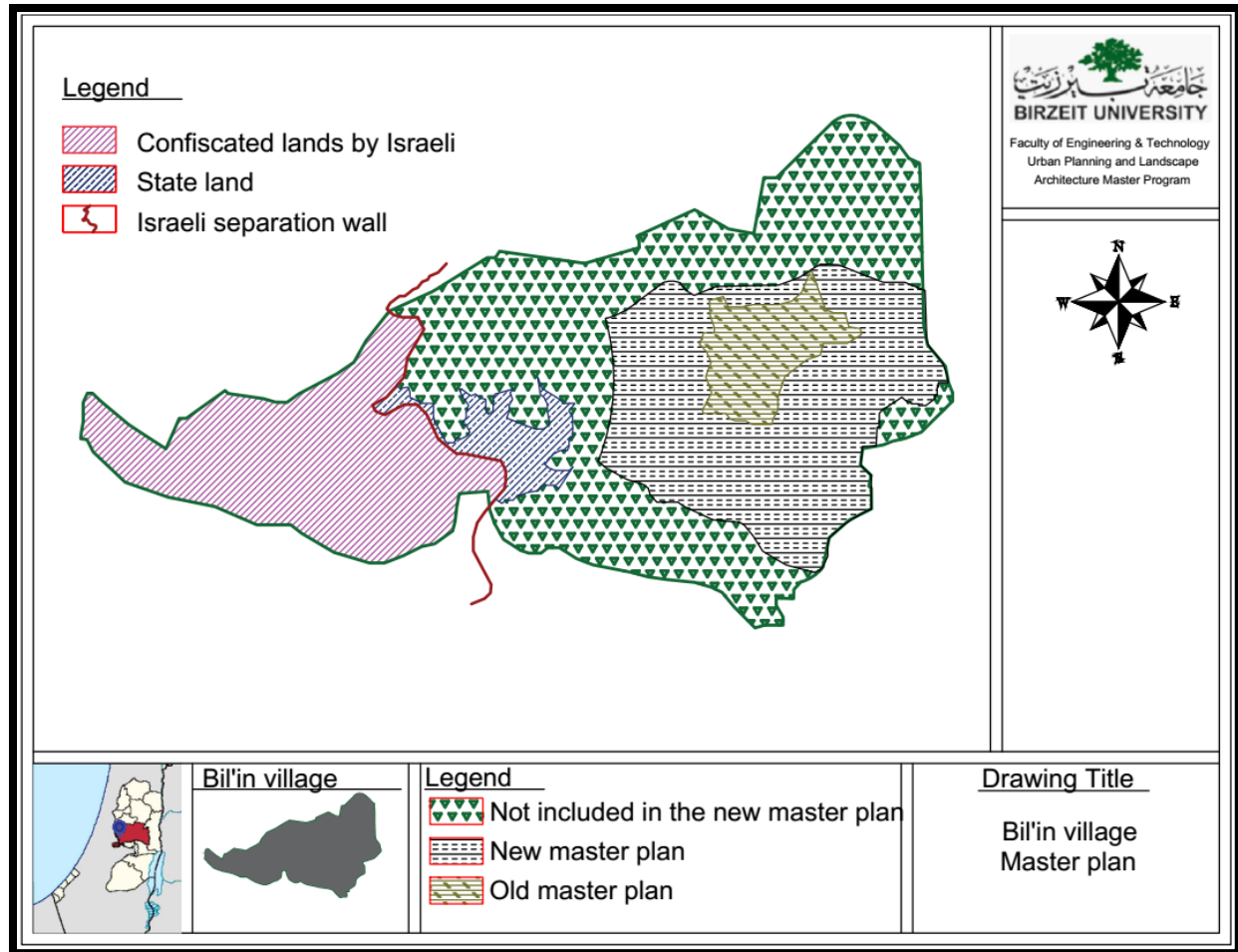


Figure (30): The boundaries of the old master plan and the new master plan after the land registration project (Author, based on cadastral maps from LWSC, 2019).

The proposed roads according to the cadastral maps have helped to reach all the lands parcels, a lot of agricultural roads that have been in dispute for decades have been opened. The clear boundaries of each parcel and the agreement between the landowners facilitated this process. The Council seeks to pave the streets by obtaining funding from the government or donors, so one of the most important conditions of these parties is the absence of any objections from the population on any development process or change in road networks. The land registration process resolved many disputes between citizens and helped the local government to obtain approval to finance a

number of development projects in the village (Bil'in Village Council, 2019). Several housing projects have been proposed, but none have been implemented due to lack of sufficient funding from the government, and the inefficient private sector in the village (Mansour, 2019).



Figure (31): Pavement of agricultural roads in the Bil'in village according to the new cadastral maps (Bil'in village council, 2019).

The cadastral maps showed all the boundaries of land, roads, and public lands, this has helped to organize the building construction process and preserve the public rights. As any infringement on the public right is obvious now and the council has the power to remove any illegal constructions (Bil'in village council, 2019).

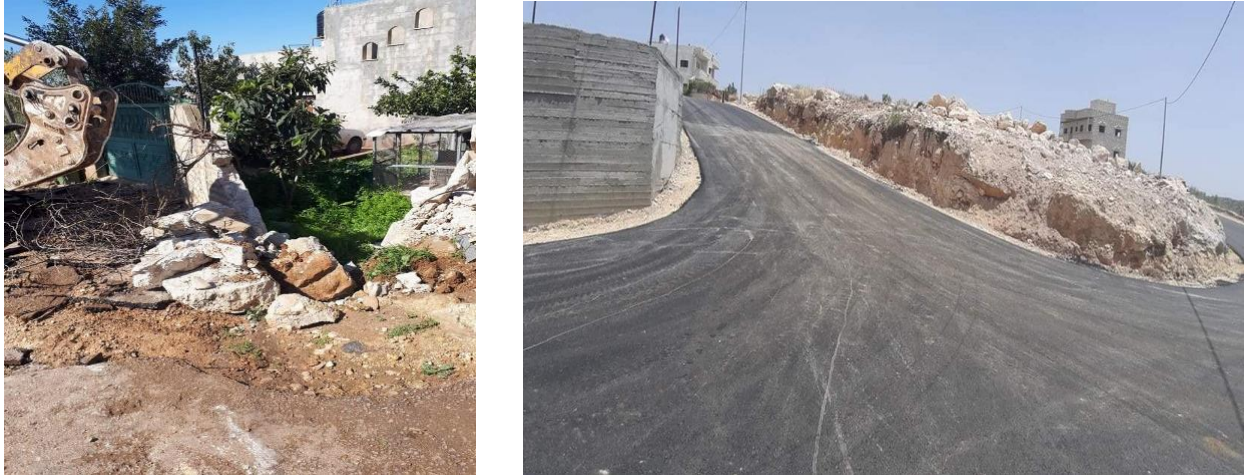


Figure (32): Elimination of infringements of buildings on the streets and asphaltting some of the sub-streets (Bil'in village council, 2019).

Ensuring land ownership for individuals made the land sale and purchase more secure, which led to the revival of the land market in the village, it is also necessary to issue all land documents from the village Council for any land selling process, this helped in monitoring land market process, and made it clear and formal, and thus preventing any diversion of land to the Israeli. Thus, application form of the parcel description should be issued by the village council in cases of sale and purchase lands, about 27 application forms were issued in 2018, and until 9-10-2019 about 62 application forms were issue (Bil'in village council, 2019). The number almost doubled in 2019 and this indicates the activation of land market in the village after the land registration process.

The village was included in the project of greening Palestine, which included the provision of many agricultural projects and the provision of various trees for farmers (Bil'in village council, 2019). The land registration process gave women in the village their rights in land heritage, they obtained it either by law or by the intervention of local committees, this has helped to resolve many disputes between the villagers and thus achieve social peace (Bil'in village council, 2019).



## 5 - Chapter Five: Analysis and Discussion

During the previous years, Palestinian urban areas (villages and cities) underwent a large urban growth in the built-up areas. Most of the buildings were concentrated in the Old town. In the past few years, the urban areas were expanding rapidly at the expense of agricultural lands. The large population growth needed a new urban planning system to accommodate their needs. Lack of infrastructure, urban expansion at the expense of agricultural land, Social, economic, and demographic changes required development in the current urban planning method. The urban planning process required an integrated, reliable, and up-to-date information. as a proactive and transparent urban planning system will transform urban areas into well developmental areas for the citizens.

The large population increase, the Israeli occupation, urban expansion problems have made the land a scarce resource. These factors increased the conflicts and disputes among the population, which necessitated the need to improve the security of land tenure, and eventually developing and improving the land registration system in Palestine.

Improving living is not limited to housing conditions, it also includes providing access to various facilities in the region and required multi-line networks to meet the needs of urban management systems (such as transport, water, and electricity coupled with population growth). The provision of the locations of these networks (whether water or sewage lines, electricity, and telecommunications systems) needs up-to-date cadastral maps and accurate land database. The spatial distribution of infrastructure is essential data for spatial planning.

The old parcel map doesn't indicate the right number of the current owners, and it doesn't demonstrate the great changes that have occurred to the land distribution according to the new

heirs and the new changes in the urban development of the village, as it is shown in figure (33).

So, these maps considered inaccurate and unreliable in any planning process to develop the village in the future.

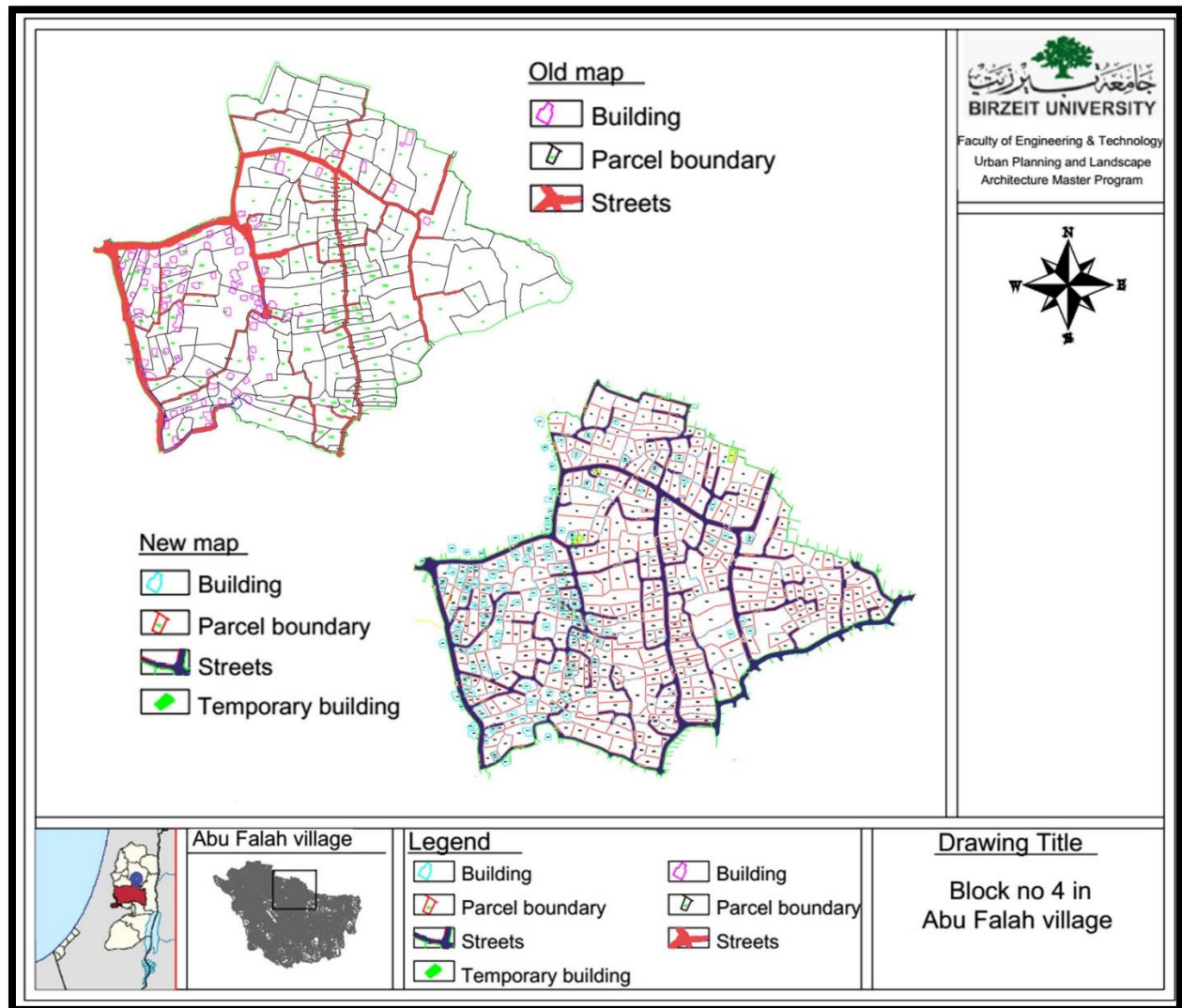


Figure (33): The old & new map of Quarter no 2 in block 4 of Abu Falah village (Author, based on cadastral maps from LWSC, 2019).

The old maps that were prepared in previous periods were characterized by significant differences between the real features of the land and the drawings in the maps, as the division of land and new

streets was not accurate. The new maps demonstrated an increase in the number of parcels and proposed streets. The decision-making process cannot rely on relatively inferior maps.

The spatial data of most of the Palestinian territories was not available with great accuracy. The existing data was not identical to reality, so it was unreliable and there was no unified spatial model. The new land registration process has helped to establish a systematic information system for managing land data, creating a database that helped in making development decisions, and improving land management.

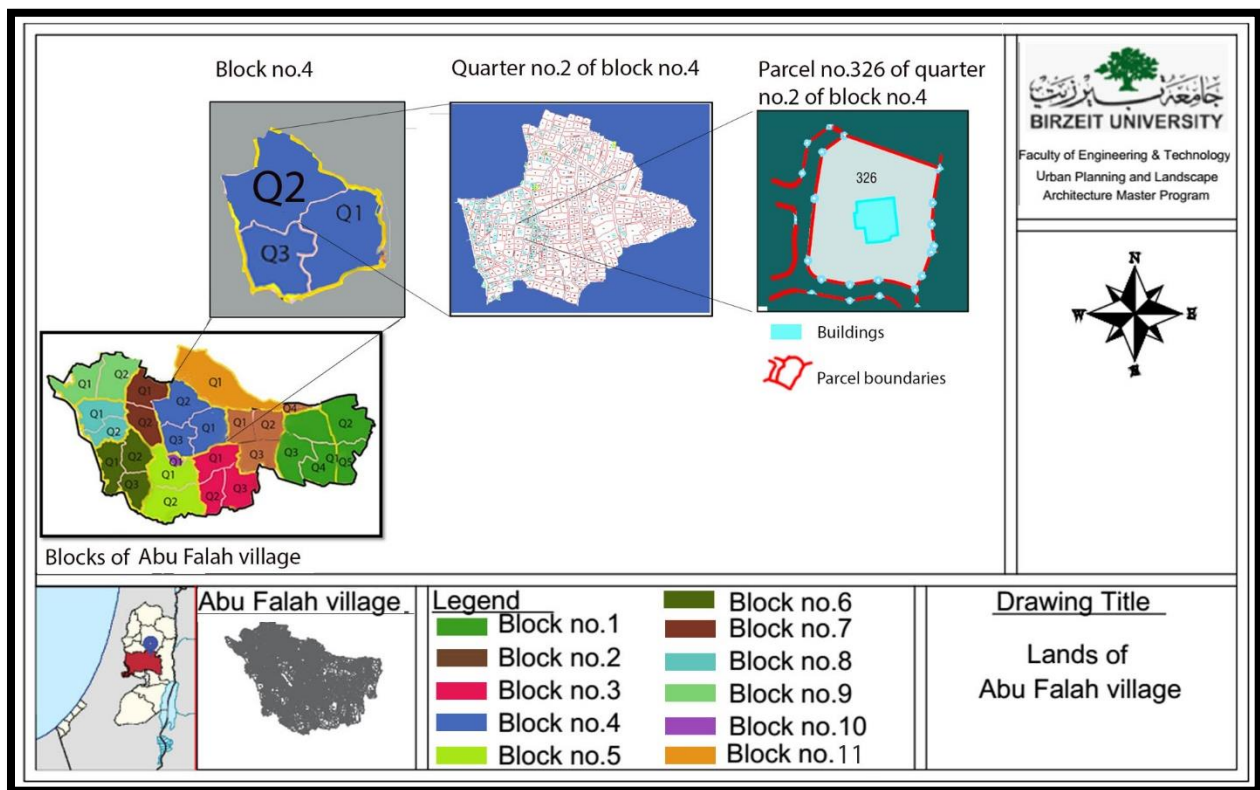


Figure (34): The hierarchal series of land units of Abu Falah village (Author, based on cadastral maps from LWSC, 2019).

The maps of land registration of 1963 in Abu Falah village that were implemented in the Jordanian period, consisted of 8 blocks, and each one has consisted of a group of parcels. Prior to the commencement of the current land registration processes, a hierarchical framework for land distribution was created. This provided a new framework for recording information and data. As shown in figure (34), Abu Falah village currently contains 11 blocks of different areas and each one is divided into quarters that contain a number of parcels. While Bil'in is divided into 11 blocks that are divided into parcels directly without a need to divide them into quarters.

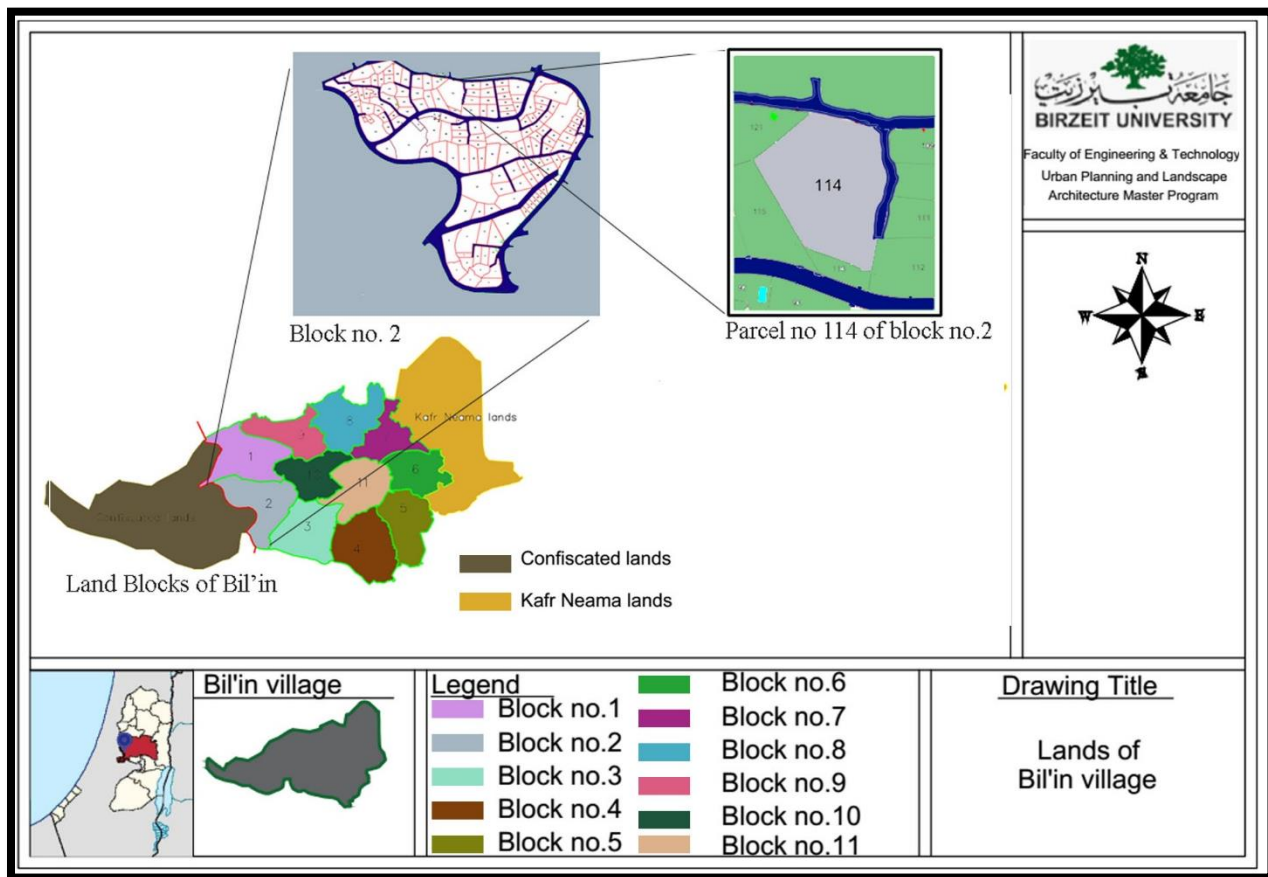


Figure (35): The hierarchal series of land units of Bil'in village (Author, based on cadastral maps from LWSC, 2019).

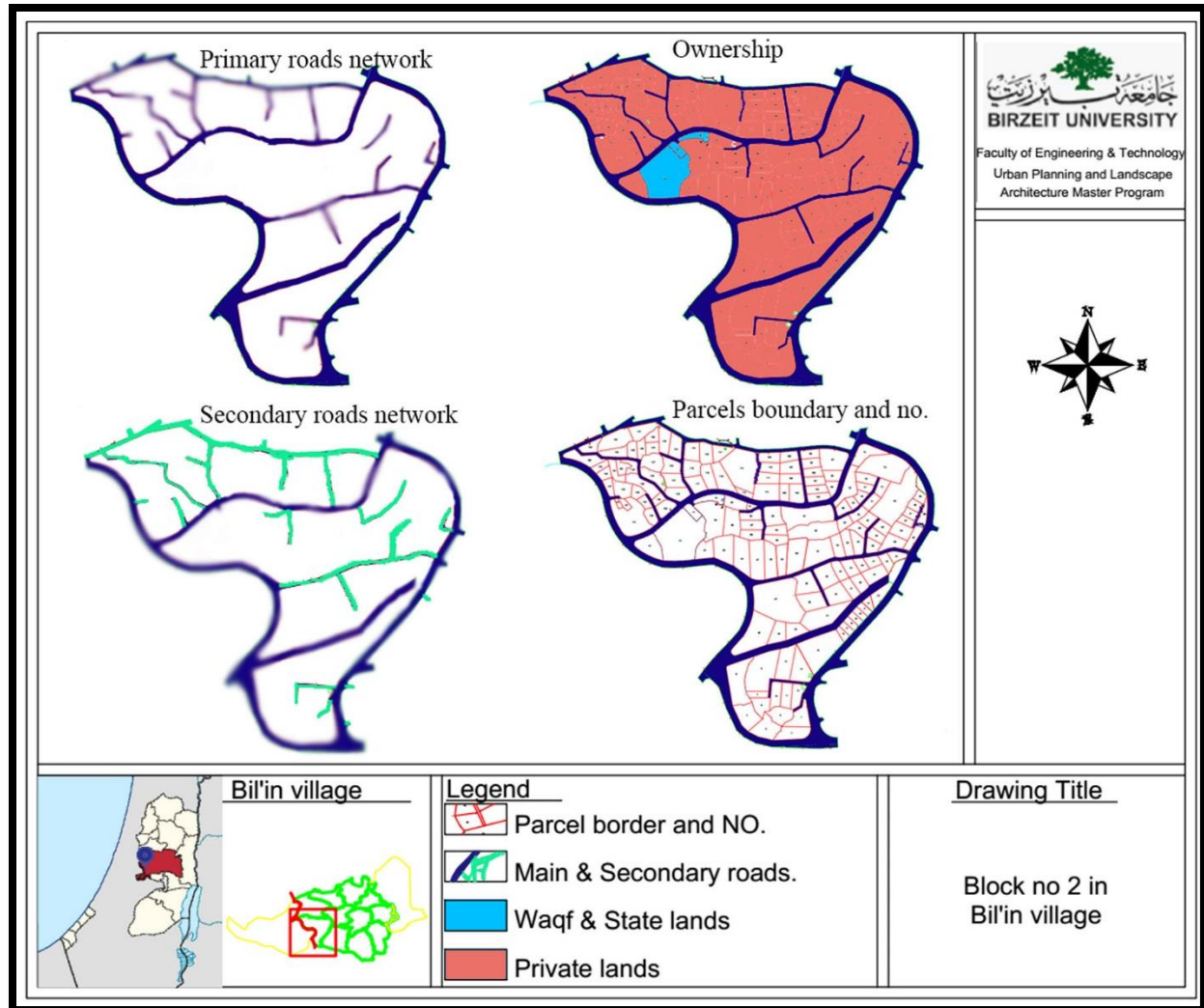


Figure (36): Block no. 2 in Bil'in village (Author, based on cadastral maps from LWSC, 2019).

As shown in the figure (36), the block is a spatial entity surrounded by roads, it can be considered as an administrative unit for data logging that supports spatial planning with sufficient and high accuracy information, each block included the main and secondary roads within the sub-regions.

A spatial model can be adopted based on the division of land registration process as follows:

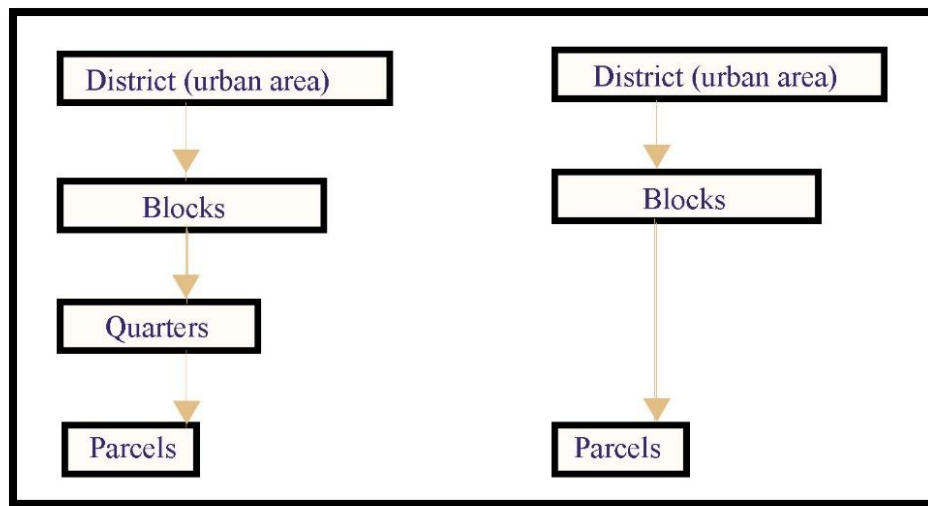


Figure (37): Spatial planning entity-relationship in Abu Falah village in the left and in Bil'in village in the right (Author, 2019).

This model created a clear (entity-relationship) of the existence (one to multiple-relationships) to become an integrated model, this model linked the situation on the ground and the requirements of land management at the level of parcels and buildings to the district level (urban area).

The process of dividing the city into smaller units is important in planning activities. In a well-designed information system, geographic units can be combined for general purposes such as similar land uses and census areas. It is possible to integrate the spatial information with data sets from different government agencies to make appropriate decisions and determine land uses based on integrated and factual studies. Spatial statistical units and spatial data models considered as key parts of data integration. Basic demographic information combined with spatial data helps to derive important indicators such as population density and per capita living space. Dividing lands into smaller units helps to identify heritage areas, environmentally sensitive areas, the needed

irrigation, water, and electricity projects, and thus it will identify urban development areas and land integration projects. The division of land into small units helps to facilitate the analysis of economic, demographic, social, and economic aspects to assist in the integrated and comprehensive planning process.

Many data are now referred to the spatial aspect of parcels, land tenure data, land value, and construction characteristics are recorded at parcel level (which is the smallest spatial unit in the district). Information is collected at the individual level from the lowest unit in the land (parcels) to the gradient outside the quarters and then block to the whole village, these three units provide an integrated framework for information gathering. These divisions are a simple spatial framework for data collection, classification, and hierarchy.

This hierarchical process in the division of the urban area helps in the spatial planning process so that it provides plans detailed enough in spatial accuracy and integrated with the land administration data, later it can be relied upon in the census and administrative divisions in the district. Eventually, urban growth will take place in these new urban sub-regions and quarters that will be identified clearly to be new development zones.

Urban development is a complex process that relies on interrelated temporal and spatial trends, multiple decision-makers, and complex socioeconomic patterns, so the urban process is a data-driven process. The process of registering land and paying attention to land ownership, land use, and land value is an important part of land management, it is considered an efficient tool of land information system. Data related to buildings, parcels, quarters or blocks are relied upon conducting comprehensive analysis, as part of an integrated planning process that requires social, environmental, physical and economic information, these data can be used to calculate population

density, individual living space, and land-use efficiency. These indicators are the basis of forecasting and assessing urban development and helping in decision-making in the spatial planning process. Therefore, creating an appropriate spatial model helps to group different data and then categorize them in a hierarchical and easy manner to be assessed and analysed.

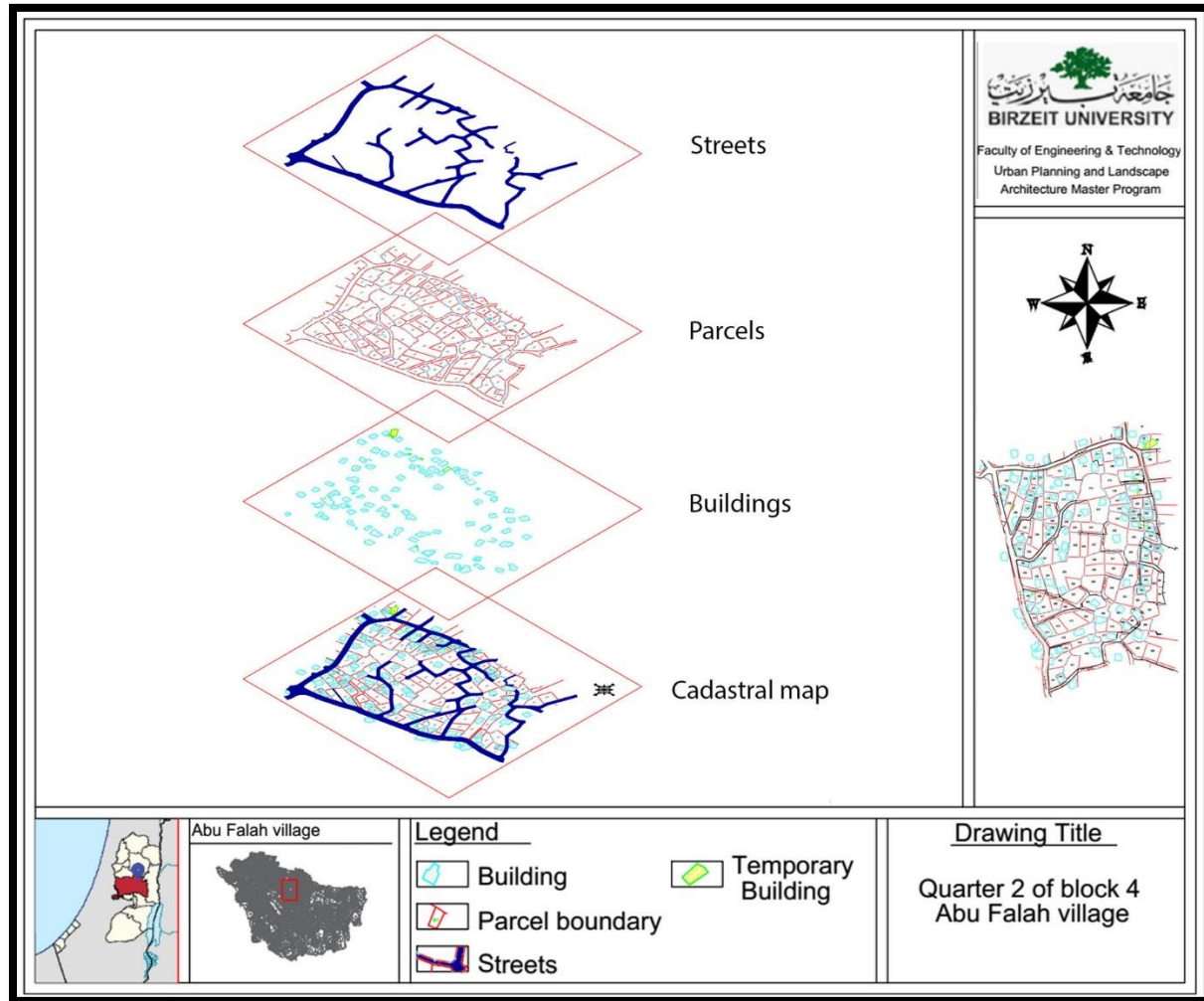


Figure (38): Part of quarter no.2 in Block no.4 in Abu Falah (Author, based on cadastral maps from LWSC, 2019).



Apparently, as shown in figure (38), cadastral maps can be layered into multiple shape-files that show the different land information and data, these layers could be exploited in (GIS) to identify the proposed land uses and manage lands properly.

The comprehensive survey of each village helps to identify the areas of unused spaces. These spaces are an opportunity to be qualified with uses that contribute to the development of neighbourhoods and the region. Public spaces for example exploited for public activities and protected from infringement of individuals. The proper design of these spaces and the development of the road network contribute to the interconnectedness of the urban fabric and encouraging the population to develop their lands.

Land registration must be properly utilized in the planning process, it's role is not limited to the use of cadastral maps to identify the main and secondary streets, but must be used in the process of managing land use, in order to utilize the resources properly. The land management process (land use) helps to make land policies clear and applied more easily, this enhances applying land administration properly and then achieve the desired urban development.

The land registration system as a tool of the land management system will enhance the exploiting of the land resources in the best way by identifying suitable land uses. The land use will preserve the cultural and environmental resources such as identifying and preserving the old towns, developing different forms of real estate such as housing projects that are implemented in Abu Falah village, and preserving agricultural lands to provide food (green Palestine projects carried out by the Ministry of Agriculture). It also helps to manage public spaces (infrastructure projects). Therefore, the land registration system is considered as one of the most important tools of urban planning and land development.

The planning process used cadastral maps to infer the location of main and secondary streets, the identification of the private and public property, and the determination of the public right in public spaces. So far, the master plans have not been handed over for the two villages, however, the land registration process has greatly assisted in suggesting many new roads, identifying public places, preserving some heritage areas and applying land policies until the new master plans are prepared. It contributed to registering most of the lands, thus encouraged investment and infrastructure development in the two villages and improve urban development.

One of the best achievements of the land registration project is the documentation of data and maps through land records computing systems, which led to the completion of tasks faster and more accurate and enable different stakeholders to access the information they need.

The most important factors that contributed to the success of the land registration process are the involvement of the community from the beginning in this project, which helped to understand the importance of cooperation between society and the local government to achieve the desired development. One of the most important forms of cooperation between the society and the local government was the approval to remove all infringing buildings on the streets to expand the main streets and to pave agricultural and sub-roads to all land parcels.

The case study approved that despite the difficulties that Palestinians faced, the community could overcome these problems by creating their own ways to accomplish projects to improve their countries. The community could play an important role in developing such projects if they feel they are a part of the development process. Projects are done as an initiative of the local population and depended on their active participation.

Many other villages started to perform land registration projects depending on the success of the project of Abu Falah village. So new procedures of land registration system could overcome the old obstacles by creating solutions supported by the population. These procedures were flexible enough to be applied accordingly with the socio-economic and political situation of each village. They could be modified according to the appropriate situation for each village, therefore the land registration process became more rapid and efficient.

## 6 - Chapter Six: Conclusion and Recommendations

The land registration process in Palestine still faces many challenges and difficulties, it is one of the latest projects that the government has started to implement in several Palestinian regions. The Palestinian government is willing to register most of the Palestinian lands to ensure the rights of its people in their lands and protect them from Israeli occupation.

This study aims to answer many questions related to land registration in Palestine since the first land registration process until the recent period. It also seeks to know how the modern land registration process contributes to urban development and the urban planning process in Palestine. This research has relied on the methodology of analysing several case studies, to shed light on the importance of the land registration process within the Palestinian context.

### 6.1 Results

Eventually, based on the analysis and studying the subject from several aspects, this research has proven that the process of land registration in Palestine has contributed to improve a tool for urban planning and urban development through the following points:

- It provided survey maps prepared in modern, scientific, and accurate ways that could be relied upon in the planning process currently and in the future.
- The new survey maps contributed to the modification of the old master plans to be more accurate and closer to reality. Forasmuch, the new cadastral maps exposed major defects in the old master plans, due to the great differences between the old maps and the situation on the ground. Whereas the cadastral maps contributed to identify the new streets, the borders of new parcels, clarifying the proportions of empty lands, agricultural lands, and construction places. These factors have made the planning process easier, faster, and more

accurate. The proposal of the new master plan was based on the future expansion of the each district and defining the direction of urban development.

- It created a land information database. Clarity and completeness of land information made it easier to verify and access data for optimal urban or developmental decisions. The land information will improve land management and land administration process in Palestine, as these processes need clear information about lands, their borders, their uses, and their owners.
- It reformed a spatial planning entity-relationship, this helped to create a reliable spatial model to link the data during the planning process at the level of parcels and buildings to the district level (urban area). Data related to buildings, parcels, quarters, or blocks are relied upon conducting comprehensive analysis, as part of an integrated planning process that requires social, environmental, physical and economic information. These data can be used to calculate population density, individual living space, and land use efficiency. These indicators are the basis for forecasting and assessing urban development and helping in decision-making in spatial planning process.
- It contributed to develop infrastructure, setting up urban development projects, and developing road networks. The land registration process succeeded in creating solutions for these developmental projects represented in lands requisition and the provision of sufficient areas for implementation.
- It contributed to identify the state lands which preserved the public right, as these lands were used to develop public projects to serve the community.
- It detected the violations and encroachment on the streets and public places, this helped to control and limit random construction.

- It developed the Land market due to increased security of land ownership, in addition to controlling and monitoring the land market and preventing land selling to Israelis.
- It demonstrated the importance of community participation in such projects because it contributes greatly to its success. The various local committees helped to expedite and facilitate the land registration process and solve many problems among landowners.
- It sought to prove land ownership for farmers, so the land became more secure. This encouraged the Ministry of Agriculture to support farmers, and develop the agricultural sector through greening projects.
- It encouraged investment projects, such as housing projects.
- It proved women's rights and provided job opportunities.
- It presented guidelines for registering the Palestinian territories faster and easier and in a manner that guarantees the property rights of citizens.
- It greatly assisted in preventing the confiscation of Palestinian lands by the Israeli occupation, as it established the legal right of Palestinians to their lands.

According to the previous results, this research could set guidelines to integrate the planning process with land registration process, to be implemented in parallel with each other as follows:

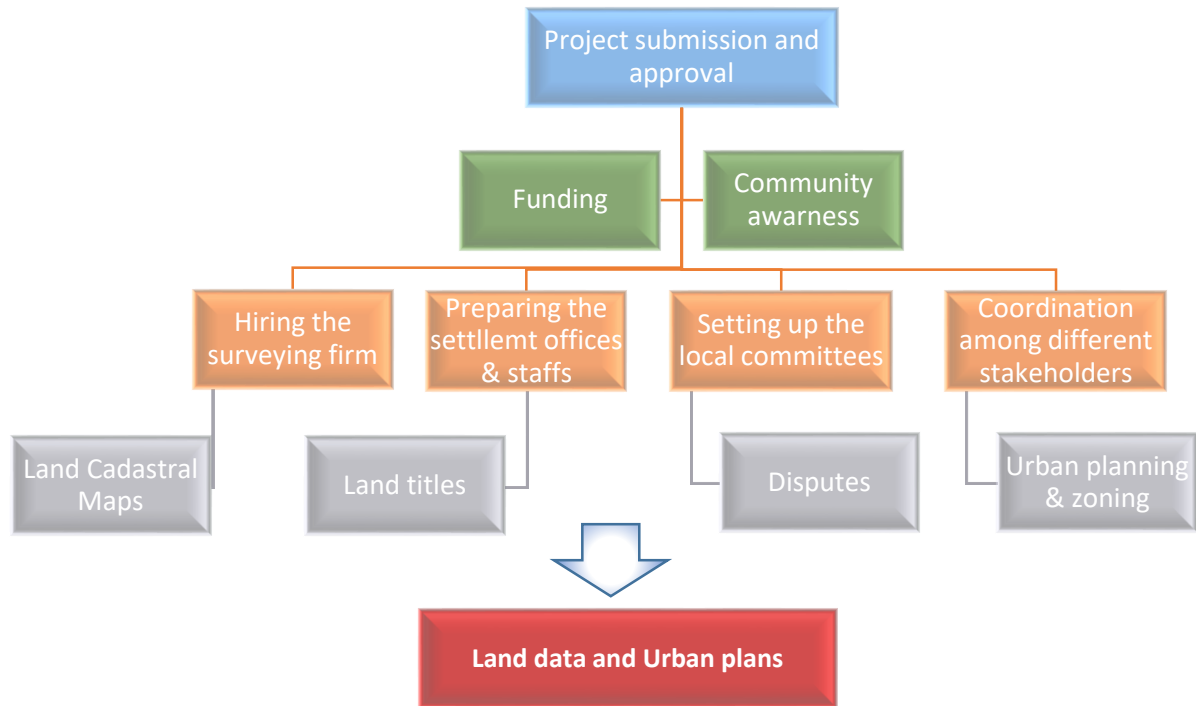


Figure (39): Guidelines to implement Land registration process in parallel with planning process (Author, 2019).

Eventually, as a summary of previous results, the land registration process in Palestine proved that it played an important role in creating important tools in developing the planning process in Palestine and achieving urban development as follows:

- Socially, it helped to end many disputes between owners and prove women's rights in inheritance to achieve social justice.
- Economically, it activated the land market and promoted economic activities.
- Politically, it contributed to the protection of many lands (especially in area C), as it helped to strengthen the relationship between people and their lands. It also helped to uncover many deals of selling lands to the Israelis.

- In urban planning field, it organized urban development as it detected many defects and problems in master plans. And it contributed to uncover many infringements on public land and the public right. On the other hand, proving land ownership was one of the most important conditions for obtaining building permission in Palestine, therefore, the land registration process significantly contributed to facilitating and speeding up getting building permission process, which encourages and catalyses investment and development processes.

## 6.2 Recommendations

- Creating a database for the Palestinian territories so that population, geological, environmental, and other statistical studies will be done in connection with the land parcel units. This will contribute to creating a reliable database in developmental projects and the urban planning process.
- Saving land information in a professional way so that it can be used, modified, and analysed in a highly accurate and steady manner. Subsequently, various interested parties can access this information easily and conveniently. Moreover, it is very important to update any changes of ownership, parcels division or new road maps. These Permanent modifications will keep the land information up to date, which eventually will ensure the correctness of decisions in the development, planning, and expansion of urban areas.
- Relying on modern techniques and exploiting the new cadastral maps in the planning process, such as GIS.
- Introducing new mechanisms to register confiscated lands by Israeli, and to prove the right of the Palestinians. Neglecting some routine procedures in the land registration process.
- Improving legislation and laws that affect the process of registering land in Palestine.



## 7 - References:

- Abu Falah Village Council (2016) .TV interview with Abu Falah Village Council to discuss the Tabu project by Al Quds educational channel. Retrieved December 5, 2016, from <https://www.facebook.com/search/top/>
- Abdulhadi, R. S. (2016). Land Use Planning in the Occupied Palestinian Territories. Institute for Palestine studies, 19(4), 47-53. Retrieved May 31, 2017, from <http://www.palestine-studies.org/jps/fulltext/39481>
- Ajwa, S. (2011). The means of ownership transfer of the unregistered lands in Palestine, a comparative study. Retrieved November 7, 2016, from [https://scholar.najah.edu/sites/default/files/allthesis/the\\_means\\_of\\_ownership\\_transfer\\_of\\_the\\_unregistered.pdf](https://scholar.najah.edu/sites/default/files/allthesis/the_means_of_ownership_transfer_of_the_unregistered.pdf)
- Al-Deek .A. (2019) Interview with the manager of the land water settlement commission in his office in Al Bireh [Personal interview]. (2019, January 9).
- ARIJ, (2012). Abu Falah village profile. Retrieved December 5, 2016, from [http://vprofile.arij.org/ramallah/pdfs/vprofile/khirbet%20Abu%20Falah\\_Vp\\_En.pdf](http://vprofile.arij.org/ramallah/pdfs/vprofile/khirbet%20Abu%20Falah_Vp_En.pdf)
- ARIJ. (2005). the Dilemma of Land Registration in the West Bank. Retrieved December 28, 2018, from <https://www.arij.org>.
- Albargouthy .S. (2016) Interview with the general director of the land registration department in his office in Al Bireh [Personal interview]. (2016, November 15).
- Al-Manasra. A. (2018), Interview with an employee in the planning section in water and land settlement commission [Personal interview]. (2018, December 25).

- 
- Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544-559. Retrieved from <https://nsuworks.nova.edu/tqr/vol13/iss4/2>
  - Bil'in village council. (2019). Interview with members of Bil'in village council [Personal interview]. (2019, January 27).
  - Cheng, J., Turkstra, J., Peng, M., Du, N., & Ho, P. (2006). Urban land administration and planning in China: Opportunities and constraints of spatial data models. *Land Use Policy*, 23(4), 604-616.
  - Dais .M. (2019) Interview with the previous President of the village council of Abu Falah village [Personal interview]. (2019, January 15).
  - Dajani, S. R. (2005). Ruling Palestine: A history of the legally sanctioned Jewish-Israeli seizure of land and housing in Palestine. Centre on Housing Rights and Evictions, COHRE.
  - Dube, E. E. (2013). Urban Planning & Land Management Challenges in Emerging Towns of Ethiopia: The case of Arba Minch. *Journal of Urban and Environmental Engineering*, 7(2), 340-348.
  - Enemark, S. (2004, October). Building land information policies. In *Proceedings of Special Forum on Building Land Information Policies in the Americas*. Aguascalientes, Mexico (Vol. 26, No. 27.10, p. 2004).
  - Feder, G., & Nishio, A. (1998). The benefits of land registration and titling: Economic and social perspectives. *Land Use Policy*, 15(1), 25–43. doi:10.1016/s0264-8377(97)00039-2 Retrieved September 17, 2018, from [https://sci-hub.tw/10.1016/s0264-8377\(97\)00039-4](https://sci-hub.tw/10.1016/s0264-8377(97)00039-4)
  - Fischbach, M. R. (1994). The implications of Jordanian land policy for the West Bank. *Middle East Journal*, 48(3), 492-509.

- 
- Gavish, D. (2004). The survey of Palestine under the British mandate. Retrieved November 7, 2016, from <http://www.pef.org.uk/oldsite/Pages/People/Gavish.htm>
  - Hanstad, T. (1998). Designing Land Registration Systems for Developing Countries. *American University International Law Review*, 13(3), 2nd ser., 647-703. Retrieved July 30, 2018, from <http://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1358&context=auilr>
  - Hareuveni, E., Stein, Y., & Reich, D. (2012). Arrested Development: The Long Term Impact of Israel's Separation Barrier in the West Bank. Be-tselem.
  - Hepperle, E., Dixon-Gough, R., Mansberger, R., Paulsson, J., Hernik, J., & Kalbro, T. (Eds.). (2017). *Land Ownership and Land Use Development: the Integration of Past, Present, and Future in Spatial Planning and Land Management Policies*. vdf Hochschulverlag AG.
  - Hyunil, Y., & Handon, J. (2012). An approach to effective land registration based on the satellite photogrammetry: case study in Baharly, Ahal Velayat, Turkmenistan. Innovative technology in land administration.
  - i24news. (2019, August 13). The Palestinian government announces the cancellation of West Bank classifications according to Oslo accord. Retrieved May 02, 2020, from <https://www.i24news.tv/ar/>
  - Jabarin, T. (2018) Interview with the general director of al-Mezan Company in his office in Ramallah [Personal interview]. (2018, December 20).
  - Khamaisi, R. (1997). Israeli use of the British Mandate planning legacy as a tool for the control of Palestinians in the West Bank. *Planning Perspectives*, 12(3), 321-340.

- Krunz, A. (2009, August). An analytical Study towards an Acceptable Planning Approach. Retrieved June 4, 2017, from [https://fada.birzeit.edu/bitstream/20.500.11889/1707/1/thesis\\_308.pdf](https://fada.birzeit.edu/bitstream/20.500.11889/1707/1/thesis_308.pdf)
- Magam. (2020). Land and Water Settlement Law Legislation. Retrieved April 23, 2020, from <https://maqam.najah.edu/legislation/15/>
- Mattsson, Hand. & Mansberger, R. (2017). Land Governance / Management Systems ,A Conceptual Discussion Retrieved September 23, 2018, from <https://www.researchgate.net>
- Mansour .B. (2019) Interview with the President of the village council of Bil'in [Personal interview]. (2019, January 27).
- Martinuzzi, S., Gould, W. A., & Gonzalez, O. M. R. (2007). Land development, land use, and urban sprawl in Puerto Rico integrating remote sensing and population census data. *Landscape and Urban Planning*, 79(3-4), 288-297.
- MAS (Palestine Economic Policy Research Institute). (2013, April). Problems and Obstacles to Land Surveying and Land Property Registration in the West Bank. Retrieved January 7, 2019, from <http://mas.ps/files/server/20141911184940-1.pdf>
- Memon, P. A., & Gleeson, B. J. (1995). Towards a new planning paradigm? Reflections on New Zealand's resource management act. *Environment and Planning B: Planning and Design*, 22(1), 109-124
- (MLHUD) Ministry of Lands, Housing & Urban Development. (2016). The lands, housing & urban development news (Vol. 1, Tech.). Retrieved July 2, 2019, from <http://mlhud.go.ug/wp-content/uploads/2015/10/Ministrys-Annual-Newsletter-for-FY-2015-2016.pdf>

- OQR. (2013). Initiative for the Palestinian Economy Construction – Land Registration. Retrieved January 8, 2019, from <http://www.quartetoffice.org/files/server/land-registration.pdf>
- Palestinian Central Bureau of Statistics. 2018. Ramallah, Palestine: General Census of Population and Housing Censuses, 2018.
- Purkiss, J. (2013, February 11). The shrinking village of Bil'in and its resistance. Retrieved May 25, 2019, from <http://palestinemonitor.org/details.php?id=0kwunta2581y4o1lk7uwb>
- Qanon. (2020). Law amending the Land and Water Settlement Law No. 22 of 1964. Retrieved April 25, 2020, from <https://qanon.ps/news.php?action=view&id=16401>
- Sait, S., & Lim, H. (2006). Land, Law and Islam Property and Human Rights in the Muslim World (pp. 1-30, Rep.). Retrieved September 17, 2018, from <http://www.thedivineconspiracy.org/Z5232D.pdf>
- Schaefer, P., & Schaefer, C. (2014). An Innovative Approach to Land: registration in the developing world using technology to bypass the bureaucracy. retrieved Nov 30, 2018, from <https://object.cato.org/sites/cato.org/files/pubs/pdf/pa765.pdf>
- Sha'at, A. (2005). Planning in Palestine: The Challenges [Pdf]. Gaza: Ministry of Planning and International Co-operation. retrieved Nov 30, 2018, from [http://www.mot.gov.ps/wp-content/uploads/Portals/\\_Rainbow/Documents/planning\\_in\\_Palestine.pdf](http://www.mot.gov.ps/wp-content/uploads/Portals/_Rainbow/Documents/planning_in_Palestine.pdf)
- Shakarna, M. (2018). Authority's speech. Retrieved September 14, 2018, from <https://lwsc.ps/index.php>
- Shalev, N. (2012, February). Under the guise of legality Israel's declarations of state land in the West Bank. Retrieved November 7, 2016, from [https://www.btselem.org/download/201203\\_under\\_the\\_guise\\_of\\_legality\\_eng.pdf](https://www.btselem.org/download/201203_under_the_guise_of_legality_eng.pdf)

- 
- Shaw, J. (April, 1946). A Survey of Palestine: Prepared in December 1945 and January 1946 for the information of the Anglo-American Committee of Inquiry (Vol. 1). Jerusalem: Printed by the Govt. Printer, Palestine.
  - Shehadeh, R. (1982). The land law of Palestine: An analysis of the definition of state lands. *Journal of Palestine studies*, 11(2), 82-99.
  - Shoman, M. (2019). Interview with the supervisor of the land registration project in Abu Falah village [Personal interview]. (2019, January 1).
  - Sridharan, K. (2016, September 29). Know all about land registration process. Retrieved July 2, 2019, from <https://www.99acres.com/articles/know-all-about-land-registration-process.html>
  - Stein, K. W. (2017). *The land question in Palestine, 1917-1939*. UNC Press Books.
  - Steudler, D., Rajabifard, A., & Williamson, I. P. (2004). Evaluation of land administration systems. *Land Use Policy*, 21(4), 371-380.
  - Tamim, N. (2013). A historical review of the land tenure and registration system in Palestine. Retrieved November 7, 2016, from <https://scholar.najah.edu/sites/default/files/conference-paper/historical-review-land-tenure-and-registration-system-palestine.pdf>
  - Tilsen, J. J. (2003). Ottoman land registration law as a contributing factor in Israeli- Arab conflict. Retrieved November 6, 2016, from <http://www.beki.org/dvartorah/landlaw/>
  - Ting, L., & Williamson, I. (2001). Land Administration and Cadastral Trends: the impact of the changing humankind-land relationship and major global drivers: the NZ Experience. *Survey review*, 36(281), 154-174.

- 
- Williamson, I., & Grant, D. (1999). The United Nations-International Federation of Surveyors Bathurst Declaration on Land Administration for Sustainable Development—A Challenge for Surveyors. Australia, October.
  - Williamson, I. P., & Wallace, J. (2007). New roles of land administration systems.
  - Yeh, A. G. O., & Wu, F. (1996). The new land development process and urban development in Chinese cities. *International Journal of Urban and Regional Research*, 20(2), 330-353.
  - Za'roub, W. S. (2014, October 27). Detailed Plans and their suitability for the application of the Principles of sustainability in the Gaza Strip” (Study case – khan younis Municipality). Retrieved June 4, 2017, from <http://library.iugaza.edu.ps/thesis/113955.pdf>
  - Zevenbergen, J. (2004). A systems approach to land registration and cadastre. *Nordic journal of surveying and real estate research*, 1(1).
  - Zevenbergen, J. (2002). Systems of land registration aspects and effects. *Publications on Geodesy*, 51.