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*Dealing with geopolitical  
brownfield sites:  
towards an adaptive guideline  
to foster their regeneration*

**Mohsen Shojaee Far**

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# Doctoral Degree in Urban and Architectural Management and Valuation

PhD Thesis

## DEALING WITH GEOPOLITICAL BROWNFIELD SITES; Towards an adaptive guideline to foster their regeneration

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## **ABSTRACT**

This study set out initially to compare characteristics and possible regeneration approach between typical brownfield sites and semi-like brownfield sites in geopolitical conflict zones to identify similarities and differences. Despite many physical similarities, the differences identified as cause and origin of the abandonment in such areas with direct link to geopolitical contexts in contrast to economic and demographic changes and urban expansions as major causes of typical brownfields. This study has shown that there is no definition of geopolitical conflict as a cause of brownfield sites in any planning systems in the world and suggests the need to include geopolitical conflict as a new cause of semi-like brownfields. After comparison task, this study set out to explore responsiveness of existing brownfield regeneration policies and regulations in conflict zones. Corresponding to the findings, this study has opened arguments on combination of information related to geolocation (space) with conflict of interest over space (power) to provide a powerful mechanism of an interdisciplinary approach and construct stronger frameworks to deal with abandoned properties in conflict zones. Such mechanism discussed under a proposed land typology, denominated as ‘geopolitical brownfields’ and a conceptual framework for diagnosis purposes. To ensure the proposed framework is not a simple pragmatic suggestion, an in-depth analysis through case of Cyprus conflict with high level of complexity presented. Although this study is inductive research with a qualitative approach, the theoretical features of quantitative research are used in combination with practical features of qualitative research. The evidences from this study enabled this research to discuss and explore the complexity of geopolitical brownfields towards a problem identification method rather than contributing to potential solutions.

**Keywords:** Geopolitics, Geo-Philosophy, Brownfield, Conflict, Urban Planning

**UNESCO Classification:** 5401.03 Land utilisation, 5904.04 Relations between the powers, 6304.02 Conflicts resolution, 7207.04 Political philosophy

## RESUMEN

El presente trabajo de investigación comienza con una comparación entre las características y posibles enfoques de regeneración de áreas “Brownfields” típicas y áreas parecidas a “Brownfields” en zonas de conflicto geopolítico, con el objetivo de identificar similitudes y diferencias. A pesar de muchas similitudes físicas, las diferencias identificadas como causa y origen del abandono en dichas áreas tienen un vínculo directo con los contextos geopolíticos, en contraste con los cambios económicos y las expansiones urbanas como causas principales de los “Brownfields” típicos. Esta investigación demuestra que no existe una definición de conflicto geopolítico como causa de generación de “Brownfields” en ningún sistema de planificación en el mundo y sugiere la necesidad de incluir el conflicto geopolítico como una nueva causa de generación de áreas parecidas a “Brownfields”. Después de la tarea de comparación, esta investigación explora la capacidad de respuesta de las políticas y regulaciones existentes de regeneración de zonas “Brownfields” en zonas de conflicto. En correspondencia con los hallazgos, esta investigación abre el debate sobre la combinación de información relacionada con la geolocalización (espacio) con conflicto de intereses sobre el espacio (poder) para proporcionar un mecanismo poderoso de enfoque interdisciplinario y construir marcos más fuertes para tratar con propiedades abandonadas en zonas de conflicto. Dicho mecanismo se discute bajo una tipología de tierra propuesta, denominada como "Brownfields geopolíticos" y un marco conceptual para propósitos de diagnóstico. Para garantizar que el marco propuesto no sea una simple sugerencia pragmática, se presenta un análisis en profundidad sobre el caso del conflicto de Chipre con un alto nivel de complejidad. Aunque este estudio es una investigación inductiva con un enfoque cualitativo, las características teóricas de la investigación cuantitativa se utilizan en combinación con características prácticas de la investigación cualitativa. Las evidencias de este estudio permitieron que esta investigación discuta y explore la complejidad de los "Brownfields geopolíticos" hacia un método de identificación del problema en lugar de contribuir a posibles soluciones.

**Palabras clave:** Geopolítica, Geo-Filosofía, Brownfield, Conflicto, Planificación urbana

**Clasificación de la UNESCO:** 5401.03 Utilización de la tierra, 5904.04 Relaciones entre los poderes, 6304.02 Solución de conflictos, 7207.04 Filosofía política



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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction: Foundation of the Study

Since the Second World War, the meaning of, and relation between, conflict and geography entered a new era and the issues related to land management techniques in geopolitical locations and conflict zones become a significant field of discussion. Correspondingly, in conflict zones the meaning and legal definition of “Land” and “Property” and their associated policies also are key challenges both for decision makers and academics. The realities behind these terminologies in conflict zones are associated with a high level of uncertainty and lack of essential elements such as ownership status, legal certainty, accessibility, clear governing policies, and real estate market values. This suggests the necessity for a new approach to deal with such areas in conflict zones. The foundation of this study is the fact that lands and properties in conflict zones usually become abandoned as well as being an asset of negotiations between stakeholders of conflict. This situation usually results in significant, and sometimes permanent, negative impacts on the affected areas by means of social, economic, and environmental effects.

Correspondingly, this doctoral study in the field of land management, concerns geopolitical locations that are engulfed by domestic and/or international conflict. This study is based on comparison between the physical characteristics of abandoned and degraded areas (lands/properties) in geopolitical conflict zones and similar sites in non-geopolitical conflict zones, which are known as brownfield sites (typical ones). The term typical brownfield site refers to the global understanding of the term as previously-developed land that is now abandoned and derelict, with possibilities of contaminations (relevant evidence presented in Chapter 2). This comparison, as the starting point of the study, has identified the fact that abandoned properties in conflict zones share many similar physical characteristics with typical brownfield sites, such as being previously developed, associated with a possible level of contamination, or requiring a series of ‘RE’ concept interventions (Oliver, Ferber, Grimsk, Millar, & Nathanail, 2005) (reclamation, remediation, redevelopment, regeneration, etc.) in order to return these affected areas (lands/properties) to a state of functional use. However, this identification also recognized a contrasting issue that led to the initiation of this multidisciplinary doctoral research. The differences that make brownfields or semi-like brownfields in geopolitical conflict zones significantly distinct from typical ‘brownfields’ are focused around the cause and origin of the problems of abandonment in such zones. The origins of these semi-like brownfields’ appearance are not related to economic changes nor urban expansions, but conflicts and violence. Correspondingly, the effectiveness of typical intervention approaches by professional urban planners, architects, engineers, economists, and similar pragmatic professions is questionable due to the level of complexity and challenges of possible solutions for these types of spaces.



These disturbed, degraded, derelict, and usually abandoned areas in geopolitical conflict zones are mainly the consequences of political and social conflicts within specific geographical locations. This is a complex issue in land management that concerns sentiments, representations, effects, histories, and conflict between powers and superpowers. This doctoral thesis addresses that complexity by constructing a conceptual diagnostic approach for such management concerns.

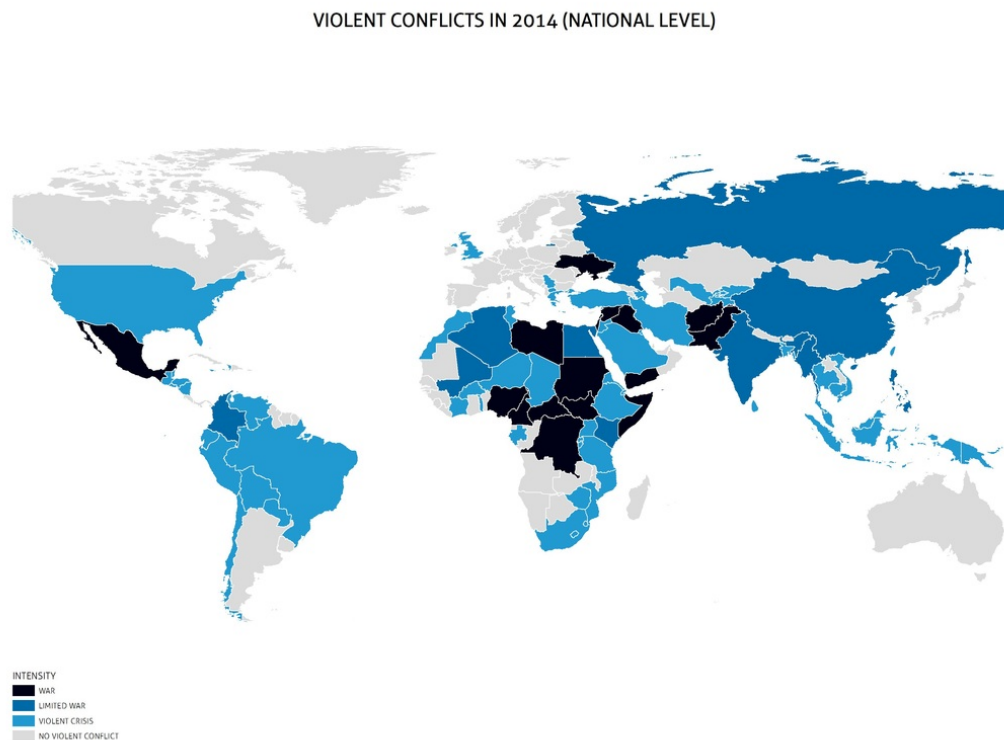
From a technical point of view, this study explores the possibilities of problem identification methods that are adaptable to these types of affected areas. These problem identification methods derived from analysis of series of existing intervention techniques. The main result of this analysis is the construction of a diagnostic method framework for the land management of areas engulfed by geopolitical conflicts. The reason for the use of problem identification methods is to develop a supportive approach for decision makers to see the questions related to land management problems with an alternative perspective. The positive side-effects of this diagnostic method may be to open possibilities for positive encouragement of conflict resolution processes. It is important to clarify at the beginning that the foundation of this doctoral thesis, as well as its methodology, is not based on a question, theoretical framework or definition of the words or ideas; its intention is to bring together technical and theoretical discussions to create a subject, or perhaps a hypothesis about, how to deal with semi-like brownfields in geopolitical conflict zones.

This subject cannot, or perhaps should not, be defined as quantitative research nor purely as a social science topic, urban studies or economics. However, it is not an abstract subject either. It is positioned around a real case of geopolitical conflict zones, with complicated realities and challenges that require a complex intellectual approach using qualitative and quantitative techniques as well as knowledge within social science, geopolitics, urban studies, and economics as an integrated intervention strategy.

Therefore, to be able to answer the complex questions of how to deal with semi-like brownfields in conflict zones, it is necessary to understand the conceptual and philosophical dimensions of the argument, which deal with the correlation between power, space, and geography. In this sense, to understand the main characteristics of these affected areas within conflict zones, this research needed to investigate the roles of space and geography, which are associated with social and political aspects of time. Correspondingly, integrated spatial analyses linked to social and political science (Goodchild & Janelle, 2004), serve as a key analytical approach to understand and clarify the problems associated with these areas. This argument goes beyond the technical discussions on how to regenerate a declined zone with normative urban and regional planning approaches, implemented by technocrats. Indeed, combining knowledge of the specific geographical locations (space) of such disturbed properties, with information on the associated conflicts of interest (power) provides a powerful mechanism for integrating technical sciences into social and political sciences. This requires an interdisciplinary approach to provide stronger frameworks to deal with such disturbed properties in geopolitical conflict zones.

## 1.2 Background and Definition of the Problem

Contemporary conflicts in the last half a century demonstrate the fact that many countries are involved in difficulties related to situations within geopolitical conflict zones. This involvement is variable, as some countries are the conflict hot-spot, some others involved in the conflict as stakeholders, and others, to some extent, are impacted by geopolitical conflict zones. The list of such countries and governments is extensive (Figure 1). The realities of land management in conflict zones urge local and sometime international authorities to deal with affected areas (i.e. abandoned properties, declined neighbourhoods, etc.) as urban and internal issues, as political assets of negotiation with stakeholders of conflicts, or both. The key problem with this perspective is that decision makers do not always know how to choose the most profitable opportunities in land assessment and re-concept processing within their available options. This results in a waste of time, effort, and resources, impacting both government and society. Another problem with this scenario is that the typical existing problem identification methods – if used in the process – mostly fail to use effective diagnosis and analysis approaches (relevant evidence presented in Chapter 4). This can affect and misdirect decision-making strategies that should facilitate profitable re-concept proposals and projects. Therefore, this doctoral thesis explores the possibilities of a diagnostic solution for these affected areas with a high level of complexity, which needs a considerable degree of complex thinking and exploration.



**Figure 1 – Map of ongoing geopolitical conflict zones developed by UNA-Orlando illustrating the ongoing conflicts around the world in 2014 (UNA-Orlando, 2014)**

### 1.2.1 Background of the Problem

There are two different issues to be highlighted regarding semi-like brownfields in geopolitical conflict zones, one is their locations and the other one is the political complexities within their locations. Most of these countries have not established policies to deal with brownfield lands, as well as having a high level of uncertainty in their political atmospheres. In contrast, developed countries in North America and Europe have formulated prospects on how to deal with abandoned properties, which were previously functional (brownfields). This difference is the foundation of the problem; in most countries located within conflict hot-spots, there is no definition for a typical brownfield site as a land use – with any name – nor any accepted responsive policies, regulation or guidance on how to deal with brownfield sites. In most of these countries, many undetermined brownfield sites and semi-like brownfields exist, and these are the focus of this study.

The complexity of this issue resulting from its environmental, social, physical, political, and economic dimensions is both undiscovered and unvalued by policy and decision makers. Correspondingly, in these kind of countries (i.e. developing countries engulfed in geopolitical conflicts, with short histories or little experience of modern planning), the urban planning solutions are usually adapted from the models of developed countries, without particular consideration of local needs or desires, and this has many negative consequences on their urban planning system. The results can be found in cases where there has been an attempt to adapt urban intervention solutions from countries with no geopolitical conflicts to semi-like brownfields in geopolitical conflict zones.

Indeed, the lack of understanding of brownfields and consequently, the dearth of related policies turns out to be even more critical when it comes to geopolitical locations associated with conflict of interest involving national and/or international actors. Actors or stakeholders of conflict would be described here as the geopolitical interest of people or entities that are outside the area, separate from the interests or the political conflicts that may exist locally. Consequently, in geopolitical hot-spots the decision makers are struggling for the best proposals and strategic plans which cannot always benefit all the local and non-local interests, or both. Surely if a proposal does not benefit either local or non-local stakeholders, it is not the best plan. It is also important to mention that the planning strategies, which are regulated and implemented in different parts of a country, may not be equally efficient in distinct geopolitical locations of the same country. This insufficiency in the adaptation of general planning strategies can also be seen as characteristic of geopolitical hot-spots, which are very different from the profiles of the other urban territories within a country. Correspondingly, this study identified that there is no definition of geopolitical conflict as a cause of brownfield sites in any planning systems in the world (

Table 6) suggests the need to fill this gap by including geopolitical conflict as a new cause of semi-like brownfields in geopolitical hotspots (relevant evidence presented in Section 2.7).

### **1.2.2 Definition of the Problem**

The semi-like brownfields in geopolitical conflict zones are the result of conflicts of power over space. The typical brownfield regeneration policies of countries with established policies in place for dealing with such areas cannot be responsive nor sufficient in the context of geopolitical conflict zones. This study assumes that impacts of conflicts and military activities within geopolitical zones can lead to a large number of semi-like brownfield sites (Figure 2). The principal research problem of this thesis is defined by land management issues in areas associated with military footprints and armed activities, and consequently the appearance of semi-like brownfield sites that are not only the traditionally industrial, commercial, and/or military buildings and facilities, but could also include previously vibrant residential areas.

These semi-like brownfield sites in geopolitical conflict zones occur as the result of rapid destruction and redevelopment during or after war and armed conflict, as well as changes in the economic situation of affected areas. Consequently, many sites in these areas are left abandoned and sometimes became partially occupied with inappropriate functions. In addition, in many cases, high levels of unmeasured contamination remain from past armed activities. Due to the lack of experience in brownfield regeneration associated with governmental bureaucracies in conflict zones (if still a government function as it supposes to be), it can be assumed that there is no sufficient strategic plan in place to respond to this type of semi-like brownfield sites. The surprising fact is that there are many cities and neighbourhoods within cities suffering from the same disaster of affected areas during and after conflicts such as Nicosia, Varosha, Agdam, Quneitra, Kłomino, Beirut, Aleppo, etc. Although different conditions and realities shape the details of each situation, the general condition of struggles of powers over space define similar problems in different locations across the world from Eastern Asia to the Middle East, and Eastern Europe to Central America. Therefore, based on a critical approach to the issue, finding an answer to the question “If current brownfield regeneration policies and regulations responsive to developmental necessities of geopolitical hotspots?” is essential. In pursuit of this, the next chapter of this thesis is dedicated to brownfield regeneration policies and regulations for the identification of diagnostic methods used as part of the current solutions.



**Figure 2 - Abandoned towns and areas as a consequence of geopolitical conflicts (Source: photo credits: 1) Left: URL: <http://www.skyscrapercity.com/showthread.php?t=1667480> 2) Top right: Zuzanna Kazmierczak 3) Bottom right: AP Photo/Petros Karadjias)**

Although, as semi-like brownfield sites in geopolitical conflict zones are defined with a technical perspective, it is important that the origins of such affected areas are explained as part of problem definition. This part of the problem will be discussed (or defined) through the concepts of space, place, power, knowledge, and time. Understanding these keywords is a requirement of defining the problem in any given case related with this subject. The questions of what space is, how space represents power, and how power produces space are discussed in Chapter 3 of this thesis.

Essentially, to be able to defend the position of the defined problem in this section, it is important to highlight the difference between semi-like brownfields in conflict zones and war-torn areas to which post-war reconstruction approaches could be an immediate answer with a series of regulated actions as immediate relief. In this sense, this study argues that if abandoned and derelict lands/properties – semi-like brownfield sites – remain idle for long periods of time as the consequence of geopolitical conflicts, then a specific solution should be offered to deal with such long-term problems of power struggles over space, or in other words exercise of extreme power over space. This argument suggests a propose land use of non-existent space (semi-like brownfields) in land management that may require a series of special treatments and policies to become useable and vital again.

### **1.3 Research Question, Aims and Objectives**

The purpose of this qualitative and exploratory study is to find an effective diagnostic method for affected areas in conflict zones with a focus on land management and theoretical grounding definition of a new land typology in geopolitical conflict zones (geopolitical brownfield). The aim is to develop a solution that promotes sustainable urban regeneration in conflict zones as well as supporting stakeholders of conflict to acquire viable regeneration projects as part of the conflict resolution process. For this purpose, a single case study approach in a geopolitical conflict zone is selected to enable the necessary in-depth focus for this research. This study uses the case of the Cyprus conflict to demonstrate the challenges and efforts of one European country dealing with internal and international conflicts for over forty years. However, the global purpose of this study is to propose suggestions for multi-criteria regeneration projects in conflict zones that can lead to positive social change through opportunities for decision makers. This is an important opportunity for profitable decisions concerning sustainability in reshaping a fragmented community as well as unifying a divided territory immersed in conflict (i.e. the island of Cyprus). Profitable decisions for local residence and adaptable multi-criteria regeneration projects offer additional options to decision makers as practical help during periods of crisis and long-term conflicts.

#### **1.3.1 Research Question**

The central question that guided this study is: **What diagnostic method for decision-making strategies can be used to identify land management problems in geopolitical conflict zones?** Surely strategies come after identifying the problems. This diagnostic method should enable stakeholders of conflict to consider or apply their most profitable options such as sustainable regeneration approach as part of the conflict resolution process. The research question reflects an exploratory inquiry that focuses on how different entities within conflict zones can identify and prioritize the problem and work towards possible solutions. Additionally, the research question addresses the characterization of problems within geopolitical conflict zones caused by conflicts of interest over the control of territories or, in other words, contests of power over space.

#### **1.3.2 Aim and Objectives of the study**

The main aim of this research is to develop an instrument for the initial evaluation as a starting point in construction of a complete methodology for sustainable regeneration of semi-like brownfield sites in geopolitical conflict zones (geopolitical brownfield regeneration). This is addressed with a conceptual framework for first-time practice of sustainable brownfield regeneration in countries/territories within geopolitical zones associated with conflicts of interest of national and/or international actors. The aim will be achieved by a cross-sectional investigation of current brownfield policies and contemporary discussions on the issue, and by introducing a new conceptualization about brownfields (geopolitical brownfields) and a complete perspective through a concrete case study. Achieving this aim provides solid grounds to further studies and development of a practical route-sheet.

Through achieving the aim, this study defends and position the proposition of semi-like brownfield sites within conflict zones through the concepts of power and space in geography. Furthermore, the relevant evidence presented in Chapter 4 serves as supporting evidence and provides the main empirical part of this research. Through this empirical part of the thesis, the study explores, observes, and documents the patterns and regularities, such as the physical, socio-cultural, economic, political, and environmental dimensions of the case of the Cyprus conflict. The empirical part also shows that the final reasoning and conclusion will not be a simple pragmatic suggestion, but an in-depth analysis through a real and highly complex case.

The objectives of this research are as follows:

**1) To create a preliminary proposal for initial evaluations and start point of a practical regeneration methodology for areas of scarce resources where brownfield sites are within, or nearby, geopolitical conflict zones.**

- a) To develop a theoretical framework with which to reason and draw conclusions (final product)
- b) To explore a case study as an evidence to the arguments
- c) To identify the important factors and elements in the evidence as a route to clarifying the patterns and regularities of the problem

**2) To promote an interdisciplinary integrated approach to the brownfield issues within geopolitical conflict zones**

- a) To develop an adaptive methodological approach to deal with land management of abandoned properties in conflict zones.
- b) To promote a diagnostic method to orient the processes leading to regeneration of the area. This proposition can be multi-scalar and can give different advice to different governmental or multilateral institutions and organizations.

Taking these two objectives together, a conceptual framework for dealing with semi-like brownfields in conflict zones is the final outcome of this study. This framework is based on the integration of two general areas of study; 1) the land management issues responsive to the global understanding of the term brownfield site through technical and policy status on degraded/abandoned previously developed properties/lands, 2) integration of social, political, cultural, and economic aspects relating to the first area as land management of abandoned properties in conflict zones.

Accordingly, this framework focuses on previously vibrant urban fabrics/districts/neighbourhoods which are now abandoned/degraded as a consequence of geopolitical conflicts rather than typical brownfield sites. To be responsive to the nature and intent of this study, a new terminology for semi-like brownfield sites, or in other words land use of non-existent space, proposed as ‘geopolitical brownfields’. This concept is

utilized in this study to demonstrate that these situations are not only negatively impacting the physical characteristics of an affected area, but also have an extreme impact on intangible aspects such as social capital, identity, and cultural values.

## **1.4 Research Methodology**

Working in geopolitical conflict zones brings much uncertainty and fewer options, which complicates the decision of whether and how to identify the problems and take decisions to address them. Based on temporal, exploratory and technical observations of the author on land management issues in a geopolitical conflict zone (Cyprus), this research took place to bring broader generalizations on the issue. The historical observations of actual process of conflict resolutions and regeneration strategies in a geopolitical conflict zone demonstrated that no existing regeneration theories can fit the phenomenon of property disputes and abandonments in such areas. Therefore, for this study, grounded theory is selected as an appropriate approach as this investigation could not rely on an established framework nor theories for conflict zones. Corresponding to such approach, preparation and proposal of a multi-criteria diagnostic method would be an essential task. As an inductive methodology, a set of rigorous research procedures with the systematic generation of different hypotheses as concerns and possibilities have been developed. These procedures led to emergence of the conceptual framework and propositions of this study.

Although this study is inductive research with a qualitative approach and exploratory nature through a single evidence study, the theoretical features of quantitative research are used in combination with practical features of qualitative research to be able to address the complexity of semi-like brownfields in conflict zones. This mixed method of qualitative and quantitative study can achieve results that neither a qualitative nor a quantitative approach alone could.

Consequently, this research started to measure brownfield sites in a specific geopolitical conflict zone, reasoning that semi-like brownfield sites are very similar to our current global understanding of brownfield sites, but with completely different origins. This study detected patterns and regularities that could be explained only by theories of power and space, resulting in the conceptual propositions and conclusions of this study. The exploratory nature of empirical section of this study (Chapter 4), in addition to observation of these patterns and regularities, demonstrates the necessity of first step action of problem identification leading to profitable decisions about adaptable multi-criteria regeneration possibilities as solutions. This suggested the need for a systematic diagnostic procedure for affected areas in geopolitical conflict zones. In other words, the mixed qualitative and quantitative method that is deployed in this study, demonstrates the necessary elements for future deployment of an analytical instruments based on the same approach.

To date, a large body of research about conflict resolution processes and international affairs exists. However, addressing the topic of land management in conflict zones, particularly concerning abandoned



properties, as an essential part of conflict resolution process is widely ignored. A logical understanding of such a complex problem, as well as identification of its origin linked to conflicts of interest over space, is still lacking and will be addressed as the core challenge of this study.

Explorations of the relevant literature on land management, brownfield regeneration, and concepts of space and place led this inductive research to methodologically explain the non-existent land use in geopolitical conflict zones. This explanation took place through the English meanings and definitions of the term 'brownfield site' and analysis of the Latin (French) understanding of the role of power in space and place. The method used for this correlation is based on logical reasoning from how the exercise of extreme power that is a result of institutional knowledge, could produce spaces such as those seen in the patterns and regularities of semi-like brownfield sites. Lessons of how contested powers and superpowers can produce geopolitical conflict zones and its semi-like brownfields are learned from developed literature of French key thinkers on space and place such as Michel Foucault and Henry Lefebvre. This is a new reasoning that is conceived as a methodological approach to connect this theoretical framework to realities such as the case of the Cyprus conflict.

#### **1.4.1 The Proposal**

The aforementioned reasoning strengthens the idea that the exercise of different types of powers, which come from different types of interests in a particular geographic location (space), is an important factor in understanding models for conflict zones. The central thesis of this conceptual idea is to redefine the problems related to property issues and conflicts in geopolitical contexts and enhances the method of understanding and analysing approaches rather than contributing to the solutions.

Through this methodological reasoning, from an inductive approach, a better understanding is reached for the integrated analysis of spatial issues related to abandoned properties in correlation with geopolitical settings that explains both the spatial and political characteristics of such complex spaces. Observing components of geopolitical conflict zones such as buffer zones, militarized areas, closed or restricted zones, and occupied lands, a series of tentative propositions is formulated that explore the existence of 'gaps' in geography as a new hypothetical land use that is referred to this study as a map of non-existent space. The patterns of these components are usually observed with regularity in long-term legal disputes over ownership status and property rights, and that also suggests the need for a multi-criteria diagnostic method. This proposition includes ways to assess values and preferences to make the issue of land management in geopolitical conflict zones explicit and to enhance the integrity and consistency of objectives in decision levels for decision-related communication among stakeholders of conflict. In contrast to deductive research, that focuses and tests an existing hypothesis to either confirm or disprove a fact or theory, and as is the nature of an inductive research method, this proposition is both open-ended and exploratory; as a result, it can enhance understanding with regard to past decisions, and illuminate the way forward as new information and problems are identified.

### 1.4.2 Thesis structure

As a methodological approach to this study, the investigation divided into three sections as 1) Theoretical Framework, 2) Empirical part, and 3) Conclusion (Figure 3).

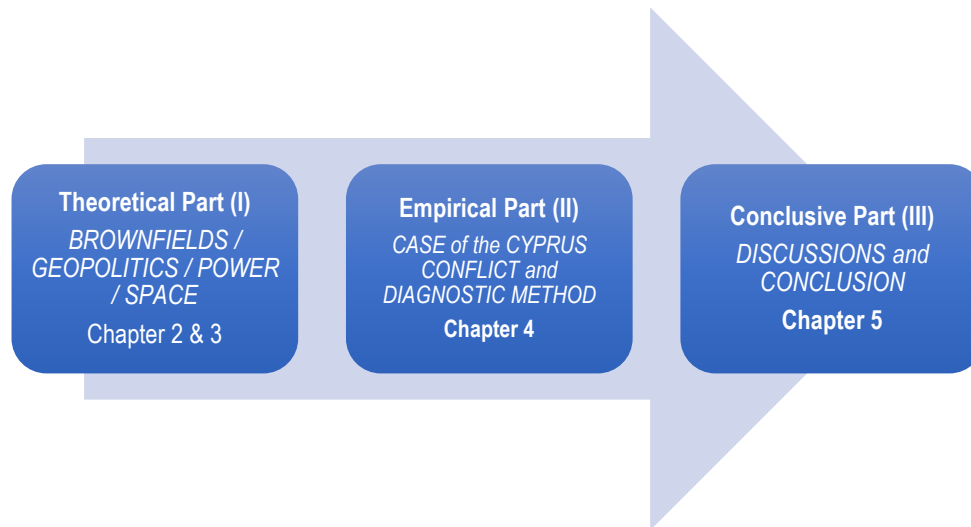


Figure 3 Structure of the Research Project

#### Part I – Theoretical Framework

The theoretical part of this study provides a series of critical reviews of fundamental theories related to both technical and philosophical aspects of semi-like brownfields in geopolitical conflict zones. This part of the study consists of two chapters that explain technical reviews of brownfield policies, geopolitics, and geography in connection to economy and sociology (Chapter 2). Then, through explanations of the roles of space, power, and conflict of interest, in correlation with geography, politics, and the actors shaping conflict zones, the problems associated with the origins of semi-like brownfields are explored (Chapter 3).

The philosophical argument that guided this part is based on a Foucauldian concept of power and space. History has provided evidence that the exercise of extreme power over space poses challenges within urban settlements engulfed in domestic or international conflicts, or urban areas fractured by social and religious divisions. Hence, this study considers that all space is the expression of power and power produces space and suggests a conceptual model of non-existent land-use named “geopolitical brownfields”. This denominated land-use would be the space of contested powers, since, as Foucault (1980) postulated, “the exercise of power perpetually creates knowledge and, conversely, knowledge constantly induces effects of power” (Foucault, 1980, pp. 63-78).

A variety of perspectives on geopolitics address the issues related to power and space, or in other words, politics and geography. Examining explorations of geopolitics, the influence of Foucault’s philosophy on power and space can be found in many definitions among works of contemporary scholars such as Cohen (2003), Cordellier (2005), Lacoste (2006), Flint (2006), Ó Tuathail (2006), etc. For instance, Cohen (2003) defines geopolitics as an analytical approach to assess the interaction between geographical settings and

political process as a dynamic approach, and he argues that since policies and locations are influencing each other, geopolitics is all about the consequence of these interactions (Cohen, 2003).

## **Part II – Empirical Part of the Thesis**

The empirical part (Chapter 4) presents evidence to support the argument. The patterns and regularities demonstrated in this empirical and exploratory section of the study (Cyprus case study), bring tangible evidence that enables this research to construct its propositions and hypothesis. This case has two important characteristics, 1) abandonment as the result of geopolitical conflict, 2) no related policies to brownfield with consideration of geopolitics have been found to exist. This study is including documentary data collection, social surveys, site observation, and qualitative analysis. The learning outcomes and the results from this observation served in this study as the base for construction of a hypothesis with regards to dealing with semi-like brownfield sites.

Such complex and multidimensional challenges address the political, economic, environmental, social, and ethnical dimensions of a region engulfed by conflicts of interest resulting from the exercise of extreme power over space. This part of the study explains the relationships between variables and components in a geopolitical conflict zone. The exploration offers descriptive information about the Cyprus conflict, particularly the closed district of Varosha, the UN buffer zone, militarized areas, and disputes over displacements and abandoned properties. This case demonstrated the barriers for maximizing options and possibilities, which could minimize conflict exposure related to land management in conflict zones.

Corresponding to the aim and objective of this study, the empirical part explores a unique case of diversity in land ownership property regimes and insufficiencies in legal mechanisms that contributes to a high level of complications. To enable this study to provide an empirical data on such land management complexity and complication, four rounds of field surveys have been conducted in addition to field data that was synthesized from local laws and policies in Cyprus, international accords, treaties, and court cases. Issues related abandoned properties and the property regime of North Cyprus were the core questions and major focus in all rounds of conducted field studies. The field surveys during this study relied on qualitative data collections such as semi-structured interviews with open-ended questions. To add reliability to these field data collections and the overall process of evaluations, participants in surveys and interview were selected from people who has been directly or indirectly affected by circumstances of a geopolitical conflict zones (include both original Turkish Cypriots and Turkish immigrants).

## **Part III – Conclusion**

This argument is intended to bring broader generalization to the issue of semi-like brownfield sites in geopolitical conflict zones. The third part – the conclusion – (Chapter 5) is dedicated to demonstrating the constructed hypothesis on how to deal with the new emerging concept of geopolitical brownfield sites. This argument shows methodological possibilities for first time actions regarding semi-like brownfield

regeneration in geopolitical conflict zones. The conclusion suggests a diagnostic model with aims of identifying the affected area, evaluating the severity of damage, and prioritizing the problem. This methodological approach proposes the acceptance of abandoned properties in conflict zones as a suggested land-use called geopolitical brownfields.

In order to assess and validate the hypotheses in this study, a series of interviews and field studies took place and different parts of this study were presented at diverse international conferences to assess the ideas and propositions by receiving and evaluating the opinions of international key informants knowledgeable in the fields of urban management, geopolitics, urban regeneration and brownfields.

## **1.5 Assumptions, Disclaimer, Limitations, and Delimitations**

### **1.5.1 Assumptions**

This study was conducted according to a set of assumptions and facts as statements considered truth. First, this study assumed that the single case study of the island of Cyprus that is engulfed in more than 40 years of internal and international conflict would serve in this study as the most valuable and unique evidence to the construction of the hypothesis. This case of a divided island represents also a geopolitical conflict zone at the European Union border. However, the long-lasting feature of the conflicts has been strong enough to delimitate propositions for geopolitical brownfields as the solutions for ephemeral conflicts may be quite different.

Second, since this study aimed to determine how to deal with geopolitical brownfields, the first action as problem identification (diagnostic method) served as the main conceptual method of the study. Third, the interviews and qualitative data collections from local key informants and refugees assumed the honesty of the respondents. Fourth, the study also assumed that the Foucauldian philosophical approach is the best fit for the subject as a theoretical base arguing the concepts of power and space.

### **1.5.2 Disclaimer**

Whilst every effort has been made to ensure the accuracy of data collection and analysis, unless otherwise indicated, opinions expressed herein are those of the author of this study and do not necessarily represent the general views of the Polytechnic University of Catalonia or François Rabelais University (University of Tours). All the collected data from site investigation, document observations, and other academic research exploratory investigations by the author have been classified and used in this study with attention to not infringe any governmental or sensitive data. With regards to interviews and site investigations, to the effect that in order to protect the anonymity of some individuals, identifying information has been masked or removed. Also, the methodologies and proposals presented in this thesis are intended as guidance only and it is not intended to constitute legal advice.

### **1.5.3 Limitations and Delimitations**

There are five limitations in this study. The first limitation of the study is that access to documents related to land management in Cyprus was limited to accessible documents from online resources and observation of the author in governmental offices without permission for photography or note-taking. The second limitation is the difficulty of communicating with stakeholders of conflict and interviewing decision makers in conflict zones. The third limitation is the presentation of evidence that was focused on a single case study, which restricts the ability to generalize the specific findings to other similar cases. The fourth limitation of this study is related to implementation of the constructed hypothesis, as the hypothesis can be evaluated and be tested hypothetically through different theoretical method but may not be implemented in a real case during this research period. The fifth limitation is related to immediate effectiveness of the study since the final suggested users of proposed solutions would be governments and decision makers in conflict zones, for which the permitted time of a doctoral thesis will not allow an immediate application.

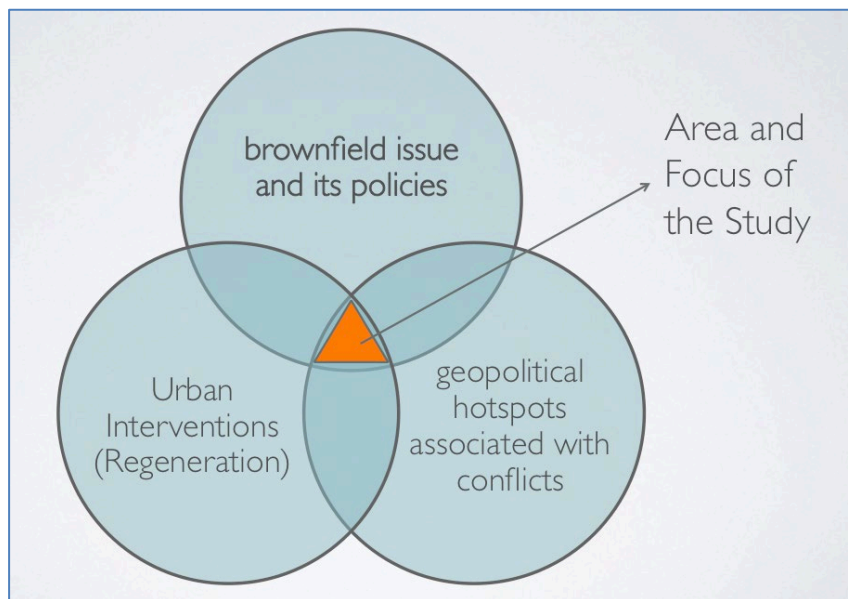
To minimize the impact of these limitations, this study relies on field surveys and the technical observations of the author as an expert field survey technician for qualitative data collection. Also, the summary and conclusion of the study are presented via different online and official communication channels to possible key informants in conflict resolution centres such as the United Nations and its local offices in Cyprus, the government of Cyprus, the government of North Cyprus, the Centre of Strategic Research of the government of Turkey, etc.

The delimitations of this research were geographical location of the data collection and the structure of interviews. This study chose to limit interviews to those who had personally experienced the conflict and war in Cyprus. The accessibility and military restrictions in geographical location of the data collection limited this study's results. This study collected data only from accessible fields with no required military permissions and made sure not to divulge photos or documents from any active military areas.

### **1.6 Significance of the Study**

Taking note of recent geopolitical conflicts all around the world, it is becoming extremely difficult to ignore the existence of semi-like brownfields in conflict zones. Although the issue of the conflict resolution process has received considerable critical attention in political science, management studies, and economics, the correlation between the brownfield sites and the geopolitical or conflict-related aspects of the area have remained untouched. This inductive research explores and sheds new light on the link between geopolitics and semi-like brownfields in conflict zones. It fills a gap in the literature through observing, reading, and documenting pattern and regularities within a specific geopolitical conflict zone. Broader generalization on the issue will help to address the challenges of semi-like brownfields in a completely new conceptual framework.

This study makes a major contribution to research on land management in geopolitical conflict zones by demonstrating the necessity of a new land typology for non-existent places on geographic maps. The diagnostic method for identifying such lands is a new idea initiated by this study, and there are several important areas where this thesis makes an original contribution such as the fields of strategical research, urban studies, land management studies, and geopolitics. The rare case of the Cyprus conflict has had a significant impact on the nature and origin of this study, as it provided a first-hand experience of abandoned properties, frozen in time, through more than four decades of an ongoing geopolitical conflict. This thesis proposes a significance of correlation between issues relating to brownfields, policies regarding brownfield regeneration options, and geopolitical hot-spots in countries engulfed by conflict. This intersection can be highlighted as a novel element in this study as little research has been done before in this area (Figure 4).



**Figure 4 - Correlation between elements of the study, which demonstrate the novel focus of the research**

## 1.7 Definitions

Following terminologies are set of keywords used in this study and in some parts, they may refer to an alternative or extended meaning of the terms in contrast to their global understanding. Therefore, it is crucial to explain what the accepted meanings and understandings of these terminologies are for the purposes of this study. It is presented to ensure readers will have the same definitions and understanding of the terms as the author of this thesis.

### **Brownfield:**

A terminology widely used in English land-management literature to refer to previously developed lands that are degraded and/or abandoned with possibilities of environmental contamination.

**Regeneration:**

An urban intervention technique that results from a series of actions to bring a degraded urban area back to a liveable and functional space that is responsive to society, economy, culture, environment and sometimes the political atmosphere of the area.

**Re-Concept:**

Series of intervention techniques for brownfield regeneration that is introduced by Dr. Paul Nathaniel (2011) as reclamation, remediation, redevelopment, and regeneration (Nathanail, 2011, p. 1805).

**Geopolitics:**

The simplified meaning derives from political geography and vice-versa, however, in this study geopolitics is considered to be the interest of powers and super powers in a specific geographical location.

**Foucauldian Philosophy:**

Explanation of the correlation between power, knowledge, space, and the role of institutions in these relationships.

**Geopolitical Location:**

An area of contested interests over a specific area on a geographical map.

**Conflict Zone:**

An area or geographical location where contested interests of power and super powers in geographical location lost its balance and caused confrontations.

**Abandoned Properties:**

A real estate property that is left vacant by its owner voluntarily with no intention of return. However, this term is addressed in this study as so-called abandoned properties in conflict zones that are left vacant by their owners due to fear for their security and with the hope of possible return in the future.

**Geopolitical Brownfield:**

A proposed land-use typology for non-existent spaces in conflict zones such as closed or restricted areas that exist but are ignored on geopolitical maps as if they do not exist. Such lands are also called in this study as semi-like brownfield sites in geopolitical conflict zones, in contrast to typical brownfield sites.

**List of Abbreviations:**

**TRNC:**

Turkish Republic of North Cyprus, a *de facto* state which is the official government of northern part of Cyprus and solely recognized by Republic of Turkey.

**RoC:**

Republic of Cyprus, that refers to southern part of the island and its Greek Cypriot government which internationally is the only legitimate government and recognised state of Cyprus



## **PART I – THEORETICAL FRAMEWORK**

*policies without clear straightforward definitions are pointless<sup>1</sup>*

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<sup>1</sup> Philip Hanham (1997)

## **CHAPTER 2**

### **BROWNFIELDS**

#### **2.1 Introduction**

Nowadays, regeneration of brownfield sites is one of the most important concerns of many urban development plans in developed and developing countries to reduce pressure on Greenfields as well as make their cities more compact and efficient. Global understanding of the term brownfield refers to previously developed lands that are abandoned, derelict, and degraded with the possibility of environmental contamination. The present study takes this global understanding of brownfields and compares abandoned properties in conflict zones with the currently accepted meaning of brownfields in order to explain the similarities and differences between them. This is an important topic for the identification and characterization of affected areas in geopolitical conflict zones because abandoned properties in conflict zones cause confusion in urban planning systems as a result of imprecise legal definitions and the implication of policies, actions, and development plans.

The aim of this chapter is to construct the hypothesis that introducing a new land-use and conceptual framework for semi-like brownfield sites in geopolitical conflict zones. To be able to construct such an inductive proposition, an exploration of the prevailing knowledge on the topic of brownfields and analysis of existing solutions is essential. To fulfil the aim and objectives of this chapter, methodologies and theories for evaluating the socio-economic characteristics of semi-like brownfield sites are explored. However, before describing these theories, it is necessary to explain the current situation and conditions of general sustainable regeneration approaches to deal with brownfield sites.

The chapter begins with a description of the definition of brownfield sites and arguing that the definition and understanding of the term brownfield (vacant, abandoned, etc.) will alter the implications of act and policies. It goes on to suggest that the meaning of abandoned properties in non-conflict zones is totally different from the context of geopolitical conflict zones, where the understanding is associated with large paradox over its meaning. Based on this understanding, this chapter describes the existing policies for brownfield regeneration programs in different countries. Subsequently, to help identify a common diagnostic method within different acts and policies, three European brownfield regeneration projects are explored, in which the main criteria that define broad categories and its indicators that provide specific measurements of existing diagnostic methods for brownfield regeneration are presented. The three projects were selected from advanced post-industrial economies to also enable the study to compare general brownfield strategies [direct or indirect strategies, policies, and guidelines] and emphasizes the differences and similarities between regeneration indicators in brownfield regeneration of post-industrial economies and post-war areas with geopolitical contexts. This comparison provided the preliminary stage of evaluations and conceptualisations of 'geopolitical brownfields' conceptual framework.

## 2.2 The Fundamentals of Brownfield Sites

This section is dedicated to an explanation of the term ‘brownfield site’. Although there is no accepted universal definition for the term brownfield, across different countries there are general brownfield policies and definitions that have shared viewpoints. In all different definitions, ‘brownfield’ is used to denote land (with or without permanent structure) that was previously developed and had a function, and now there is no more use (fully or partially) for the land, which has now become derelict, abandoned, or vacant. This type of land may also be associated with contamination and physical problems (DoE, 1992; Daley, 1993; Kunsman, 1994; CERCLA, 1996-2010; Beer & Higgins, 2000; Alker, Joy, Roberts, & Smith, 2000; USA Brownfield Act 107-118, 2002; Oliver, Ferber, Grimski, Millar, & Nathanail, 2005; English Partnerships, 2006; CABERNET, 2005; Dixon, Raco, Catney, & Lerner, 2007; Adams, De Sousa, & Tiesd, 2010; DCLG, 2006, 2010 & 2012; EPA, 2009; Maczulak, 2009; Swartjes, 2011; etc.). This widespread commonality demonstrates the mutual understanding of the term as well as its complexity and multi-disciplinary aspects. However, the perspective and approach of an institute that deals with brownfield issues, in addition to its regional features, can significantly change the working definition. This study systematically reviews the policies and definitions related to brownfield sites, aiming to provide a global understanding of the term brownfield that can define typical brownfields in contrast to semi-like brownfields in geopolitical conflict zones.

In general, the definition of a term influences the direction and system approach of policies; consequently, the importance of a clear and standardized definition of the term ‘brownfield’ is clear since it can influence all related national and regional policies. Since the late 1980s and early 1990s, many discussions, definitions, and policies have been developed in reaction to the acknowledgement of brownfields. Perspectives on the issue moved from solution finding for problematic locations towards decoding and taking advantage of opportunities (Figure 5), where brownfields began to be treated as golden opportunities within compact urban environments to be turned into liveable and vital urban areas (Neonato, Millar, & Hall, 2005; CABERNET, 2005; Dixon, Raco, Catney, & Lerner, 2007; Adams, De Sousa, & Tiesd, 2010). It is undeniable that to find solutions, develop policies and take advantage of an opportunities, a definition of the issue which is clear and acceptable to all stakeholders is essential (Alker, Joy, Roberts, & Smith, 2000). In support of this, Oliver et al. (2005) presented evidence in an investigation on the “Scale and Nature of European Brownfields” that even a minor difference in definition can greatly influence the status and policies of brownfields (Oliver, Ferber, Grimsk, Millar, & Nathanail, 2005). Compatible with this claim, the investigations of Adams et al. (2010) on the shared challenge of development of brownfield policies in North America and the UK determined that differences in definitions have a direct influence on the implementation and development of policies (Adams, De Sousa, & Tiesd, 2010).

Historically, considering the causes of brownfields, it is clear that most of the sites appeared after the events of the 1950s as the result of rapid developments and post-conflict events following the Second World War. However, social consciousness about the existence of brownfields only dates back to the 1980s, when the

value of land in the United States, Europe, and some other countries increased, and old factory sites and closed military bases became attractive to developers. In addition, issues related to public health and contamination, which were related to those closed properties and abandoned/vacant lands raised additional sensitivity to the concerns over brownfield sites. Previous literature (1990s-2000s) on brownfields stressed that the “deindustrialisation” and “suburbanisation” of cities are the main cause of brownfields, and they appear at the edge or sometimes middle of expanded cities. However, it is difficult to ignore that brownfield sites also exist as direct or indirect impacts of war, political conflicts (Shojaee Far & Atun, 2012), and sometimes geopolitics.

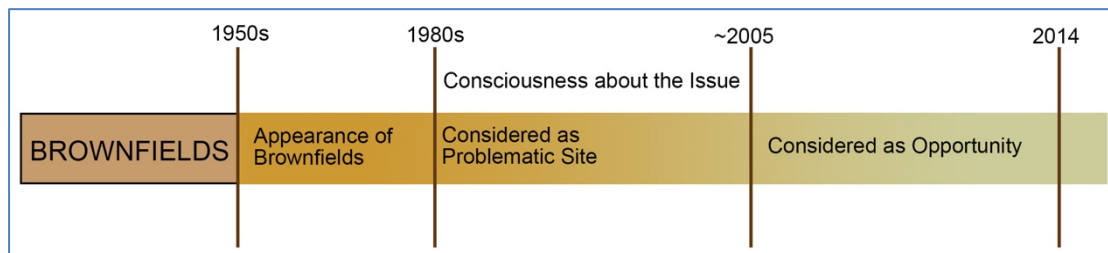


Figure 5 - Changes in the perception and perceived value of brownfields over time (Created by author)

### 2.2.1 Brownfield Definitions

A search of the literature relating to brownfields revealed that different institutional viewpoints produced alternative brownfield definitions and policies. In other words, sensitivity to nuances in definitions results in a different understanding and perspective on the issue, which in turns leads to divergent strategies (Adams, De Sousa, & Tiesd, 2010). In addition to institutional definitions of the term, many scholars have published papers on the definition of brownfields and their regeneration approaches, considering variety of dimensions and factors to present a multi-dimensional definition for the term brownfield (Alker, Joy, Roberts, & Smith, 2000; Dixon, Raco, Catney, & Lerner, 2007; Nathanail, 2011; De Sousa, 2005; Dixon, 2006; Charlier, 2000; Adams, De Sousa, & Tiesd, 2010; Oliver, Ferber, Grimsk, Millar, & Nathanail, 2005; Maczulak, 2009 and others). However, these studies do not show a single, definite and universally-accepted definition of the term they even show subtle changes over time responding to the diverse needs of different regions. One of the brownfield definitions that was articulated by Alker et al. (2000), and popularised by many other institutions, describes brownfields thus:

“A brownfield site is any land or premises which has previously been used or developed and is not currently fully in use, although it may be partially occupied or utilised. It may also be vacant, derelict or contaminated. Therefore, a brownfield site is not available for immediate use without intervention.” (Alker et al., 2000, p. 64)

Considering all the differences in definitions, it is acknowledgeable that there exists a large body of published studies describing the characteristics of brownfield sites. This has increased awareness of the

issue, not just in developed countries but also in developing countries, which have little experience in dealing with brownfields. Among countries that have dealt with brownfields there are two general approaches; the first approach refers to concentrated actions and the second approach to fragmented actions under a series of general frameworks (i.e. sustainable development). Countries with the first approach prepared a specific terminology to address the issue including legal definition, policies, action plans, as well as toolkits (CLARINET, 2002). Usually the institutional perspective of these countries resulted in the formation of a dedicated organization or agency to undertake the responsibilities related to brownfield sites, as was the case in the UK, USA, Canada, Australia, the Netherlands, Austria, Germany (Brache or Brachflächen) and France (Friche urbaine), amongst others. Alker et al. (2000) claimed that two main institutional sources amongst the English body of research for brownfield definitions are the UK and the USA. Although in the UK the term ‘brownfield’ is repeatedly used in connection with Previously Developed Land (PDL) by institutes and governmental authorities, it is difficult to find an exact definition of the term endorsed by the UK government; hence, surprisingly, one may argue that there is no governmental definition for the term (Leney, 2008). The efficient reuse of PDLs has been encouraged in the core planning principles of the UK National Planning Policy Framework (NPPF), which directly addresses brownfield issues. The NPPF defines PDLs as:

“Previously developed land: Land which is or was occupied by a permanent structure, including the curtilage of the developed land (although it should not be assumed that the whole of the curtilage should be developed) and any associated fixed surface infrastructure. This excludes: land that is or has been occupied by agricultural or forestry buildings; land that has been developed for minerals extraction or waste disposal by landfill purposes where provision for restoration has been made through development control procedures; land in built-up areas such as private residential gardens, parks, recreation grounds and allotments; and land that was previously-developed but where the remains of the permanent structure or fixed surface structure have blended into the landscape in the process of time.” (DCLG, 2012, p. 55)

In contrast to lack of explicit definition of brownfield in the UK, as one of the institutional sources of the term, there are British sources that used the term ‘brownfield’ within their definitions; for instance, the glossary of terms used on website of the Campaign to Protect Rural England (CPRE)<sup>2</sup> defined “Brownfield land or site” as:

“Brownfield land is another term for previously developed land, or land that contains or contained a permanent structure and associated infrastructure. Brownfield land occurs in rural and urban areas, but does not include agricultural or forestry land or buildings. The National Planning Policy Framework encourages local authorities to plan to reuse brownfield land before greenfield sites, as long as the brownfield site is not more environmentally valuable.” (CPRE, 2013)

Meanwhile, in the USA, as the second source of the term in the English body of literature, the definition is clearly given by the United States Environmental Protection Agency (US EPA) in 1996 (Alker et al., 2000) and signed into US public law in 2002, stating that:

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<sup>2</sup> Campaign to Protect Rural England (CPRE) is a registered charity (no. 1089685) and a company limited by guarantee (registered in England, no. 4302973), supported by the Department for Communities and Local Government (<http://www.cpre.org.uk>)

“With certain legal exclusions and additions, the term "brownfield site" means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” (USA Brownfield Act 107-118, 2002)

One of the interesting points about brownfield definitions found in the English land management literature can be analysed using well-known British and American English dictionaries. On one hand, the British Oxford and Cambridge dictionaries have classified ‘brownfield’ as an ‘adjective’, with Oxford defining it as “denoting or relating to urban sites for potential building development that have had previous development on them. Compare with greenfield” (Oxford University Press, 2013), while Cambridge states that it “describes an area of land in a town or city that was previously used for industry and where new buildings can be built” (Cambridge University Press, 2013). On the other hand, in Merriam-Webster’s dictionary, as an American English source, ‘brownfield’ has been classified as a ‘noun’ and defined as “a tract of land that has been developed for industrial purposes, polluted, and then abandoned” (Merriam-Webster, 2013) with reference to the first use of the term in 1977. The different definitions of brownfields within dictionaries reflect the differences within the English research literature, for, as shown above, in American English, a brownfield represents a place or idea whereas the British understanding is that brownfield is an adjective which describes a noun - a description of a place. Evidently, the previous usage of the land also plays an important role where in the American approach it includes only contaminated and abandoned sites, while in comparison the British perspective includes any previously developed lands with specifically defined conditions.

Not only differences within the language used to define the term, but also differences between languages, can lead to a variety of alternative meanings and diverse policies. Due to the domination of the English language within international discussions and scientific publications, the definition of ‘brownfield’ that has spread and gained near-complete acceptance is that defined in western English literature generally originating from North American and British institutes. This does not mean that there are more comprehensive or more limited definitions in different languages, but the awareness of changes in definitions and development of related policies within different regions and languages is an important factor affecting a coordinated international response to brownfield issues. It must be assumed that the term and its related terminology have been defined in relation to the institutional perspectives of the defining institute on politic, science, economy, sociology, and environment.

Countries that have not developed specific vocabulary for brownfield sites have still undertaken their redevelopment using different policies, usually under the concept of sustainable development (second approach). Brownfield sites have mainly been described in these policies according to the particular national perspective and traditions of their location (CLARINET, 2002). Alternative terms can be identified in general planning policies that match the global characteristics of brownfield sites, such as ‘abandoned industrial site’, ‘contaminated land’, ‘derelict land’, etc. However, this fragmented approach, in contrast to an institutional method of concentrated brownfield acts and policies, may cause confusion from an external

standpoint about the existence and clarity of actions for the development of brownfield sites. For instance, in the general land law of Spain (Ley 8/2007 de Suelo) there is no direct reference to brownfields, but under the concept of sustainable development it refers to protection of Greenfields, compact development, and the improvement of contaminated lands. In this example, the urban planning system of Spain has a general national law from central state government and each region (comunidades autónomas) has its own detailed planning legislation, in which they refer to different aspects of urbanism. In addition to detailed regional policies, if there is a need, there are specific modifications to legislation such as in the 22@BCN project in Barcelona, where brownfield-type policies were developed by the modification of urban regulations in the general metropolitan plan of Catalonia (22@BCN Act, 2000).

Even though the 22@BCN act is about brownfield redevelopment, there is no reference to the term 'brownfield' or any similar alternative. However, as an example of a non-direct reference to brownfield development, many Spanish land laws encourage cleaning up contaminated land and redeveloping derelict industrial sites as the agenda of an integrated urban regeneration approach as well as under the concept of sustainable development (Spain Land Law 8/2007, 2007; Spain Royal Legislative Decree 2/2008, 2008; 22@BCN Act, 2000; Spain Waste Law 10/1998, 1998; Spain Waste and Contaminated Lands Act 22/2011, 2011; Spain Royal Decree 9/2005, 2005; Rodriguez Molnar, 2007; MAGRAMA, 2014; IUU-UVA, 2010).

### **2.2.2 European Union Concerns about Brownfield Sites**

Brownfield regeneration plans and strategies are promoted in European Union Structural Measures as protection strategies for health, the environment, and the reduction of urban sprawl. However, as there is no universally-accepted definition for brownfields, similarly there is no common definition of a brownfield site among European countries. This fact shows a need for an EU-wide definition to cover the generalities of the issue (Ramsden, 2010). It also highlights that there is a need for a common definition for clear communication between EU countries and investors regarding sustainable redevelopment opportunities. Since 1993, the term 'brownfield site' has been used many times in different subdomains of documents officially produced by institutions of the European Union, its Member States, and the European Free Trade Association, such as EU laws, preparatory acts, legislation, parliamentary questions, consolidated acts, and EU case laws (EUR-Lex, 2017). Most of these documents are concerned with economic aspects of urban developments, funds, and other similar themes. However, there is no definitive, legal, EU-wide definition for 'brownfield sites' in the aforementioned documents. Existence of such a definition would facilitate the development of urban planning strategies related to brownfield sites on a larger scale. In 1997, Philip Hanham noted in UK parliament that the development of policies without a "clear straightforward definition" was "pointless".

A variety of definitions have already been offered by different European working groups and networks under direct or partial supervision of the European Commission; There is wide list of organisations that suggest definitions for brownfields such as the 'Concentrated Action on Risk Assessment for Contaminated Sites in Europe' known as 'CARACAS', 'Contaminated Land Rehabilitation Network for Environmental

Technologies' known as 'CLARINET', 'Concentrated Action on Brownfield and Economic Regeneration Network' known as 'CABERNET', 'Hybrid Geophysical Technology for the Evaluation of Insidious Contaminated Areas' known as 'HYGEIA', 'Network-Orientated Risk Assessment by In-Situ Screening of Contaminated Sites' known as 'NORISC', and 'Regeneration of European Sites in Cities and Urban Environments' known as 'RESCUE' in addition to European Commission working papers such as 'Towards A Local Sustainability Profile - European Common Indicators' (Basztura, 2003).

In a methodology sheet from one of the European Commission's working papers, both contaminated land and derelict land were separately defined and referred to as 'brownfield' (Ambiente Italia, 2003). This report defined contaminated lands as "land affected by levels of pollution of the soil or subsoil that are high enough to require remediation before safe reuse is possible" and derelict land as "part of developed/urbanised land (artificial surfaces) no longer in use (for housing, industry or services)" (Ambiente Italia, 2003). However, based on the works of CLARINET, CABERNET defined the term 'brownfield' more specifically. This definition by CABERNET became popular among European research institutes and some countries such as Austria, the Czech Republic, and Latvia (CLARINET, 2002; CABERNET, 2005; Dixon et al., 2007; Oliver et al., 2005; Nathanail, 2011; Ramsden, 2010). CABERNET defined brownfields as sites that:

"Have been affected by former uses of the site or surrounding land; are derelict or underused; are mainly in fully or partly developed urban areas; require intervention to bring them back to beneficial use; and may have real or perceived contamination problems." (CABERNET, 2005)

In 2012, in response to the question "Have EU Structural Measures successfully supported the regeneration of industrial and military brownfield sites?", the European Court of Auditors produced a special report (ECA, 2013) addressing the Court's audit of 27 brownfield regeneration projects and regeneration tools used by Member States under the framework for co-financed interventions. Although the court considered that brownfield regeneration workflow is not a unified and certified process (as there are differences between local planning instruments) and that the majority of assessed projects achieved their physical output objectives, it reported lower-than-expected success in intended socio-economic regeneration objectives, and few projects being part of "an integrated development plan".

"In all Member States a brownfield policy is mainly implemented through local planning instruments, which promote the application of some key best practices, namely the regeneration of brownfields over greenfield developments, while the interim use of brownfield sites is rarely promoted." (ECA, 2013)

The report also included a glossary with definitions of the terms 'brownfield site' and 'contaminated site' and explicitly differentiated brownfield sites from contaminate sites, in that brownfield status is not dependent on the presence of contamination. The court conclusion noted difficulties when prioritizing actions due to gaps in Structural Fund regulations for integrated development plans dealing with both brownfield and contaminated sites. Such plans addressing brownfield regenerations do not adequately support "reuse of brownfield sites over Greenfields" and brownfield sites are not appropriately identified



and registered (ECA, 2013). “Results could have been achieved at a reduced cost to national and EU budgets” (ECA, 2013).

Although this report and many other similar official documents used the term ‘brownfield sites’ to address the issue, for the purposes of each document a glossary definition was explained and only the concept was referred to in the text. For instance, the above-mentioned report (ECA, 2013) referred to them as “derelict industrial and military sites (so-called brownfield sites)”.

**“Brownfield site:** A site which has been affected by its former use (for the purposes of this report, industrial or military) or that of surrounding land, is derelict or underused and requires intervention to bring it back to beneficial use. It may or may not be contaminated. ...**Contaminated site:** A site where there is a confirmed presence, caused by human activities, of dangerous substances at a level deemed to pose a significant risk to human health or the environment. This risk is evaluated taking into account current and approved future use of the land. The most frequent categories of contaminated sites are industrial and military brownfield sites, landfills and agricultural land.” (ECA, 2013)

### 2.2.3 Accepted Brownfield Definition for the Purposes of this Thesis

To sum up, there are three different types of planning policy dealing with brownfields; the first type uses concentrated actions and developed a terminology and specific approaches to the brownfield issue, such as the policies of the UK and the USA. The second type of policy deals with brownfield issues under the concept of sustainable development, however their approaches are fragmented, and different authorities deal with different levels of the issue for example, the policies in Spain. The third type are found in countries with limited knowledge on the topic and no specified law or policies regarding to the issue, such as the case study of this research, the Turkish Republic of North Cyprus (TRNC) (Shojaee Far & Atun, 2012).

With regards to the contamination status of brownfields, it can be concluded that there are two general perspectives, which can affect both the definitions and the policies. Some countries accept contamination as an essential characteristic of brownfields. Since contamination is usually caused by industrial activity, these countries mainly refer to brownfield sites as derelict, vacant, and/or abandoned industrial sites, such as the USA, Canada, Spain, Belgium, Italy, Romania, Poland, Bulgaria, Denmark, etc. Other countries address brownfields as previously-developed lands (PDLs) that are either vacant, abandoned, or derelict, or some combination of these. From this perspective, the contamination of the land is not an essential feature, which means the sites may or may not have real or perceived contamination. This stance is popular among countries that emphasized the dereliction of PDLs, more than the contamination, as the defining feature of a site with brownfield status, such as the UK, Ireland, Germany, France, etc.

Definitions of the term ‘brownfield’ are influenced not only by different institutes’ varying needs, but also the region and language of an institute. Nuances in the definitions are then reflected in the way that the policies develop. This suggests that finding a universally-accepted definition for this term would not be practical, given the variations in brownfield sites of different regions, both in causes and in characteristics.

Furthermore, the political, social, strategic, and economic approaches of responsive institutes affect their corresponding understanding and the actions they take. In other words, the evidences proved that it is difficult to have a universal definition for the term ‘brownfield’ because the concept is too varied. Instead, it may require a sub-categorization approach to the term.

According to these discussions, the general concept of ‘brownfield site’ will be taken in this study as any previously-developed land associated with at least one of these terms: ‘abandoned’, ‘vacant’, ‘derelict’, and/or ‘contaminated’. This includes both urban and rural lands but excludes the natural environment and historic urban quarters. This definition includes real or perceived contamination as well as assessments of the existence and level of contamination as an essential factor, however, according to this study, the contamination is not a necessity to mark a site as ‘brownfield’. Therefore, to serve the purpose of this study, the suggested basic definition of a typical brownfield site would be:

*‘A brownfield site is any previously-developed land, which is either abandoned, vacant, derelict, or contaminated, or any combination of these’*

### **2.3 Brownfield-Related Policies and Regulatory Frameworks**

One of the globally-accepted solutions for turning these unexploited areas into lively, vibrant, and functional spaces is based on urban intervention techniques (i.e. regeneration) under sustainable development agendas, and it is widely known as Sustainable Brownfield Regeneration (SBR) (Dixon, Raco, Catney, & Lerner, 2007). SBR programs are about bridging technical issues and socio-economic concerns to give new life to abandoned lands and properties. These regeneration programs reduce the pressure on Greenfields and prevent urban sprawl by creating a more compact urban form. Awareness of the pragmatic dimensions of these projects is essential; by defining the role of stakeholders, managing the partnership, and recognising and handling the potential risks, more realistic and satisfactory results can be expected.

As mentioned above, however, the difficulties of establishing a definition for the term ‘brownfield’ goes beyond the lack of a universally-accepted term, and historically has also concerned different regeneration policies and programs. For instance, due to economic and political changes in the UK in recent decades, a lot of former industrial land has become available. Since 1998, the UK government has made the regeneration of brownfield land an important development objective. Correspondingly, they have set a target that by 2008, 60% of all new development should take place on brownfield land. The results of this governmental initiative have been significant, as more and more brownfield sites have been re-used instead of greenfields. Nevertheless, until 2012, general UK brownfield policy in the planning policy statements simply defined brownfield sites as “land that has been previously developed”, and this resulted in the misidentification of brownfields (e.g. new houses being built on back gardens that were considered as brownfield sites, a matter which raised environmental concerns) (CIWEM, 2016).

In the USA, brownfield development is led by the Environmental Protection Agency (EPA) which developed a national definition of the term. However, each state of the USA has adopted a different definition. For example, in some states in the USA, properties with “obsolete structures that may retard redevelopment are considered brownfields, whether or not the site suffers from environmental contamination” (Hula, Reese, & Jackson-Elmoore, 2012). Levels of acceptable contamination also vary between states and over time, indeed many states “reforms” only adjust the acceptable level of toxicity for different substances. An important distinction in the US definition is the assumption that, while brownfields may have significant contamination, the most contaminated sites are categorized completely differently. These sites are handled by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Therefore, many toxic sites in the US are not even considered ‘brownfields’, which is different to most of the world. Moreover, there is no worldwide definition for ‘contamination’, rather individual jurisdictions constitute ‘acceptable’ levels of toxins at sites which makes comparisons between jurisdictions very difficult (Hula, Reese, & Jackson-Elmoore, 2012).

### **2.3.1 A Brief Exploration of the Framework of Brownfield Policies**

This subsection examines the general framework of brownfield policies in different countries with different planning legislation, such as the People’s Republic of China (PRC), the Kingdom of Spain, the United Kingdom, and the United States of America. The aim of this exploration is to provide a brief overview of current policy status and conditions with regard to brownfield sites and to demonstrate their different ways of viewing and dealing with the issue from different locations and legislation system in Europe, North America, and Far East.

Of course, the original aim of brownfield policies was to minimize potential health threats from water contamination but, over time, other objectives have become more significant. Economic development as a goal is becoming increasingly relevant in these policies and some experts argue that economic redevelopment has become more important than the protection of human health. Saving undeveloped land, or greenfields, is another goal of brownfield development programs, especially in the UK, as well as dealing with population growth and housing demands in China.

It is important not to ignore policy implementation strategies, as the manner of implementation can change the focus and the results of a policy. Hula, Reese, and Jackson-Elmoore (2012), in their book ‘Reclaiming Brownfields: A Comparative Analysis of Adaptive Reuse of Contaminated Properties’, identified three main strategies when comparing policies from different countries; 1) having a development focus, 2) enforcing minimal environmental protection, and 3) liability protection (Hula, Reese, & Jackson-Elmoore, 2012). These are ways to improve investments on brownfield sites by, respectively, emphasizing the end-use of the property, putting development ahead of environmental health, and removing owner liability for clean-up costs (contrary to general environmental laws that hold the owner of contaminated land responsible for the clean-up costs).

### 2.3.2 The Case of the United Kingdom

The reuse of brownfield sites to reduce pressure on greenfields became a key factor in UK policies due to the sustainable development agenda (Coulon, et al., 2016). The framework of brownfield policies in the UK had been defined in planning policy statements until 2012, which were prepared and enforced by regional planning agencies. However, from 2012 onwards, such statements were replaced by the National Planning Policy Framework (NPPF) and regional planning agencies were eliminated, making brownfield development a nationally-regulated issue. In May 2015, the Conservative Government announced an agenda of brownfield-related policies, including the goal to make 90% of brownfield land suitable for housing by 2020, using various incentive programs. The NPPF currently encourages the use of “land that has been previously developed (brownfield land), provided that it is not of high environmental value” (Department for Communities and Local Government, 2012). It then goes on to give local planning authorities the right to set targets for brownfield use. The definition again is quite broad and, as a result, local authorities have resorted to favouring greenfield (undeveloped land used for agriculture, landscaping, or left in its natural state) and green belt sites (land designated to the prevention of urban sprawl) for development. Certain other government actions have been taken to encourage the use of brownfield land, such as the Right to Reclaim Land of 2011, which allows local communities to claim unused public land for new development (Department for Communities and Local Government, 2011). Recently, Coulon et al. (2016) highlighted a number of key drivers that have stimulated the reuse of brownfield land in the UK:

- The increased economic viability of brownfield regeneration as local/regional land supply decreases, in addition to policies that restrict the use of greenfield sites (for example, the “Green Belt” policy, meant to control urban sprawl) which directly encourage brownfield sites as space for new housing.
- Legal and technical support through guidelines, integrated legislation and technical toolkits.
- Taxation policies that provide incentives to invest in brownfield sites.
- Targeted campaigns to raise awareness and gather public support.
- Improvements in infrastructure such as the transport network.
- The reduction of corporate liability that comes from undertaking the accounting requirements of long-term land management costs, which improves the financial position of companies and organisations (Coulon, et al., 2016).

Also, with regard to land contamination, UK policies take a risk-management approach. In order for a site to be considered contaminated, and therefore need a risk assessment, it must contain a pollutant linkage, which means that the land contains the presence of a **source** of contamination, or harmful substance in the ground, as either a solid, liquid, or gas, a **receptor** that can be harmed – which can be a person, water, flora

or fauna, or a structure - and a **pathway** capable of exposing the receptor to the source, directly (skin contact with soil) or indirectly (movement through air or water). The government only acts when there are “unacceptable risks to human health and the environment” (Rizzo, 2016, p. 24), and UK policies have become an international reference for other countries dealing with contamination, such as the People’s Republic of China.

### **2.3.3 The Case of the People’s Republic of China**

China is one of the fastest-growing areas worldwide with rapid development and expansion of industrial areas, which produce many highly contaminated sites and brownfields. As environmental concerns are still emerging in China, it is difficult to find clear, detailed statistics on brownfield sites. China’s rapid urbanization and the manufacturing boom of the last 30 years has led to significant soil and water contamination problems, and recently many policies and regulations have tried to combat this. Plans for dealing with contaminated lands are stressed as an immediate priority in China’s 13th Five-Year Plan. China’s first nationwide soil quality survey, in 2014, emphasized the challenges of maintaining soil quality.

As a result of technical cooperation on soil remediation between China and the UK, technical reports and guidelines are being developed, learning from the UK’s experience in dealing with brownfields and contaminated lands. One of these reports concluded that soil remediation should be considered more than just technological innovation and risk management; it also should rely on business models that translate relevant science/technology into tangible solutions. Therefore, China needs to establish real funding methods for land remediation and regeneration (Coulon, et al., 2016).

In Hong Kong, which is an autonomous territory of China, identified brownfield sites are agricultural land in rural, usually flat and more accessible, areas and have previously been occupied by some kind of industrial operations. In 2015, looking for a long-term solution to accommodate population growth, the Chinese government set a housing goal of 480,000 residences over 10 years, making brownfield sites the principal target; specifically, in Hung Shui Kiu, Yuen Long South and New Territories in northern China (Choi, 2015). In Korea, too, there has been a great deal of interest recently in brownfield redevelopment. There have been many contamination problems that have created a need for comprehensive policies and programs to specifically deal with brownfield sites (Kim & Miller, 2015).

### **2.3.4 The Case of the United States of America**

In the case of the United States of America (USA), the Environmental Protection Agency (EPA) is the entity responsible for dealing with brownfield sites and contaminated lands, and the main policy framework was defined in US public law in 2002 as the “Brownfield Act 107-118”. Four major characteristics of US brownfield policies were highlighted by Kim & Miller (2015):

- There has been a relaxation and readjustment of regulation, as the excessive environmental regulations that had been in place since 1960 were hindering brownfield development.

- There is a lot of support for program diversification as a way to deal with the redevelopment of the various types of brownfield sites.
- Policies are a mix of top-down and bottom-up approaches. In the early days, the top-down approach was used for urgent sites to protect the public from contamination. Since the 1990s, however, a bottom-up approach has been more common in lightly toxic or residential areas.
- The extensive online database managed by the US EPA continues to expand and facilitates site identification and reuse monitoring. The EPA's Superfund Redevelopment Program has collected a huge amount of brownfield reuse data such as prior usage, contamination information, surrounding area profiles, community status and reuse types (Kim & Miller, 2015).

In 2010, the federal government of the United States started the Brownfield Area-Wide Planning (BF AWP) program with the goal of assisting certain communities in preparing comprehensive area-wide revitalization plans for brownfield sites. These projects include river, industrial, commercial and railway corridors, as well as downtown areas (Kim & Miller, 2015). The main difference compared to the past is that brownfield redevelopment is now usually seen as a comprehensive, multi-functional redevelopment, rather than just a quick fix for a single brownfield site. For example, the physical planning areas included in proposals are designated areas of the city rather than individual plots of land. Other recent developments are the consideration of existing brownfields within the context of current city conditions as well as future plans, and the inclusion of community engagement in the larger context. Because of this, it has been suggested that while the experts from the federal government and EPA tend to regard brownfields as an environmental and technical problem involving contamination and clean-up, local residents may see brownfields as a neighbourhood planning issue and thus focus on details of the redevelopment (Solitaire, 2005).

### **2.3.5 The Case of Kingdom of Spain**

In the case of Spain, although there have been very good brownfield regeneration projects carried out in the last few decades<sup>3</sup>, it is difficult to identify any specific policy guidance for brownfield sites. Neither the term 'brownfield' nor any literal translation of it exists in Spanish legislation regarding concrete strategies for brownfield regeneration. The elements of brownfield sites such as abandonment, urban decline, contamination, etc. are addressed in different policies and legislation under different laws and public entities. For example, soil contamination is considered in environmental legislation, but it is not linked to regeneration policies, yet in reality it is considered to be the first stage in the regeneration of contaminated land. This fragmentation of policies is the consequence of the territorial and political structure of Spain because each region has its own capacity, responsibility, and authority for urban development, land management, environmental protection, and regeneration strategies (González Carmena, 2016).

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<sup>3</sup> 22@Barcelona projects and Zorrotzaurre in Bilbao

Therefore, as a national framework for dealing with brownfield sites does not exist, any brownfield regeneration plan requires many fragmented laws and policies to be considered in order to develop a comprehensive strategy. For example, in the case of the brownfield regeneration of the Zorrotzaurre area in Bilbao, to include environmental aspects into the urban regeneration program of the area, many different policies and laws at both national and regional levels had to be collected in order to put together a comprehensive and integrated strategy<sup>4</sup> (ZMC, 2011). In light of the fact that Spain does not have any comprehensive regulations responding to brownfield sites, to understand the actions and strategies for brownfield regeneration, the policies concerning environmental protection (soil contamination) and urban regeneration should be evaluated separately.

With regard to soil contamination, the ‘Plan Nacional para la Recuperación de Suelos Contaminados’<sup>5</sup> (1995-2005) was the last policy to provide economic initiatives in different regions of Spain to support financial liabilities for environmental issues. Although, there are few incentives established in the ‘Ley 22/2011, de 28 de julio, de residuos y suelos contaminados’, the funds are very limited and depends on local and regional policies (in each autonomous community) and their availability<sup>6</sup>. Also, the current National Integrated Waste Plan (PNIR) does not provide or support any economic incentives for autonomous communities to finance remediation plans<sup>7</sup> (Pastor Piñeiro, 2008).

In terms of urban regeneration policies and strategies, the focus of the acts and their associated economic initiatives (funds and incentives) are generally related to housing rehabilitation, however they are not necessarily limited in other cases, such as brownfield sites. In a case that can fulfil the requirement of such policies, the regulations can be applied case by case. This brings a level of complication into regeneration strategies for brownfield sites. To be able to take advantage of economic incentives or reduced limitations for private developers on each major project, the land status and regional policies should be modified. The brownfield regeneration project of 22@ in Barcelona is one of the examples of modifications to the general metropolitan plan<sup>8</sup> (Ajuntament de Barcelona, 2000). Although there are many different amendments and policies that are indirectly related to brownfield regeneration, as was explained in the Spanish context of brownfield regeneration, the implementation of policies completely depends on both local and project-based strategies, which provide extensive confusion for brownfield regeneration strategies within Spanish legislation. Spain represents a case of land management strategies with fragmented actions, though many other countries with established and successful urban planning mechanisms use similar methods with regard to brownfield regeneration plans.

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<sup>4</sup> La Estrategia Ambiental Vasca de Desarrollo Sostenible 2002-2020, El Programa Marco Ambiental de la CAPV 2007-2010, La Ley 3/1998, de 27 de febrero, General de Protección del Medio Ambiente del País Vasco, El Real Decreto Legislativo 2/2008, de 20 de junio, por el que se aprueba el texto refundido de la ley del suelo, La Ley 2/2006, de 30 de junio, de Suelo y Urbanismo

<sup>5</sup> National Plan for the Recovery of Contaminated Soils

<sup>6</sup> The current law “Ley 22/2011, de 28 de julio, de residuos y suelos contaminados” contemplates the possibility that the operations of cleaning and recovery of contaminated soils are carried out using public financing prior commitment by the beneficiary that any potential gains that they acquire will revert to the amount subsidized in favor of the public administration that has financed the aid.

<sup>7</sup> PNIR 2007-2015 (National Integrated Waste Plan), Annex 13: National Plan for the Recovery of Contaminated Soils

<sup>8</sup> Modificación del PGM para la renovación de las zonas industriales del Poblenou

### **2.3.5 Important Highlights from Exploration of the Framework of Brownfield Policies**

When comparing the aforementioned cases, only the UK has explicitly pushed new development on brownfield sites through a combination of clean-up incentives and taxes, making it more logical for developers to choose brownfield over greenfield sites. In the USA, there are incentive programs, but not as strong an effort to fully direct developers toward brownfields. This is likely due to the fact the USA is far larger, and space for building is not as in as much demand (Hula, Reese, & Jackson-Elmoore, 2012). On the other hand, in Spain, the decision to clean the site is often independent of the decision to redevelop, as the brownfield regeneration programs and policies are defined in a framework of project-based decisions.

There are many liabilities for private developers such as remediation cost, fragmentation of available plots, complicated property values, and obviously, the costs of brownfield remediation so policies must be introduced to incentivize them (Craig & Balch, 2016). In the US, there are statutes that define the parties responsible for remediation and liability exemption if purchasing parties comply with government regulation. In the UK, they are regulated under general environmental protection legislation through the Environment Agency (EA) which provides standards for compliance. To combat the disadvantages of brownfield development, the UK has introduced various policies for its promotion and to protect greenbelts. In the US, the government has implemented a tax credit as a development tool for development that helps achieve government policies on housing and employment (Choi, 2015). However, in Spain the funds and incentives are defined in the budgets and capacities of each local government, which only can be evaluated case by case, as it is in waste and soil contamination laws that it is specified that the local governments in each region are responsible for financing aid.

Among the factors considered when assessing policies for brownfield site regeneration are ownership complications, market demand upon completion, current market value of areas, environmentally-friendly designs, construction costs, risks, planning strategies, and availability of finances. The way policy frameworks are responding to requirement of these indicators, along with social and environmental factors, is defining the level of risk for developers in both public and private sector (Hutchison & Disberry, 2008). Financing methods can be broken down into two types of 1) programs that are funded both privately and publicly, and 2) programs that are funded entirely publicly (Hula, Reese, & Jackson-Elmoore, 2012). However, the realities of policy implementation are far more complex than what is explained in policies as differences in sources of funding are often a consequence of varying policy structures. For instance, in a comparison between the financial management of UK and US brownfield policies, differences in the level of private funding could be identified. US financial implementation of brownfield policy relies on tax breaks and direct subsidies for the encouragement of private investment, in contrast to UK implementation method that forces the hand of private developers by restricting the development market, making it so difficult and costly to develop on Greenfields that it has become a rational business decision to develop on brownfields (Hula, Reese, & Jackson-Elmoore, 2012).



Ownership is another challenge for brownfield development. In most cases, sites are owned by companies or multiple people making the entire process complicated and time consuming. To counteract this, the UK introduced Local Development Orders to streamline the planning approval process. Public engagement is another strategy adopted by both the UK and the US. For example, in the US, when applying for government grants for brownfield development, they consider how the plans will address public needs and concerns. In the UK, there is a statutory requirement to consult the public before approving any brownfield development project and publish the plans for members of the general public to comment and express their opinion (Choi, 2015). In contrast to UK and US policies, in Spain it can be seen from various projects that public announcement and citizen participation is purely related to project strategies and the level and mechanism of implementation of the policy, even though in Article 4 of the Land Law and Urban Rehabilitation ('Ley de Suelo y Rehabilitación Urbana') the right of information for citizens and their participation in the process of urban developments are mentioned<sup>9</sup>. For example, in the regeneration process of Zorrotzaurre area in Bilbao, citizen participation was continual during all stages of the project, while in the case of the 22@ project in Barcelona, citizen participation input was mainly limited to the local associations adding some buildings into the heritage catalogue before building demolition took place.

## 2.4 Identifying Diagnostic Methods in Brownfield Acts and Policies

The most obvious finding to emerge from previous sections of this thesis is that the majority of acts and policies are designed as global solutions for dealing with brownfield sites. However, the problem identification process in all the acts has been only very generally defined, which is a shortcoming in the established diagnostic method before policies and acts are implicated as solutions. With this in mind, the current section will now explore three well-known European brownfield regeneration projects by reverse engineering to identify the criteria and indicators that were used in the problem identification process. This is very important for the study to be able to establish the existing indicators in the problem identification process for brownfield projects, in order to then construct its hypothesis on the issues of semi-like brownfield sites in geopolitical conflict zones.

The most common term in the problem identification process is 'diagnostic', used in medical science to represent a methodology that helps a professional "discover what is wrong with someone or something" (Cambridge Dictionary, 2016). The origin of the term goes back to the Greek term *diagnōstikos* that means 'able to distinguish', which was related to the identification of an illness or other problems (English Oxford Dictionary, 2016). Therefore, the problem identification process (diagnostic) is a method to collect a set of information for the diagnosis of a problem, which might include information from a series of diagnoses performed at different times. Although the terms 'diagnostic' and 'diagnosis' are widely used in medical

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<sup>9</sup> The Real Decreto Legislativo 7/2015 de 30 de octubre, por el que se aprueba el texto refundido de la Ley de Suelo y Rehabilitación Urbana "El derecho a la información de los ciudadanos y de las entidades representativas de los intereses afectados por los procesos urbanísticos, así como la participación ciudadana en la ordenación y gestión urbanísticas" more information <https://www.boe.es/boe/dias/2015/10/31/pdfs/BOE-A-2015-11723.pdf>

science, in other disciplines such as computer science they are used for error identification in programs. Therefore, the method, as well as the process of problem identification, can be referred to simply with the term ‘diagnostics’. The task of identifying the problem would be also simply be referred to by the term ‘diagnosis’, in which it is “a judgment about what a particular illness or problem is, made after examining it” (Cambridge Dictionary, 2016) or “the art or act of identifying a disease from its signs and symptoms” (Merriam-Webster, 2017). Correspondingly, in this study the term ‘problem identification process’ will refer to the diagnostic method as the term ‘diagnostic’ completely explains the task of diagnosis in the identification of problems of brownfield sites.

With respect to this discussion of the terms ‘diagnostics’ and ‘diagnosis’, it was found that the diagnostic process has three main steps: 1) observation of symptoms or signs of an issue that provide clues about the cause or nature of the problem; 2) identification of the problems based on investigations using established criteria, indicators or tests; 3) using the results or conclusion to characterise the problem and demonstrate the status. Given the lack of a universally-accepted definition of brownfield sites, it becomes difficult to explain brownfields as a precise problem with a definitive diagnostic method. In many countries, particular definitions or perspectives of solutions or conclusions about how to deal with brownfield problems are established through local acts and policies, in which the term ‘brownfield’ is already known as a land-use status for previously-developed lands that are abandoned, vacant, underused, etc. However, evidence from different successful brownfield regeneration projects demonstrates the lack of an established diagnostic method for identifying the particular symptoms or signs of brownfields as part of the process towards policy implications. This fact presents difficulties for justifying the existence of certain problems; therefore, a universal diagnostic method is necessary to be able to characterise the problem in each separate case and location.

In order to provide an understanding of the symptoms and signs in an affected area (brownfield sites), this section explores three European brownfield regeneration projects that have been managed with completely different approaches and solutions, 1) Docklands in London (UK), 2) @22 project in Barcelona (Spain), and 3) Zorrotzaurre in Bilbao (Spain). Through this exploration and reverse engineering of each process, the most important criteria and indicators in each project are identified to explain how the problem was defined and treated. The review enabled this thesis to extract the pattern and regularity from the three examples in order to highlight the shared aspects and key factors. To achieve this, the investigation focused on a timeline of actions covering the important events, actors, policies, and the results of the implementation of such policies. Through reading the patterns and regularities of each project, this study identified important criteria and indicators during the process for each case. Comparison of these criteria and indicators revealed important parameters of an indirectly-used diagnostic method within each project. Apart from other factors such as location, project success, available resources, etc., two other key factors played an important role in the selection of these cases:

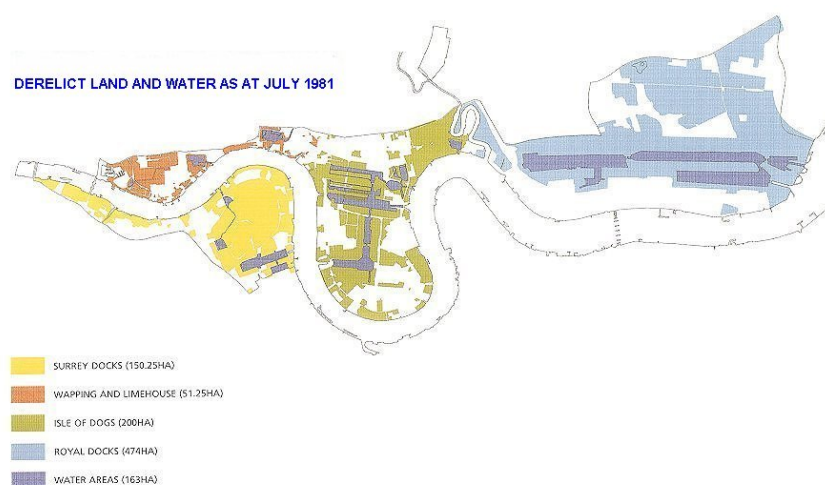
1) having no certain policies for brownfields at the time of the project, and;

2) the project being managed by a new semi-private/semi-public company owned by the local government, which represents a creative solution for the time where it was difficult to identify the responsible entities or stakeholders.

### 2.4.1 London Docklands

The London docklands represented the largest port worldwide during the 19<sup>th</sup> century, as well as one of the biggest and most famous brownfield sites in the 20<sup>th</sup> century. As a result of London's problems post-WWII, in addition to changes in transport systems, 22 square kilometres of vacant and abandoned properties were produced in east London, causing the loss of more than 10,000 jobs. In the 1960s, the UK government started to think about this huge vacant, abandoned area and a series of analysis and planning exercises began, although, it was in the 1970s when the first proposals for regeneration were proposed. In 1973, a comprehensive study of the potential of London's Docklands was developed by an inter-disciplinary team assigned by the government and, as the result, five alternative regeneration plans were proposed as a mixture of policy suggestions and overall land allocations.

To address the challenges and adverse interests of strategic plans of the area, in 1974 the Docklands Joint Committee was established to develop and implement a comprehensive strategic plan. After two years of consultation with locals in the area, parallel to developing a series of draft documents, the "London Docklands Strategic Plan" was released in 1976. The main strategic objective of this document was to address the main infrastructural insufficiencies and socio-economic needs of residents for the next twenty years. After five years, because more than 50% of the lands were protected by their assigned land-use and publicly owned, the results achieved were far below the original expectations. In 1981, the value and potential of the docks as a heritage site were not considered in the plan; instead they were a safety concern (Figure 6). At the same time, difficulties in financing the regeneration process through public funds, compounded by questions of resource allocation, led the program to failure and it was unable to attract private investors (LDDC, 2009a).



**Figure 6 – This figure shows the constitution of the area (derelict land and water as at July 1981) prior to the regenerations process (Source: Monograph Archive of The LDDC History Pages, 1981-1998)**

Owing to these failures in initiatives and plans in 1981, responsibility for the project was placed on a newly incorporated company, acting as the local governmental regeneration agency for this specific project, which was called ‘The London Docklands Development Corporation (LDDC)’ (Figure 7). In 1981, when LDDC established, big number of lands (estimated 60%) were derelict, vacant, and/or seriously under-used (Waterhouse, 1997). Although the LDDC had strong influence and authority over the running of this project, the power of actions was intentionally distributed between different groups such as property developers (i.e. Canary Wharf), the local housing association, conservation groups, and Newham council (Shojaee Far, 2011). The new plans of the LDDC targeted transport and social infrastructure as ways to attract private investment to the project. In 1982, for a period of ten years, the Enterprise Zone project started in the docklands with a development plan in the Isle of Dogs area, in which property tax was lifted and limitations in planning controls were reduced to attract private investors. Meanwhile, to make sure the area was not isolated, in 1983-4 the Docklands were connected to the rest of London by the development of new roads and utilities (pipes for sewage, gas and electricity) using reclaimed land, in addition to a scheme for public transport implementation (LDDC, 2009b). In contrast to the plan of 1976, two positive aspects can be seen in the 1981 strategy; 1) a flexible and incremental approach for the regeneration process and 2) a plan to enhance and conserve what was the best from the area, such as the docks.

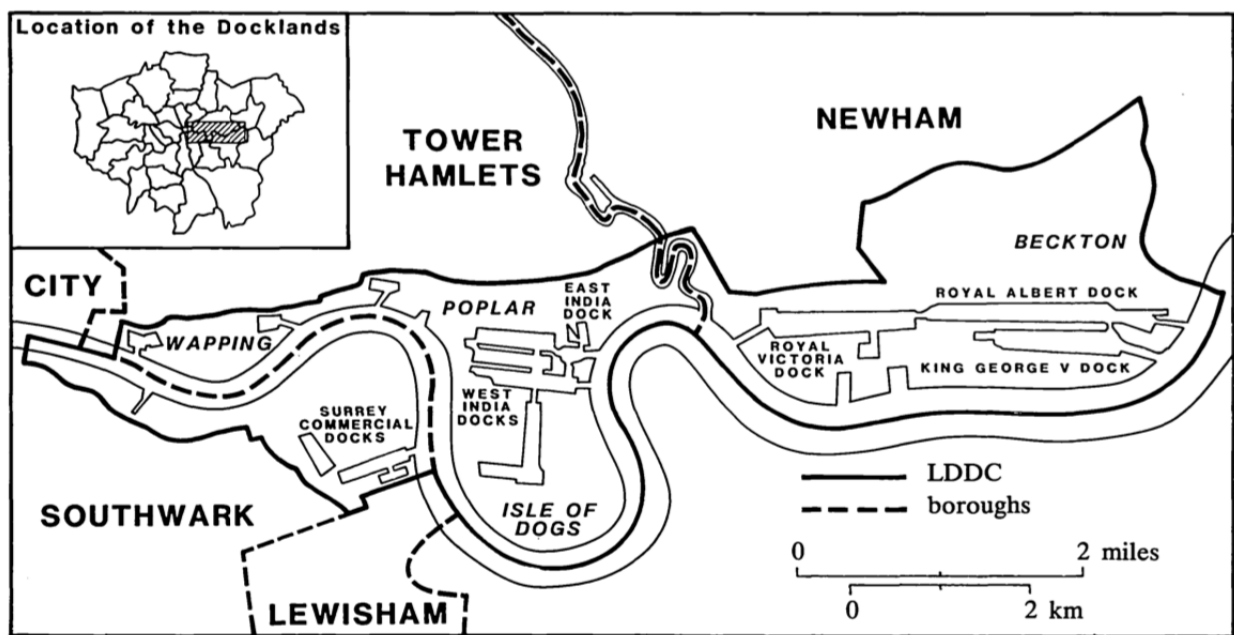


Figure 7 – “London docklands development cooperation (LDDC) area” (Church, 1988)

In 1984, the Telegraph was the first newspaper to sign up for the Enterprise Zone, followed by many other private investors. During the second half of the 1980s, improvements in public infrastructure continued; in 1987 the Docklands Light Railway opened, and in the same year, work started on London City Airport, located in the Docklands, which would expand during the 1990s.

Apart from transport infrastructure, another important focus of the LDDC was the housing demand since in 1981 many houses were in poor or uninhabitable condition; 2000 new social housing units were added

to the area in addition to the refurbishment of 8000 existing dwellings providing low-cost housing that raised the owner-occupation percentages from 5 to 45 percent (LDDC, 2009c). The LDDC did not focus only on housing and office buildings; improvements were made in community infrastructure such as hospitals, health centres, and schools, where many programs educated and trained residents of the area. Consequently, many young people and professionals (YAP) moved to the area bringing socio-economic improvements and changes in the social structure of the area, where public spaces, green areas and pedestrian paths were given special attention, as well as the docks themselves which were understood from the beginning to be heritage sites with potential value on the waterside (Figure 8).

During regeneration actions, contamination in the area has been proved to be present. The areas such as Winsor park estate in Beckton, Thames barrier park in Woolwich, and 13 kilometres of river walls were examples of highly contaminated areas that required different level of remediations. To deal with potential contaminations, very similar to registration of contaminations introduced under section 143 of the Environmental Protection Act, LDDC recorded area site use-history with its presence of contaminating uses. Three main treatment actions have taken place by LDDC (LDDC, 2009d):

1. Removal and replacements
2. Physical, chemical, thermal, microbial, stabilisation, and solidification treatments
3. Containment

The first action, removal and replacement, was one of the easiest options that eliminates the problem, however the cost of transportation and disposal of contaminated materials (i.e. soil) has recorded remarkably high. The second and third option, the treatments and containments of contaminated areas, were complex with series of necessary procedures. In some cases, total containment or removal after treatments were necessary as either presence of contamination was beyond possibilities by a physical barrier between residents and the contaminated material or substances could not reduce the effectiveness of treatments (LDDC, 2009d).



**Figure 8 – Photos from before and after LDDC actions - Top Left and Right: Before and After Acorn Walk, Surrey Docks - Bottom Left and Right: Before and After Shadwell Basin (Source: Monograph Archive of The LDDC History Pages, 1981-1998)**

This project did not intend to maintain industrial activity in the area, which was already in huge decline, but instead aimed to attract new business to generate more jobs and reduce the unemployment of the area. In 1998, as the main objectives of the project had been achieved the LDDC was dissolved, despite the ongoing process of regeneration. Investors had already been attracted to the area and the developments in the Canary Wharf financial district continued, creating 100,000 jobs in 2012. Today, the Docklands area represents one of the main business areas of London.

**Table 1 – Analysis table for identifying diagnostic indicators in Docklands brownfield regeneration project**

Analysis of the Docklands Brownfield Regeneration Project			
Project Overview			
	Time Line	<ul style="list-style-type: none"> <li>- 1696 - 1939 Docks of London</li> <li>- WWII bombed with more than 2500 bombs</li> <li>- 1950s Decline</li> <li>- 1970s Officially identified as Brownfield</li> <li>- 1976 London Docklands Strategic Plan was published</li> <li>- 1981 Constitution of the London Docklands Development Corporation (LDDC)</li> <li>- 1980s - 1990s Regeneration Program</li> <li>- 1982 Start of the Enterprise Zone – a 10-year scheme of incentives for businesses</li> <li>- 1983 - 1984 Reclamation and utilities supply</li> <li>- 1984 LDR commissioned to connect the area with public transport</li> <li>- 1986 -1987 Works starts on London City Airport.</li> <li>- 1987 Docklands Light Railway opens / Agreement to develop Canary Wharf business area</li> <li>- 1989 - 1999 DLR expansion / Social housing packages / Social care grants</li> <li>- 1998 Dissolution of the LDDC completes its regeneration / Canary Wharf Tower started being built</li> <li>- 2012 Canary Wharf employs 100,000 people</li> <li>- Today (2017) a mixed-use vibrant environment</li> </ul>	
	Main Problems Identified	<ul style="list-style-type: none"> <li>- Vacant and abandoned properties</li> <li>- Outdated docks – unsuitable for new transportation</li> <li>- Population and employment decline, which led to slum conditions</li> <li>- Isolation from the city</li> <li>- Lack of public facilities, open spaces, and community centres</li> </ul>	
	Main Actions	<ul style="list-style-type: none"> <li>- During the 1970s, the first alternatives for regeneration were proposed and the London Docklands Strategic Plan was released in 1976 as a regeneration program for the next 20 years.</li> <li>- In 1981, and after confirming that the previous initiatives had failed, the LDDC was established as a government regeneration agency in charge of a program of regeneration until 1998.                             <ul style="list-style-type: none"> <li>o First focus on reclamation and utility supplies, public transport infrastructure development and initiation of an Enterprise Zone with the aim of attracting private investment.</li> <li>o Renovation and creation of new affordable housing stock to improve conditions and increase the ratio of ownership to rental.</li> <li>o Commerce and community infrastructure (health, education and amenities), and social and training programs for residents.</li> <li>o Renovation and creation of public spaces, green areas, and pedestrian routes to create an attractive environment.</li> <li>o Increase in design and quality standards in architectureurbanism and conservation of heritage sites.</li> </ul> </li> <li>- 1998 saw end of the LDDC, private investors were interested in the area and the regeneration process continued, representing today a major business area of the city.</li> </ul>	
Environmental Analysis			
Environmental	Previous strategic environmental plans and their results	Previous strategies neglected the docks and aimed to drain and fill the areas of water, which resulted in an ineffective waste of resources.	
	Contamination	Soil contamination	Three main action took place: 1- Removal and replacements 2- Physical, chemical, thermal, microbial, stabilisation, and solidification treatments 3- Containment
		Water pollution	Two main action took place: 2- Physical, chemical, thermal, microbial, stabilisation, and solidification treatments 3- Containment
	Natural Risks		Three main action took place: 1- Removal and replacements

		2- Physical, chemical, thermal, microbial, stabilisation, and solidification treatments 3- Containment	
<b>Historic Analysis</b>			
Historical Indicators	Site physical condition	The post WWII ruins and abandoned industrial activities on a site which was one of the major ports of 19 <sup>th</sup> century in the world, made one of the biggest brownfield sites in Europe with extremely low and obsolete physical condition.	
	Heritage	One of the aims of the regeneration strategy was to add value to the existing potential assets of the area, which in this case meant to save, enhance and promote the docks and the river side, neglected by previous strategies. Also, a statutory list of buildings to be preserved was developed and some areas were defined as conservation areas. The docks and the Thames represented a power symbol of London with lot of potential.	
<b>Physical Analysis</b>			
Physical Indicators	Land status	Under-use	Substantial number under-used industrial property across area.
		Vacant	Estimated 60% of the land was in a vacant or derelict state due to the closure of the docks and reduced industry in the area.
	Land use		Many vacant areas were the result of preserving the industrial land-use while no more industrial activities existed in the area and new uses could not be found. Consequently, the industrial land-use was changed to mixed uses to accommodate new functions such as commercial and residential areas.
	Existence of infrastructure and its level of obsolescence		The area had a lack of utility supplies, therefore one of the first steps for the regeneration process was to supply the whole area with pipes for sewage, gas and electricity.
	Communication	Within the area	The area of regeneration was extensive yet with no public transport network, which made it difficult for residents to have jobs close to their houses. The supply of public transport was a key factor in the strategy of the LDDC to attract private investors and improve the situation of residents.
		With the rest of the city	Although the area is in the inner city of London, the lack of public transport disconnected the area with the rest of the city, where it turned to an isolated decline area. Consequently, it was not attractive to private investors who would prefer to invest outside the inner city.
	Physical obsolescence		The status and quality of the architecture in the urban areas was low. To generate an attractive environment, the LDDC had the idea of promoting and encouraging famous architects to develop public buildings.
	Housing Stock	Number	The lack of housing stock was a problem that the LDDC tackled from the early years, especially through affordable housing programs.
		Typology	As there was no diversity in original housing typologies, many residents moved out to find alternatives.
		Physical Conditions	20% existent housing stock was in poor or even uninhabitable conditions which led to a massive renovation program.
	Urban Density		Although at the time of the project a high-density population was identified in the slums, the LDDC decided to increase the intensity of urban development to enhance the availability of commerce, restaurants and leisure facilities at ground level as well as improving the viability of public transport.
	Existence and status of public space		The quality, amount and status of the existent public space was clearly insufficient. During regeneration project, new public spaces, green areas and pedestrian paths were given priority as well as the riverside and docks.
	Citizen Participation		A code of consultation was established between different stakeholders and the planning process was announced in public notices via local newspapers, site notices and letters to nearby residents and businesses for the consideration of any objections, which many times had an impact on the proposals.
	Land ownership		The majority of land was property of public entities, kept vacant due to its 'operational use' designation, however the lands were not in any assigned use anymore. Therefore, throughout LDDC authority, this land became available for private investment.



Economic analysis			
Economic Indicators	Recognition of Stakeholders		The LDDC was established by the government as the main organization responsible for the regeneration project, though its powers were limited. Other stakeholders included property developers (e.g. Canary Wharf), the local housing association, conservation groups, and Newham council.
	Elements for private investment		Private investment was a keystone in the process of regeneration for the LDDC, so many of the initiatives in the early years of the project were oriented to this goal, such as improving public transport, creating the Enterprise Zone, creating an attractive environment, providing tax reliefs and incentives, etc. Overall, it was a bid to change the perception of the area as being in decline.
	Public incentives		To attract private investors, for a period of ten years tax incentives were available for locating businesses in the Enterprise Zone, for example, property tax being paid by the Government.
	Land use		The industrial land-use was changed to mixed-uses, which accommodated commerce, offices, and residential areas that generated a new vibrant economy for the area.
	Main economy of the area		The main economy of the area was related to the docks and their industry. Previous strategies that chose to keep the same focus failed due to the obsolescence of the docks. However, the LDDC was successful in encouraging new and pioneer industries to the area as well as converting it into the core business area of London.
	Level of Unemployment		During 1978 to 1981 it is estimated 10,000 jobs were lost in the area. The decline of the docks caused a high level of unemployment among local people which the regeneration process hoped to solve by attracting private investment.
	Public - Private Cooperation		Training and employment initiatives were developed by the LDDC in partnership with local authorities and local businesses.
Social Analysis			
Social Indicators	Population		In 1981 the total population of dock lands estimated around 39000 inhabitants. Due to the creation of new jobs, the population doubled during the process of regeneration with expectation of larger growth in future years, for which housing programs and community facilities such as schools, healthcare centres etc. are considered in the growth plan of the area.
	Social Characteristics		Low incomes and education were the main social characteristics of residents whose jobs were related to the dock industry.
	Level of unemployment		The decline of the docks caused a huge increase in unemployment which was aggravated by the lack of transport to find jobs in other parts of the city.
	Level of education		The level of education of the residents was very low, so one of the social priorities of the regeneration program was to provide training programs and education facilities. Also, the process of regeneration attracted young active / aspiring professionals (YAP), which helped to improve the condition of the area.
	Housing Stock	Number	It is estimated that around 24,000 new houses during 1981-1998 is built in the area.
		Typology	As a result of the lack of diversity in housing stock, after economic improvement, residents have been seen to migrate out of the area.
		Ownership	95% of the existent stock was rented, the regeneration program introduced the concept of house-selling and encouraged house builders to build affordable houses so, by the end of the project, 45% of the houses were in owner-occupation.
	Gentrification		Although the aim of the project was regeneration, much of the improvement in the area caused unintentional gentrification, consequently a high number of residents were replaced with newcomers with higher social profiles.
	Existence and status of Community Infrastructure (Schools, hospitals etc.)		There was a lack of community infrastructure which was solved parallel to the housing problem by paying special attention to education and health facilities.
Existence of social programs		Programs in education and training for local people took place as part of the regeneration process.	

### 2.4.2 22@Barcelona

Poblenou neighbourhood, which eventually became part of Barcelona city (Figure 9), was an industrial zone for more than 100 years and had been recognized as Catalonia’s principal economic engine. As the result of Barcelona city expansion in the mid-20th century, the area had to be deindustrialized and the activities moved to a new industrial zone. However, between this migration of activities and Barcelona’s strategic plan for the 1992 Olympic Games, the neighbourhood faced decline and degradation to become what is internationally known as a brownfield area, although, as was discussed before, neither the term ‘brownfield’ nor anything similar is defined in Spanish law. The regeneration project (22@Barcelona) had the aim of transforming the abandoned and obsolete industrial facilities and changing the area into a commercial and innovative activity zone. To attract private investors and high-tech activities to the area, 22@Barcelona targeted the improvement of the quality of its urban spaces in parallel with socio-economic regeneration efforts (Barceló Rota, 2005).

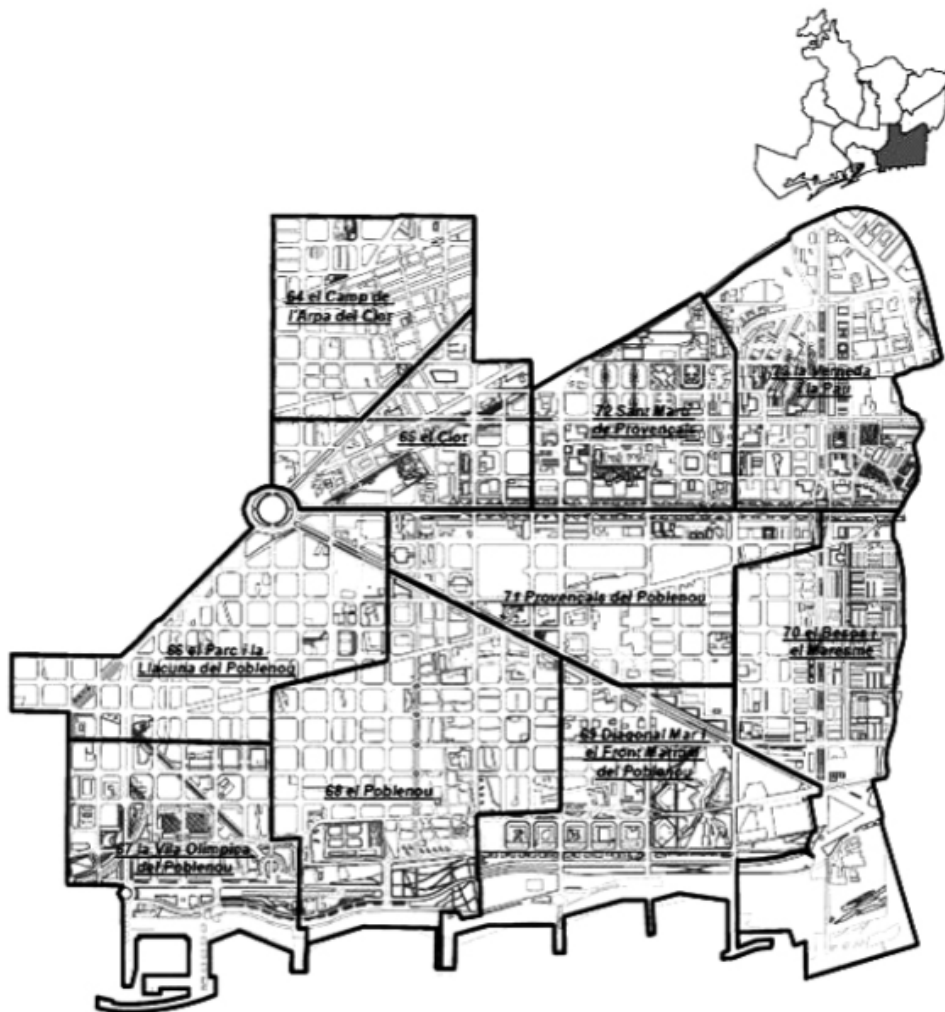


Figure 9 - Poblenou neighborhood is located at San Martín district - Source: Team INNOVA report on 22@Barcelona project (Team INNOVA, 2015)

## Poblenou

Poblenou neighbourhood is located in the San Martín district, originally a stand-alone municipality until 1897 when it was added to Barcelona city. At the time of its attachment to Barcelona, San Martín was mainly an industrial zone (textile sector) with a few urban characteristics. Due to the availability of land and natural resources in the 18th Century, the district already had industries belonging to the wealthy Spanish returning from the Americas, and in the 19th Century bleaching industries from Barcelona were relocated there due to cheaper land costs. In 1860, the construction of the first railway to pass through the San Martín district allowed industrial activities to increase, leading Poblenou to become one of the most important industrial areas in southern Europe (Figure 10), known up until 1960 as “The Catalan Manchester” (22 ARROBA BCN, 2006).



**Figure 10 - Urban view and textile factory in Poblenou during 20th Century (Source: Multimedia Archive of the Historical Association of Poblenou – AHPN)**

### 1963-1986 Urban Degradation

During the second half of the 20<sup>th</sup> Century, with the creation of a new industrial zone and transport infrastructure on the edge of the city (Zona Franca), factories were forced to relocate from Poblenou; this marked the beginning of the de-industrialization of the area. As a result of de-industrialisation, and affected also by the oil crisis, Poblenou lost more than 1300 factories in the period up to 1990, and most of the spaces became occupied (underused) by transport-related activities. Consequently, the area faced degradation with neglected urban surroundings (Barceló Rota, 2005).

### 1986-1999 Progressive Refurbishment

Only few years after democracy arrived in Spain in 1981, Barcelona started running for the Olympic Games of 1992. The celebration of this Olympic Games was seen not only as an important sporting event, but also as the starting point of the city’s regeneration strategy. The main goal was to modernize the entire city through urban, economic, social and cultural transformation. In 1990, the first strategic economic and

social plan of Barcelona<sup>10</sup> for 2000, promoted by Pasqual Maragall, was approved (Cubeles, Muñoz, & Pardo, 2011). As part of the strategic plan, coastal areas in Poblenou were regenerated through the creation of new parks and residential areas resulting in Catalonia's traditional industrial zone becoming an accessible central area of the city complete with modern residential areas and public spaces. Despite this, the industrial facilities remained untouched until the mid-1990s. Amidst debates and opposing opinions regarding the future of the industrial facilities - to be turned into residential areas or renovated - the alternative idea of a digital city, '*La Ciudad Digital*', as an innovative zone was conceived. The industrial pact of the metropolitan region of Barcelona<sup>11</sup> appointed the Catalan Institute of Technology to investigate the concept of this innovative zone. Based on the availability of lands and the strategic location of Poblenou, the study concluded that transformation of the area into an innovative zone for high-tech and high-skill professional activities would be a unique opportunity within Europe (Barceló Rota, 2005).

However, debates about the architectural heritage of the area started because during the construction of the Vila Olímpica (to fulfil the housing demand for the athletes in the Olympic Games) all the 19<sup>th</sup> Century industrial buildings in Icaria were demolished, initiating the disappearance of the neighbourhood. Correspondingly, investigative projects were carried out by many different institutions with the aim of documenting the architectural heritage that had been destroyed due to the works initiated in 1986. In 1990 the *Arxiu Historic del Poblenou* published the '*Nou vitatge a Icaria*' and the *Servei d'Activitats Arqueologiques* (Service of Archaeological Activities) and the *Servei de Protecció del Patrimoni Monumental* (Monumental Heritage Protection Service) carried out a documentation project on the former industrial area. With this research, and with the new Catalan Cultural Heritage Law (*Llei del Patrimoni Cultural Catala*) of 1993, as well as a neighbourhood association created at the time, in 1994 the City Hall of Barcelona finally revised the Heritage Catalogue of 1979, including the Industrial Heritage category (Dot Jutgla & Pallares-Barbera, 2015).

In February 1999, the final part of Diagonal Avenue (in the future Forum 2004 area) was opened. This expansion linked Poblenou to Barcelona's downtown district which is the business core of the city. In spring of the same year, and with the approval of the 3<sup>rd</sup> Strategic Plan of Barcelona, the 22@ project finally became explicit in its strategic line (Figure 11). It addressed facilitation of development towards the idea of city of knowledge by promoting new line of activities corresponding to energy efficiency and community participation (Cubeles, Muñoz, & Pardo, 2011).

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<sup>10</sup> Plan Estratégico económico y social Barcelona 2000

<sup>11</sup> Pacto Industrial de la Región Metropolitana de Barcelona



Figure 11 – Aerial Map of Poblenu and 22@Barcelona Project (Ajuntament de Barcelona, 2012)

## 2000 “22@Barcelona” Project

In 2000, The City Council decided to run a project to transform Poblenu industrial characteristics into innovative non-polluting productive activities and initiated the 22@Barcelona project, named for the replacement of the ‘22a’ industrial urban classification. With this, the general plan of Barcelona “Modificación del Plan General Metropolitano” (MPGM) was modified to add the objectives of 22@ projects into local legislation. Following MPGM, two other general plans were approved for improvement in 1) infrastructures<sup>12</sup> and 2) the historic and artistic<sup>13</sup> value of the area. Very similar to LDDC organisational strategy a single shareholder private company (22 ARROBA BCN, S.A.U.) was created to conduct the transformation project (Barceló Rota, 2005).

Progressive transformation of Poblenu for next 20 years marked as the main objective of the 22@project. In this agenda mixed-use dense complex urban development projects, involving different stakeholders took place (Figure 12). Also to create open and green urban spaces, 30% of private owned properties purchased and became public owned property through public incentives, (Ajuntament de Barcelona, 2012). The project facilitated a new compact, diverse and sustainable urban model that generates economic strength for the area, where it connected and unified with the city of Barcelona (22 ARROBA BCN, 2008).

<sup>12</sup> Plan Especial de Infraestructuras (PEI)

<sup>13</sup> Plan Especial del Patrimonio histórico y artístico de la ciudad de Barcelona (PEPA)





**Figure 12 - Urban Planning Map of Poblenou, identified areas of 22@ for interventions (Source: Municipality of Barcelona)**

### **2000-2005 Urban Renovation**

The main goal during the first five years of the project (2000-2005) was to initiate a physical regeneration with focus on urban physical characteristics and infrastructure facilities of 22@ project. Through land-use strategies in the MPGM, the project enabled different sectors to invest in the area, and many public and private initiatives and plans were carried out to ensure progressive transformation of the city (22 ARROBA BCN, 2012).

### **2005-2017 Economic, Social and Cultural Renovation**

After success with the initial developments from 2000 to 2005, new phases and areas of development were identified for the @22 project, focusing on the development of professional activity clusters through the concentration of companies, scientific and technological centres, and public entities (Cubelles, Muñoz, & Pardo, 2011). This strategy encompasses the socio-economic and socio-cultural dimensions of the @22 project, in which interaction was provided between young companies that resulted in collaborations between new talents and business owners. A year before, in 2004, a government owned business development agency called Barcelona Activa<sup>14</sup> was established and following its activities many other programs promoted innovative businesses in the area such as “22@Staying in company”, “Do it in Barcelona”, “22@Creatalent”, “22@Breakfast”, etc.

<sup>14</sup> In 2004 Barcelona’s City Council published ‘Barcelona Ciudad del Conocimiento: Economía del Conocimiento, Tecnologías de la Información y la Comunicación y Nuevas Estrategias Urbanas’ and established Barcelona Activa as a local development agency with focus on entrepreneurship programs

In 2008 when the global financial crisis hit and slowed down urban development, more socio-cultural and media related projects started in 22@ area (Figure 13). In 2007 and 2012, respectively, the *Fabriques de Creació* (The Art Factory) and *Poblenou Urban District* were established. In 2010 Barcelona's City Council published a guide to visit and discover the District 22@ of Barcelona<sup>15</sup> with the intention of attracting more tourists to the area and promoting the architectural diversity of its industrial heritage and new symbolic buildings.



**Figure 13 - Palo Alto in 1993 and in present, from the derelict status to a vibrant urban market (Source: Multimedia Archive of the Historical Association of Poblenou - AHPN)**

<sup>15</sup> Guía para Visitar y Descubrir el Distrito 22@Barcelona

**Table 2 - Table of analysis for identifying diagnostic indicators in the 22@Barcelona brownfield regeneration project**

Analysis of 22@Barcelona Brownfield Regeneration Project			
Project Overview			
	Time Line		<ul style="list-style-type: none"> <li>- 1848 establishment of the 1st Spanish railway in the area</li> <li>- Until 1860 textile sector industries</li> <li>- 1860-1960 “The Catalan Manchester”</li> <li>- 1897 San Martín district is added to Barcelona</li> <li>- 1963-1986 urban degradation</li> <li>- 1986-1999 progressive renovations</li> <li>- 2000 “22@ Barcelona” Project approval</li> <li>- 2000-2005 Urban Renovation</li> <li>- 2005 Economic, social and cultural Renovation</li> <li>- 2008 Financial Crisis</li> <li>- 2008-2012 Socio-cultural and media industry development</li> </ul>
	Main identified Problems		<ul style="list-style-type: none"> <li>- Deindustrialisation and abandoned industrial properties</li> <li>- Neglected industrial surroundings</li> <li>- Houses located in industrial land use affected by the strict land use classification in sub-regional plan of Barcelona (Wynn, 1979) known as “Plan Comarcal de 1953”</li> <li>- Lack of social housing</li> <li>- Lack of public facilities, open spaces, and community centre</li> </ul>
Environmental Analysis			
Environmental Indicators	Previous strategic environmental plans and its result		nothing identified
	Contamination	Soil contamination	It was not the concern of the project, or nothing identified
		Water pollution	It was not the concern of the project, or nothing identified
	Natural Risks		It was not the concern of the project, or nothing identified
Historic Analysis			
Historic Indicators	Site physical condition		For over 100 years, Poble Nou was the main industrial area in Barcelona, nicknamed “The Catalan Manchester”. Its degradation started in the 1960s and it finally turned to brownfield.
	Heritage		Many abandoned industrial buildings were added to the heritage catalogue for restoration and renovation purposes. Many former industrial buildings were regenerated with an adaptive reuse approach as housing, new facilities or amenities maintaining the character of the area. A report in 2015 presented 114 industrial heritage to be conserved.
Physical Analysis			
Physical Indicators	Land status	Under-use	Serious under-use properties as the repair and transport related industries were moved to the abandoned factories.
		Vacant	Many factories and their surroundings became vacant and abandoned
	Land use		Change of the exclusive industrial land-use to a mixed-use combined with public spaces and green areas was a key factor in improvement of the area.
	Existence of infrastructure and its level of obsolescence		The area had an old and obsolete urban infrastructure. The regeneration plan and development of efficient and shared utilities was a key factor.
	Communication	Within the area	The area suffered from lack of communication in compare with rest of Barcelona. Development of well-connected area using public transport and extensive bike trail improved mobility within the area.
		With the rest of the city	Metro communication and major bus lines that connected the area were an important factor. However, at the time of the project, the city of Barcelona already had an established, efficient transport system that connected all parts of the city. Therefore, communication with the rest of the city was not the main concern of the project.
Physical obsolescence		Before the regeneration project, the physical condition of streets and surroundings of old and obsolete industrial areas of Poble Nou were in a very critical condition. In 2015 it is reported that 15 km of streets have been redeveloped, above 40000 sqm of public green space developed, and	



		around 14000 sqm of industrial vacant and abandoned land and properties converted to public facilities for productive and innovative activities.
Housing Stock	Number	An estimation of 4600 residential units identified prior to the regeneration project. According to the statistics published by city council in 2015, 1600 new subsidized housing units include 25% for rent has taken place in the area.
	Typology	There was almost no housing diversity in the area. With the renovation of some existing industrial buildings as new housing typology (lofts) the options increased.
	Physical Conditions	Restoration of the houses that been affected by industrial classification in the Plan Comarcal de 1953, has increased due to change of land use to residential.
Urban Density		The project increased diverse uses for the buildings to create a model of a compact city and attract real estate developers. The idea initiated the concept of an agglomerative economy.
Existence and status of public space		As the majority of land in Poblenou had private ownership status, just a few open and public spaces existed at the time of the project. In 2015 an increase of green and public space reported with coverage of 145000 sqm.
Citizen Participation		Although the project did not officially collect public opinions, residents and activists gave their opinions through different associations (i.e. architectural heritage catalogue).
Land ownership		100% of the land was owned by the private sector and with exclusive industrial land-use that made development of the area difficult. Through incentives that permitted greater height for new development, 30% of private ownership was transferred to public ownership to be used as green and open urban spaces.
<b>Economic Analysis</b>		
Recognition of Stakeholders		Since the ownership status was 100% private and as policies were fragmented, it was difficult to assign the task to certain stakeholders. Thus, a single shareholder private company was established as the main stakeholder of the project. The City Council of Barcelona was the sole shareholder of 22 ARROBA BCN company.
Elements for private investment		During the first years of the regeneration process, different initiatives such as improvement in infrastructure and transport, creation of different programs to attract entrepreneurship, specialized clusters, etc. were the main factors to attract private investment.
Public incentives		Although a clear incentive never approved for this project, but many different for development potentials in different actions have taken place as a catalyst for private investment such as “compensation for relocation (around 600 euros per existing square metre); compensation for existing buildings (around 200 euros/m <sup>2</sup> of current buildings); proportional contribution to the redevelopment envisaged in the PEP” (Team INNOVA, 2015)
Land use		A mixed-used strategy prioritising innovative and productive activities that neither disturbing nor polluting has taken place as one of the main fways to transform the area.
Main economy of the area		The industrial land-use was changed to mixed-uses, accommodating commerce, offices, and technological facilities that generated a new vibrant economy for the area.
Level of Unemployment		Since the late 1960s, deindustrialisation caused an employment crisis, however the new approach of the innovation zone promoted many new jobs which increased the rate of employment in the area. The published statistics of Municipality of Barcelona shows a significant decrease in unemployment rate in Poblenou area, as the records show 20.9% registered unemployment in 1986 (BRUNET, PIQUÉ, & VÁZQUEZ, 1996) reduced to 6.1% in 2017 (Oficina Municipal de Dades, 2018).
Public - Private Cooperation		Employment initiatives were carried out in cooperation with private companies, the municipality and universities.
<b>Social Analysis</b>		
∞ ∅	Population	No valid data

Social Characteristics		Originally the neighbourhood had labour residents, however before the project it become an obsolete area with extremely low-profile residents. After the project, the existence of social activities and migration of young and professionals (YAP) changed the social characteristic of the neighbourhood to a technological area with artistic activities for young people.
Level of unemployment		Many different free training programs were provided specifically for officially-registered unemployed people. Also, incubator spaces in the area provided the capacity for micro-business to take place with low running costs, which caused an increase in the overall employment rate in the area. The published statistics of Municipality of Barcelona shows a significant decrease in unemployment rate in Poblenou area, as the records show 20.9% registered unemployment in 1986 (BRUNET, PIQUÉ, & VÁZQUEZ, 1996) reduced to 6.1% in 2017 (Oficina Municipal de Dades, 2018).
Level of education		As the educational level of the original residents in the area was low, different training programs were organised through public incentives to increase the educational level of residents.
Housing Stock	Number	An estimation of 4600 residential units identified prior to the regeneration project. According to the statistics published by city council in 2015, 1600 new subsidized housing units include 25% for rent has taken place in the area.
	Typology	traditional 1-3 storey houses were identified and after the project started Non-conventional housing typology (lofts) in former industrial buildings was developed to have more attractive and diverse options for investors, in which the project was favouring diversity of uses and architectural typologies.
	Ownership	100% of the land was owned by private sector and with exclusive industrial land-use that made difficulties in development of the area. Through incentives that permit more heights for development, 30% of private ownerships transferred to public ownership to be used as green and open urban spaces.
Gentrification		Although many signs of gentrification such as some population transfers, increase in land values and changes in social characteristics of the area occurred, the project aimed to keep low middle-class population and merge them with new comers through social and educational programs. Although the 22@ project can be identified as potential gentrification, its current status make it difficult to mark the project as gentrification.
Existence and status of Community Infrastructure (Schools, hospitals etc.)		The area has a lack of community support infrastructures and although there are different training centres, the numbers are still very low.
Existence of social programs		The major residents of Poblenou were workers employed by the big companies in the area, but the social regeneration approach of the project, with help and support of different agencies (i.e. Barcelona Activa), many different social and community based programs have taken place such as “historical activism, relational networks, and the proliferation of all types of civil society association activities” (Team INNOVA, 2015).

### 2.4.3 Zorrotzaurre Bilbao

The Basque Country has always been considered one of the most important industrial areas of Spain, especially Bilbao and its estuary. During the 1960s, the best lands, particularly those in the river valleys, were occupied by industry without any social or environmental considerations. The industrial crisis of the 1970s and 1980s resulted in the decay of industrial areas and left many obsolete industrial facilities and mining sites. Meanwhile, extreme pressure was placed on Greenfields for new developments as very few flat lands were available amidst the mountainous geography of the Basque Country. Therefore, reuse and regeneration of the old industrial areas became an opportunity for local government to integrate abandoned and/or degraded industrial facilities into city spaces. In 1981, the Basque Government established the

Society for Promotion and Industrial Reconversion (SPRI) as an agency dedicated to business development. In 1983, Bilbao suffered from the overflow of the Nervión River and flooding of all the adjoining zones, which was the greatest natural disaster of its history (Figure 14). The flood demonstrated the need for the renewal of infrastructures to avoid, or reduce the impacts of, future disasters, as well as a need for economic regeneration of old industrial facilities (Garrido Martínez, 2004). The river was also heavily contaminated as a result of industrial activities and untreated sewage. Therefore, in 1984, the first action began, focusing on water remediation and the construction of water cleaning systems, and was completed by 2006; it is recognized as the one of the most significant water remediation projects in Spain (Ploger, 2007).



**Figure 14 - Images of the flood in Bilbao, 1983 (Source: URL: <http://www.jonarregi.com/bilbao.html>)**

Two parallel urban regeneration plans were developed for industrial zones, aiming for their integration into the city. The first one<sup>16</sup> addressed the transformation of an industrial zone into a mixed-use area (1985-1995), and the second was intended to revitalize the metropolitan area of Bilbao (1989-1992), which resulted in establishment of the Association Bilbao Metropoli in 1991. Nowadays, this association deals with planning, investigations, and PPP models (public-private partnerships) for new project implementation. However, similarly to 22@ and the Docklands, a public company was established in 1992 to be responsible for the execution of projects<sup>17</sup>. This company took charge of the urban transformation of the area by environmental, infrastructural, cultural, and socio-economic change to attract private investors to the area (Belausteguioitia, 2007).

In 1994, a general plan for soil protection<sup>18</sup> was prepared and proposed to remediate and regenerate abandoned properties and factories. Although the plan was not approved, it encouraged PPP models for land clean-up strategies. Subsequently, the local government in the Basque country prepared a brownfield reclamation program<sup>19</sup> and in 1998 the first intervention study was prepared by the Public Society for Environmental Management<sup>20</sup> known as “Sociedad Pública de Gestión Ambiental del Gobierno Vasco”.

<sup>16</sup> Plan General de Ordenación Urbana

<sup>17</sup> The company was called ‘Bilbao Ria 2000’ and was established through 50% investment from local government and 50% from the central government of Spain, as well as support from the EU. This approach is a new collaborative method in Spain. Although the Company has no jurisdictional power, corresponding to the political positions of its Board of Trustees, the company has a great deal of power in both decision-making and project execution.

<sup>18</sup> Plan director para la Protección del Suelo

<sup>19</sup> Programa de Demolición de Ruinas Industriales

<sup>20</sup> Ingurumen hobekuntza mejora ambiental (IHOBE) – the name is in Basque language

As the term ‘brownfield’ and its corresponding policies do not exist in Spanish legislation, the study did not refer to brownfields or prepare any comprehensive strategy for brownfield sites. Instead, they tried to differentiate the abandoned factories from other contaminated areas such as wastelands, which were referred to as ‘industrial ruins’; the plan defined this term as ‘the sites, built or not, that having participated in an industrial activity are degraded in such a way that a new use is not possible except through a thorough work of recovery’ (Belausteguigoitia, 2007). The initial investigation in 1998 identified 331 hectares of industrial ruins, of which 159 sites were in the Bilbao Metropolitan Area, which held 72% of all identified brownfields.

### **Zorrotzaurre**

In the 1960s, the Zorrotzaurre area in Bilbao, which is in the Nervión River, became a peninsula through the opening of the Canal de Deusto, it consisting of mainly industry and port services (Figure 15). Due to the industrial crisis of the 1970s, many factories in this area suffered a loss of activity and closed, many of them becoming abandoned buildings. On top of this, the opening of the new port of Bilbao moved the Canal de Deusto activities to the new port area, thus 60% of the lands in Canal de Deusto had become abandoned and underused by 2006 (Figure 16). The area became isolated with just 462 residents and many industrial abandoned facilities (Belausteguigoitia, 2007). In 1995, corresponding to the approval of the General Plan of Bilbao, the land-use status ‘industrial zone’ was modified to ‘residential’ and ‘mixed-use’. At this point, 19 industrial facilities were also identified as industrial heritage sites for the preservation of the historic industrial value of the area (ZMC, n.d.).



**Figure 15 - Zorrotzaurre in 1959 Right photo: Zorrotzaurre in 1970 after the open of Deusto Canal**





**Figure 16 – Abandoned industrial facilities in Canal de Deusto - Left: Industrial building of the Mefasa offices from 1962 included in the heritage catalogue. Right: Industrial building of the Elorriaga offices from 1958, also included in the heritage catalogue. (Source: Deia Online News Paper - Tuesday, September 29, 2015)**

In 2001, the Management Committee for Urban Development of Zorrotzaurre, composed of public and private owners of Zorrotzaurre, was established with the objective of promoting and implementing urban regeneration plans for the area. In 2004, Zahah Hadid presented a ‘Master Plan’ for the urban regeneration of this abandoned industrial zone and proposed the complete opening of the Canal de Deusto (Figure 17). The idea of transforming the peninsula of Zorrotzaurre into an island was proposed to prevent future flooding in the area. In 2012, Bilbao City Council approved the proposed master plan, which by then was called the ‘Zorrotzaurre Special Urban Planning Plan’, and execution of the regeneration project started in 2013 (ZMC, n.d.).



**Figure 17 – Proposed Master Plan for Zorrotzaurre prepared by Zaha Hadid in 2004 (Source: Official website of Zorrotzaurre regeneration program URL: <http://www.zorrotzaurre.com>)**

To be able to attract a new residential population to the area while still keeping the existing occupants, 50% of the new development was given over to affordable social housing. This plan was supported by a 4.5 million euro fund (2010-2014) from the City Council and the Management Commission for the renovation of existing residential buildings as well as adaptive re-use strategies for industrial heritage sites. To attract private investment into the area, different projects were initiated such as new bridges for facilitating public transport, a technological park, and private health centres (IMQ Clinic) (ZMC, 2012). In parallel to these urban regeneration strategies, social regeneration was also an important factor in this project. In 1998, the Lan Ekintza Association was established with the objective of supporting the local community to reduce unemployment in the area. The social activities initiated by this association, starting from 2008, led to the area to hosting numerous cultural and artistic activities. Recently (2017) execution of the main demolition plans started in the area and it is planned to complete first phase of reclamations prior to redevelopment phase by mid-2017 (20 MINUTOS, 2016).



Figure 18 - Zorrotzaurre aerial images in 2017 (Source URL: <http://www.zorrotzaurre.com/imagenes/>)



**Table 3 - Table of analysis for identifying diagnostic indicators in the Zorrotzaurre brownfield regeneration project**

Analysis of Zorrotzaurre - Bilbao Brownfield Regeneration Project			
Project Overview			
	Time line		<ul style="list-style-type: none"> <li>- End of 19<sup>th</sup> century – mid-20<sup>th</sup> century: Industrial development</li> <li>- 1970s-1980s: Industrial crisis</li> <li>- 1983: Flood</li> <li>- 1985-1995: New city plan (Plan General de Ordenación Urbana)</li> <li>- 1989: Initiation of the idea to renovate the neighbourhood</li> <li>- 1989-1992: Revitalisation Plan for Metropolitan Bilbao</li> <li>- 1991: Bilbao Metropoli 30</li> <li>- 1991-2020: Bilbao Port</li> <li>- 1992: Bilbao Ria 2000</li> <li>- 1994: Director plan for soil protection</li> <li>- 1998: Basque Government Brownfield Reclamation Program</li> <li>- 2004 Master Plan Zaha Hadid</li> <li>- 2006: Water sanitation system</li> <li>- 2012: Plan Especial de Ordenación Urbana de Zorrotzaurre</li> <li>- 2017: Systematic process of demolition of industrial pavilions and urbanization works</li> </ul>
	Main problem		<ul style="list-style-type: none"> <li>- Deindustrialisation, abandoned industrial properties, and lack of sufficient inhabitants</li> <li>- Contaminated Soil and Water</li> <li>- Lack of services and required infrastructure</li> <li>- Lack of population</li> <li>- Isolated area</li> </ul>
Environmental Analysis			
Environmental Indicators	Previous strategic environmental plans and its result		nothing identified
	Contamination	Soil contamination	Due to previous activity based on industry and mining, the soil showed high levels of contamination
		Water pollution	The water was heavily polluted from industrial uses and untreated household sewage. The construction of a new water sanitation system was the most important project in terms of environmental clean-up.
	Natural Risks		The area had a high risk of flooding which was considered in the new plan by opening the Deusto Canal and converting the peninsula into an island.
Historic Analysis			
Historic Indicators	Site physical condition		For over 40 years, Zorrotzaurre accommodated the main port activity of Bilbao and its related industries. With the closure of the industry and the port, the area became neglected.
	Heritage		From the industrial heritage catalogue of the Plan General de Bilbao 1995, 19 industrial buildings were identified in the area of Zorrotzaurre for restoration and renovation.
Physical Analysis			
Physical Indicators	Land status	Under-use	Most of the industrial buildings that there were not already abandoned were under-used by irrelevant activities as the result of industrial crisis and the relocation of the port.
		Vacant	Many industrial facilities became abandoned and vacant as a result of the crisis
	Land use		The change of the exclusive industrial land-use to mixed-used was a key factor for improvement of the area.
	Existence of infrastructure and its level of obsolescence		The household sewage systems were absolutely obsolete. A new water sanitation system was required to solve the problem of untreated household sewage.
	Communication	Within the area	No major action identified, however the newly implemented master plan suggests new routes and paths within the area.
With the rest of the city		Although the area was close to the city centre it was isolated because of the lack of communication. Therefore, the construction of new	

			bridges and the improvement of the public transport (tramway and bus) was planned.
	Physical obsolesce		The architectural quality in the area had low standards and the old buildings were in poor condition. To regenerate the area and maintaining the industrial character, 19 buildings were selected for renovation and specific renovation programs planned for existing houses.
	Housing Stock	Number	The population of the area was just 462 inhabitants, however the plan for regeneration aimed to increase the population and convert the area into a vibrant residential neighbourhood of the city. To achieve this goal, the existent housing stock was insufficient and new residential buildings were included in the plan.
		Typology	2-3 storey houses with traditional Basque architecture
		Physical Conditions	The existent housing stock was in poor conditions. During 2010-14 public funds were allocated to renovate and rehabilitate the existent housing stock.
	Urban Density		The project kept the low-density characteristic of the riverside but increased the density in the centre of the island to enhance the appearance of commerce, leisure and new activities.
	Existence and status of public space		In this industrial and polluted area, there were no public green spaces. The new master plan considers the riverbank as a great opportunity for creation of public spaces.
	Citizen Participation		Citizen participation was an important decision indicator for the approval of the regeneration plan. Zorrotzaurre Forum "Foro de Zorrotzaurre" was created as the main institution for dialogue between citizens and institutions.
	Land ownership		60% of the land was owned by the Port of Bilbao, 10% by public institutions and 30% was owned by the private sector include both industrial and residential properties.
<b>Economic Analysis</b>			
Economic Indicators	Recognition of Stakeholders		Bilbao Ria 2000 (fully public) and Bilbao Metropoli 30 (public-private partnership) associations were created promote and to carry out the regeneration of the brownfields of Bilbao including Zorrotzaurre.
	Elements for private investment		Improvement the public transport and connections with the city were key factors to attract private investment. The City Hall also encouraged large companies to locate their business there as a future iconic area of the city. However, due to the economic crisis some of major investors still did not confirm their move.
	Public incentives		4.5 million euro for the enovation of old residential buildings and industrial heritages allocated to the project.
	Land use		A mixed-used strategy incorporating affordable housing, non-polluting productive activities, cultural and social facilities and plenty of open spaces planned to take place as one of the main transformations of the area.
	Main economy of the area		The industrial productive economy will be transformed in a technological, innovative and productive economy creating the first urban technological park in Bilbao.
	Level of Unemployment		As result of limitation in population and existence of non-functional industries, no valid unemployment rate has identified for the area.
	Public - Private Cooperation		Association of Bilbao metropolitan promotes PPP models for new project implementations through different regional available public funds.
<b>Social Analysis</b>			
Social Indicators	Population		The increase in the number of industries during the 1960s caused most of the inhabitants to leave the area to find other residential areas. In consequence, after the decline of the industry, the population was reduced to 462 people. However, one of the main goals of the new plan is to greatly increase this population to transform the area in a vibrant neighbourhood of the city.



Social Characteristics		Majority of the residents are from worker class from previous industrial activities
Level of unemployment		With the industrial crisis, not only did the industry close down, but the main commerce and restaurants of the area also closed due to the lack of clients, increasing the levels of unemployment in the area. The public association Lan Eskaintza was formed to help residents to find new job opportunities.
Level of education		It was not the concern of the project, or nothing identified
Housing Stock	Number	With the new plan, the number of houses will increase from 200 to nearly 5500, of which half will be affordable houses.
	Typology	nothing identified
	Ownership	Planned to be privately owned properties
Gentrification		Since the first work is planned for May 2017, the effect of gentrification cannot yet be determined. However, the aim of the new plan is to avoid this.
Existence and status of Community Infrastructure (Schools, hospitals etc.)		Since the population is very low, there is no significant need for community infrastructure, however such facilities have been considered in the approved plans.
Existence of social programs		nothing identified

#### 2.4.4 Identified Diagnosis Criteria and Indicators from Evaluated Projects

This study identified and categorized a series of diagnostic criteria and indicators that are used during evaluations and preparation of strategies and plans, and the execution of three projects evaluated in previous sections. The categories are based on their importance and role in the regeneration process, depending on how useful different criteria and indicators were in problem identification process. The first types are the ‘essential conditions’ and checkpoints during initial phases, then the second type addresses the most important aspects that should be accounted for and during the process, but not the essential condition aspects. The third type of indicators represent aspects that been considered in most cases, but they have never been crucial or critical features and only considered as added value in the project. This sub-section provides a comparative analysis for identifying the most significant diagnostic indicators in the three evaluated examples (Table 4). The identified criteria and indicators and prioritisation of their level of importance in three categories are not representing a list of recognised criteria and indicators in general brownfield regeneration literature but represent an empirical understanding of what has been done in the given examples.

**Table 4 – Table of comparative analysis for identifying the most significant diagnostic indicators in the three evaluated examples**

<b>Overall Evaluations</b>						
		<b>Table Keys</b>				✓✓ Essential ✓ Important ⊙ Considered - Not considered - C1 (Case of Docklands) - C2 (Case of Barcelona) - C3 (Case of Bilbao)
		C1	C2	C3		
<b>Environmental Evaluations</b>						
Environmental indicators	Previous strategic environmental plans and its result		✓	-	-	In the UK, they evaluated their existing environmental plans and strategies to find the failure points. Therefore, it would be necessary to study the results of previous environmental acts and actions to be able to identify problems.
	Contamination	Soil contamination	✓	-	✓	The existence of contamination may be a principal factor in former industrial areas. However, this study identified that possible contamination from industrial activities is not always the main concern. For instance, while in Bilbao and London this factor was less relevant, in the process of regeneration.
		Water pollution				
	Natural Risks		⊙	-	✓✓	Some brownfields may be at risk due to the formation and location of the area. The example of flooding in Bilbao is discussed in section 2.4.3.
<b>Historic Evaluations</b>						
Historic Indicators	Site physical condition		✓	⊙	✓	The physical condition of the site may be analysed to highlight potential problems or, as can be seen in this study, potential values in the area. In the case of London and Bilbao, the physical condition of the area represented an important factor in the regeneration strategies.
	Heritage		✓	⊙	✓	To maintain the character of the area by renovating buildings with heritage value, in all three projects a list or catalogues of the historic buildings or areas created for further conservation or adaptive reuse actions.
<b>Physical Evaluations</b>						
Physical indicators	Land status	Under-use	✓✓	✓✓	✓✓	Consideration of existing land status represents an important indicator in all three projects.
		Vacant				
	Land use		✓✓	✓✓	✓✓	Land use represents a crucial indicator to analyse for the regeneration process. In the three presented examples, the existent land use was industrial and changed later to mixed-use to enable the incorporation of new uses such as residential, commercial, offices etc.
	Existence of infrastructure and its level of obsolescence		✓✓	✓	✓✓	To be able to provide adequate infrastructure for new uses and activities in the area, the Analysis of the existence of, and level of, obsolescence of utilities in an affected area is a starting point in the process
	Communication	Within the area	✓✓	✓	✓✓	Accessibility and communication to and within the area is an important factor to attract and encourage private investment. In all three projects, the regeneration goal set to supply the same level of public transport as the rest of the city.
		With the rest of the city				
Physical obsolescence		⊙	⊙	⊙	In the three cases, physical obsolescence of the urban and architectural elements was an important factor, but not a critical indicator for regeneration actions. Renovation of buildings with more values (instead of demolition) was the major decision to keep essence of area. However, the design restrictions were lifted in all the project to provide new	

					architectural and urban design styles in connection with existing renovated areas.	
Housing Stock	Number				Diversity and number of available residential units represented an important factor in all three cases, and their physical conditions were considered in renovation strategies.	
	Typology	✓	✓	✓		
	Physical Conditions					
Urban Density		⊙	⊙	✓✓	Analysing the urban density was an indicator in all three cases in order to prepare a feasible regeneration proposal. All decided to increase the urban density to create more activity, a compact pattern, and an agglomerative economy.	
Existence and status of public space		✓	✓	✓	A Lack of public and green urban spaces was identified in all three cases, and correspondingly it become one the factors for evaluation and planning proposals.	
Citizen Participation		✓	⊙	✓✓	Citizen participation was considered in the planning process of all three examples. However, the participation model as well as level of participation was different in each project. Direct communication identified in the case of London, creation of specific institution in the case of Bilbao and communication with existent neighbours' associations in the case of Barcelona.	
Land ownership		✓	✓✓	⊙	Land ownership status was very different in each case; while in London and Bilbao most of the area was publicly owned, in the case of Barcelona 100% was private properties. Therefore, understanding who owned the land, and how to deal with the owner, represented another indicator of evaluations.	
<b>Economic Evaluations</b>						
Economic Indicators	Recognition of Stakeholders		✓✓	✓✓	✓✓	One of the main indicators highlighted in the three cases was the difficulty in recognising the main stakeholders for the process of regeneration. Therefore, in all examples, a company was established as the main responsible agent for the regeneration project.
	Elements for private investment		✓✓	✓	✓	Transport, infrastructure, psychological perception of the area, and tax incentives have been identified as the main indicators to be evaluated to prepare clear strategies for attracting private investors.
	Public incentives		✓✓	✓	✓	Public incentives always act as a catalyst to attract investors to the area. In all three projects public incentives have taken place to ease the private investment to the area.
	Land use		✓✓	✓✓	✓✓	As land-use defines the main area of activities of a land, the new mixed-use land status provides higher economic values.
	Main economy of the area		✓	✓	✓	Evaluations of the current economic status of the area and its feasibility in the future is an important in any brownfield regeneration project. In all three cases, the economical characteristics of the areas were based on traditional industrial activities. Therefore, the proposals aimed to transform industrial activities into mixed activities with a focus on keeping the production (art, innovation, etc.) functionality of the area, but instead of traditional industries, more creative and innovative production industries were encouraged to move to the area.
	Level of Unemployment		✓	✓	⊙	In all three cases, unemployment rate was a crucial factor related to economic indicators of the area. The major solution for decrease in unemployment rate was based on attracting new investors and generating new economies to the area.
	Public - Private Cooperation		⊙	⊙	✓	While in Bilbao, the investment strategies focused on PPP models, in other two cases, public entities only cooperate with private sector for trainings and reduction in employment costs.
<b>Social Evaluations</b>						
5 <sub>oc</sub>	Population		⊙	⊙	✓✓	In each case, due to the closure of the existent industries as well as high level of unemployment, the population of the area

					was reduced and the proposals aimed to attract a new population. In the case of Bilbao, the population increase was an important indicator for evaluations and preparation of the plans.	
	Social Characteristics	✓	✓	⊙	Understanding the social characteristics of the area is a principal evaluation factor for both cases in London and Barcelona. The urban regeneration plan in all examples addressed social regeneration at the same time as physical developments in the area.	
	Level of unemployment	✓	✓	⊙	The unemployment rate is an important indicator both for economic evaluation and social analysis, as those suffering from unemployment were also condemned to be isolated. The problems of transportation in all three cases added more difficulties with regard to the social polarisation of the residents in affected areas compared to the rest of the city.	
	Level of education	✓	✓	⊙	Very low educational background of residents in both London and Barcelona was identified in the affected areas. Therefore, it was another important indicator to be able to prepare social regeneration strategies.	
	Housing Stock	Number			To avoid gentrifications and protect existing communities in affected areas, funds and support were provided to renovate old houses and through affordable housing strategies the projects attracted the residents to invest and purchase.	
		Typology	✓	✓		✓
		Ownership				
	Gentrification	⊙	✓	✓	It was a concern and indicator in evaluations and preparation of the plans, however the case of London can be identified as failed or perhaps a naive indicator, while in Barcelona reasonable preventive strategies against gentrification were instigated and are still effective.	
	Existence and status of Community Infrastructure (Schools, hospitals etc.)	✓✓	⊙	⊙	Providing social infrastructure such as schools or health centres was as important as providing residential units.	
	Existence of social programs	⊙	⊙	-	To be able to encourage community involvement, series of educational and supportive programs have taken place in both Barcelona and Docklands.	

This comparative evaluation method has been included for several reasons: it identifies, lists and compares criteria and indicators for actions and policies in different brownfield regeneration examples in Europe; it illustrates how each indicator is considered in each project; and it describes the way that indicators are implemented. The table below (Table 5) illustrates the breakdown of indicators with their assigned numeric values. The definition of these assigned values is achieved by a qualitative evaluation method on taken actions and policies in each presented case. Although such method is not completely satisfactory, to be able to prioritise the importance of each identified factors in preparation and progress of the cases, this qualitative method is used for assigning weight and prioritising the findings of evaluation. For essential conditions in preparation and progress of each project a value of 3, for important conditions a value of 2, for considered but not crucial conditions a value of 1, and for not identified a value of 0 were assigned to each indicator. The content of the value matrix calculated according to average of assigned values, and then prioritized based on conditions (indicators/factors) with higher level of importance from 3 to 0.

**Table 5 - Prioritisation of criteria and indicators based on level of importance**

	C1	C2	C3	Av.
Land status	3	3	3	3.00
Land use	3	3	3	3.00
Recognition of Stakeholders	3	3	3	3.00
Land use	3	3	3	3.00
Existence of infrastructure and its level of obsolescence	3	2	3	2.67
Communication	3	2	3	2.67
Elements for private investment	3	2	2	2.33
Public incentives	3	2	2	2.33
Housing Stock	2	2	2	2.00
Existence and status of public space	2	2	2	2.00
Citizen Participation	2	1	3	2.00
Land ownership	2	3	1	2.00
Main economy of the area	2	2	2	2.00
Housing Stock	2	2	2	2.00
Site physical condition	2	1	2	1.67
Heritage	2	1	2	1.67
Urban Density	1	1	3	1.67
Level of Unemployment	2	2	1	1.67
Population	1	1	3	1.67
Social Characteristics	2	2	1	1.67
Level of unemployment	2	2	1	1.67
Level of education	2	2	1	1.67
Gentrification	1	2	2	1.67
Existence and status of Community Infrastructure	3	1	1	1.67
Contamination	2	0	2	1.33
Natural Risks	1	0	3	1.33
Public - Private Cooperation	1	1	2	1.33
Physical obsolescence	1	1	1	1.00
Previous strategic environmental plans and its result	2	0	0	0.67
Existence of social programs	1	1	0	0.67
Environmental Criteria and Indicators				
Historical Criteria and Indicators				
Physical Criteria and Indicators				
Economic Criteria and Indicators				
Social Criteria and Indicators				

### Essential Criteria and Indicators

The results can be categorised into ‘essential’, ‘important’ and ‘considered’ indicator groups. What stands out in the table 5 is that indicators related to economics and physical conditions positioned significantly more important than environmental and social concerns. The list of identified essential criteria and indicators are:

- 1- Land use (both physical and economic concerns)
- 2- Land status (physical concerns)
- 3- Recognition of stakeholders (economic concerns)
- 4- Existence of infrastructure and its level of obsolescence (physical concerns)
- 5- Communications and transportations (physical concerns)
- 6- Elements for private investments (economic concerns)
- 7- Public incentives (economic concerns)

There are two reasons why the criteria and indicators in economics and physical dimension have become so dominant. These are financial and legal responsibilities of the person or entity appointed or identified to be accountable for the project planning and execution, which represents the start point of each project. Generally, the identified group of essential criteria and indicators provides two types of information: the first step required actions (items 1 to 3) and the second step required actions (items 4 to 7).

### **First Step**

In all the projects it was critical to identify the assigned land use, the physical land status as well as its occupation status to be able to evaluate the current operational level of the area with its socio-economic characteristics. The criteria related to land use and land status indicate how policies and corresponding budgets and responsibilities should be distributed. Consequently, role of stakeholders also indicates the ones who receive the budget and responsibilities to deal with the existing status of brownfield sites. The first step group demonstrated that unless these criteria indicators are not considered in detail, the second step as well as the other aspects would not have serious impacts during evaluations and preparation of the plans. This highlights the differences between first step and second steps in these three evaluated brownfield regeneration cases.

### **Second Step**

The next 4 essential criteria indicate the major step after identification of the simple facts of where, what, and who, which deals with two major questions: 1) what are the available infrastructures, and to what extent can we reuse them? 2) how much budget do we have? or what is the required support and incentives from different sources to manage the project? A clear and sufficient answer to these questions provides the major tool for preparation of a potential success route-sheet and formulate the best possible ways to attract private investors.

### **Important Criteria and Indicators**

With regards to the list of identified 'important' criteria and indicators, 17 items were identified, however not all the items have the same value in all the projects. These criteria and indicators represent the critical aspects during different phases of each project, and they were the key considerations for preparation of the strategic and execution plans:

- 1- Housing Stock
- 2- Existence and status of public space
- 3- Citizen Participation
- 4- Land ownership status
- 5- Main economy of the area
- 6- Site physical condition
- 7- Heritage
- 8- Urban Density
- 9- Level of Unemployment

- 10- Population
- 11- Social Characteristics
- 12- Level of education
- 13- Gentrification status
- 14- Existence and status of Community Infrastructure
- 15- Contamination status
- 16- Natural Risks
- 17- Public - Private Cooperation

Different indicators in physical and economic concerns are again the key aspects that is identified as 'important' factors. Generally, based on prioritising the importance of the identified group of 'important' criteria and indicators provides two types of information: the third step required criteria and indicators of actions (items 1 to 5) and the fourth step as well (items 6 to 17). However, what is striking about the figures in this table is low value position of major social and historic consideration (value 1.6) in the project, which positioned them in group of forth steps of action.

### **Third Step**

With regards to the third step of actions, availability and conditions of housing stock were remarkably important factor in preparation and progress of all the project. Availability, liveability, and real estate values of such properties provided important factors to enable the decision makers to identify the existing residential capacities and correspondingly forecast the expected population growth for the area. Parallel to status of housing stock, concerns about public spaces and community opinion on physical quality of new developments highlighted as another important factors. Evaluations on existence of public spaces, their use, and necessities of development of new public and green urban space were critical to change the urban perception of the area and provide fundamental urban spaces to encourage community participation. It is identified that depends on the major strategy of the projects, different level of citizen partnership has been expected, planned, and executed. The criteria for citizen partnership indicate the willingness of residents to participate in regeneration plans, which encouragement of public consultation for and during project preparation highlighted as an important factor.

On the other hands, the criteria related to land ownership status played an important role in the identification of the subject of land-use modifications. These criteria indicate different requirements for evaluation of tax systems, economic incentives, and revisions of development restrictions for public or private owned properties. This aspect indirectly connected with criteria related to the main economy of the area, which is an important factor in strategic planning for each project. These indicators for project strategies concerning future activities either by keeping existing ones or transforming it to other activities or an implementation of a mixed-strategy. Here, mixed-strategy is referred to preservation of industrial heritages and characteristics in corporation with new functions and economic dynamism. In any direction, concerns and evaluations of main economy of the area in an important indicator for understanding active economic mechanism of the area and can identify the existing/future low and high profitable activities. This indicator

in correlation with land ownership status can also help to identify socio-economic characteristic of the area through land occupation status and its required analysis.

#### **Fourth Step**

The fourth step required criteria and indicators of actions, cover some very important aspects, but closer inspection of the table shows that these actions were not really required or considered during the first stage of project planning nor in problem identification process. This step is covering almost all the important secondary aspects of each brownfield regeneration project include physical, historic, economics, social, and environmental concerns. The criteria related to physical concerns of urban density was an important indicator to measure and ensure proposed regeneration plans offering a compact and efficient urban development in the area, which also is responsive with indicators for open public spaces. On the other hands, the historic concerns of industrial heritages helped during project preparation and progress to identify and preserve the elements of past economic prosperity in brownfield sites. The historic criteria indicate the level of importance of industrial heritages (i.e. catalogues) and as an important factor ensured the regeneration plan will not wipe out the history of the area.

The next important highlights of the fourth step was identified concerns regarding social aspects such as population and unemployment rate, avoiding gentrification and population transfer, and existence of community infrastructure. With regards to population and unemployment rate, it was clear in all three projects that a regeneration project is not a guarantee for reduction of unemployment rate and increase of population. Therefore, the criteria that have set in all the examples highlights indicators for evaluation and encouragement of possible entrepreneurship supports that attract private sector to investment in new businesses. The presented evidences from evaluations demonstrated increase in more job opportunities. However, these new businesses did not only provide job opportunity for existing residents but invited new young and professionals in neighbourhood. Here, the gentrification as an indicator during preparation and progress of the project helped to identify the goal of the project, to gentrify or to regenerate. This represent a key strategy and sometimes hidden during each redevelopment project within degraded areas. In parallel to mentioned aspects, concerns about existence of community infrastructure such as schools, hospitals, libraries, etc. was a key factor for such new mixed-use development.

Although the name of brownfield regeneration is always attached to remediation actions, of the three presented examples, only in Bilbao and Docklands this indicator played an important role in evaluations and preparation of plans. Surprisingly, in 22@Barcelona project, no activities regarding the status of contamination have taken place and none of the plans considered this indicator as part of the preparation of strategies or the execution plans. This fact placed the environmental factors in a low value (1.3) in analysis results.



## Considered Criteria and Indicators

As it mentioned before, the third category of criteria and indicators considered only as added value to the projects, where direct or indirect actions corresponded to these indicators. However, the items in third category it did not identified in this study as part of the major strategy or action plans. From the average quantitative results, it can be seen the lowest value (0.67) assigned to two items; 1) evaluation of previous strategic environmental plans and its result, in which except for the case of Docklands, no significant consideration identified within documents of the other two project, and 2) low level of existence of social programs during the regeneration plans identified. Although in case of 22@Barcelona project, the “historical activism, relational networks, and the proliferation of all types of civil society association activities” (Monardo, 2018) highlighted as major social programs and they were seen just as added value during progress of project, the other two projects significantly suffer from lack of significant social programs to support and improve the existing worker community of the area.

### 2.4.5 Final Remarks

Some of these identified project criteria and indicators, which have been implemented in the aforementioned examples, are not found in the generally accepted brownfield regeneration strategies, neither the direct strategies used in the UK nor indirect strategies employed in Spain. This may be explained by the fact that many of these indicators are considered to be part of the proposals and solutions instead of being part of problem identification process. Even so, a clear diagnostic method did not exist in any of the aforementioned examples and it can thus be suggested that the development of a diagnostic method for brownfield sites is a necessity before the preparation of any strategic or regeneration plans. However, in the cases explored, these identified diagnosis indicators do have important implications during the development of regeneration plans. Therefore, by considering these indicators as empirical factors of a diagnostic method prior to preparation of a brownfield regeneration plan, four major steps have identified by this study. The steps are:

**Step 1:** Identification of the major physical conditions and relative stakeholders

**Step 2:** Identification of available infrastructure and the source of investments

**Step 3:** Identification of ownership status, local economic mechanism, and major urban physical conditions

**Step 4:** Identification of socio-cultural and socio-economic status and values with concerns of public health

These 4 steps of problem identification extracted from aforementioned examples, demonstrate the actual techniques of diagnostic methods in brownfield acts and policies. Contrary to expectations, this study did not find significant criteria related to geographic location of the sites, influence of regional powers and superpowers on situations, nor characteristics related to political and economic geography of the area. The insights gained from this sub-section demonstrate lack of a place-based approach as an analysis indicator or decision factor for brownfield regeneration projects. Turning now to the cases of geopolitical conflict zones, intriguing questions regarding the nature and extent of the problem, and the next section of this

chapter addresses a place-based approach as another important criteria and indicator for evaluation and preparation of plans for brownfield sites in geopolitical contents and specifically conflict zones.

## **2.5 A Place-Based Approach to Brownfield Sites; Geopolitical Locations**

From these discussions on brownfield sites, it has become clear that changes in economy or the local geopolitical settings of an area can impact the operability of a functional space. In the case of brownfield sites, the changes result in negative impacts on the area. Statistical analysis and data sets can be useful for identifying the number of vacant lands, lists and reports of functional and non-functional land uses, taxation, etc. However, statistical data sets lack the geographical characteristics of their subjects such as the role of space and geographical location that are important factors in the production of brownfield sites. To address that, this section of the thesis is about the role of geographical location and the associated political situations that define brownfield sites. This will serve to connect the purely technical features of brownfield sites to aspects that can be defined only in the area of social science, being related to human behaviour and the perception of facts. Although this research does not have any intention of running spatial or place-based analysis, the inclusion of a place-based approach in assessments and the diagnosis of an affected area (i.e. brownfield sites) is crucial.

In spatial and place-based analysis, it is important to note the significance of location in the final results because “if the locations change, the results change”, and in inductive research, “space provides the necessary link to other potentially interesting factors and to the context of observations” (Goodchild & Janelle, 2004). Although since the 1960s, spatial and place-based analysis have had an important role in urban and land-use planning (Bradshaw & Muller, 2004), spatial thinking about a problem is not yet integrated into the definition of the problem. The appearance or production of brownfield sites and related issues are addressed in isolation in most documents from separate disciplines such as environmental science, economics, sociology, and political science. Some brownfield-related policies, such as the one in the UK, are somewhat cohesive, but the role of space, geographical locations and their associated political attributes are largely ignored. Goodchild and Janelle (2004) explicitly explained this fact:

“In the development of local policy, the reductionist approach that allocates processes to different disciplines is counterproductive, since it encourages social policies that ignore economics, and economic policies that ignore politics. Just as space provides an integrating mechanism for data, then, we argue that space can provide an integrating mechanism for the social sciences and a mechanism for linking science to policy” (Goodchild & Janelle, 2004)

To have deeper understanding of why a piece of functional land became abandoned and marked as vacant, useless, or misused, it is also essential to understand the local geopolitics of the area. Typical industrial/commercial brownfields are generally linked to local geography, economy, and policy, which can manifest as a local geopolitical issue rather than just a simple urban planning, economic, or environmental issue. Correspondingly, the multi-layer complex challenges associated with brownfield sites

are directly connected to the local geopolitical issues of a certain region. Local geopolitics, then, can be seen as a contributory element in the production of typical brownfield sites, which have been defined and reflected differently in different urban planning systems and policies. Therefore, corresponding to a place-based understanding of brownfield sites, it is important to highlight that the geographical location of 'typical' brownfield sites in the local geography of the area is an important factor as deindustrialization and suburbanization can produce abandoned, previously-developed areas such as abandoned industrial, commercial, and military areas.

However, the validity of this argument is limited to the local geopolitics of a specific area and cannot justify the impacts of regional geopolitics in the production of brownfield sites. This line of thought leads to the identification of an alternative source of 'geopolitics and conflicts' in the production of brownfield sites; the impact of regional, rather than local, geopolitics. This alternative source has nothing to do with deindustrialization and suburbanization (the well-known causes of brownfield sites) but is related to the place and spatial settings of a specific region affected by the political interests of both local and international actors. Such interests over space make an area politically, economically, and strategically important, thus it is called a geopolitical location or hotspot. The confrontation of opposing interests may result in violence, armed conflict, and wars that cause dereliction and abandonment of areas of land (Hooper & Venema, 2014) that share physical characteristics with brownfield sites, however they are not typical brownfields. In geopolitical conflict zones such as Cyprus, there are sites that fall into the general definition of the term 'brownfield', and they may be categorized and dealt with by normative urban planning approaches (Shojaee Far & Atun, 2012). However, the origins of their abandonment are quite different, as they are linked to conflicts, violence, and armed confrontations. Therefore, it becomes important to acknowledge the differences between typical brownfields, which are the consequence of local geopolitics, and semi-like brownfields in geopolitical conflict zones that are a consequence of local, regional and/or international geopolitical conflicts.

As a result of these conflicts, brownfields are formed not only from previously industrial and commercial areas, but also vibrant residential areas. It can be assumed that different levels of contamination are often associated with these sites as a result of military activities, domestic violence, civil war, and perhaps disruptions in industrial and commercial operations. This suggests that the identification and characterization of these semi-like brownfield sites in geopolitical conflict zones is the key to dealing with affected areas in conflict zones. To be able to identify and characterize such an area, a systematic method should bring together diverse disciplines of social science (the cornerstone) with physical science and fields of engineering. This approach would be very close to the interchangeable history and nature of regional science as a matching point of the mentioned disciplines (Boyce, 2004).

With regard to this multi-disciplinary approach within the general area of regional science, two important perspectives of semi-like brownfield sites in geopolitical conflict zones can be identified as 1) spatial situations and characteristics of space, 2) situations that can only be defined under the umbrella of social

science, such as politics, sociology, and economics. Although, as mentioned before, this thesis will not run a spatial analysis, it is worth mentioning the existence of a new integrated spatial analytical model, promoted since 1999 by the Centre for Spatially Integrated Social Science (CSISS)<sup>21</sup>. This model advocates the integration of social sciences into spatial analysis models, using a variety of information systems and computing analysis such as GIS to include the geographical location of an event or a subject of study as an important factor.

To have a better understanding of this integrated mechanism, it is important to highlight the large amount of previous research done by Torsten Hägerstrand on socio-economic systems. He raised an important question “What about people in regional science?”, where he noted the integration of time and place factors in regional science studies, saying “time has a critical importance when it comes to fitting people and things together for functioning in socio-economic systems, whether these undergo long-term changes, or rest in something which could be defined as a steady state” (Hägerstrand, 1970). This integrated spatial way of thinking can determine characteristics that differ spaces from each other in the context of a general framework (Fotheringham & Brunson, 1999). In this sense, location and space produce a strong mechanism to integrate various aspects of social sciences by means of its economic, political, and social processes of behaviour of societies linked to geographical locations, unlike isolated studies in different disciplines (Goodchild & Janelle, 2004).

These arguments provided an important opportunity to advance the understanding of the role of geographical locations and their attached political attributes associated with time, and to introduce an alternative source of production of semi-like brownfield sites in geopolitical conflict zones. Therefore, to be able to understand and characterise such affected areas, it is important to explore their different attributes such as abandonment issues in conflict zones in contrast to abandoned and vacant industrial areas, geopolitical settings and their impact on property rights, and the concept of mapping semi-like brownfields on geographical maps which led to the idea of a space of non-existent land-use. Corresponding to these attributes, in the next section, the study explores the socio-economic attributes of an area by means of its tangible and also hidden values in order to make a proposition to explain the full attributes of semi-like brownfield sites in geopolitical conflict zones.

### **2.5.1 Abandoned Properties in Geopolitical Conflict Zones**

To abandon something is generally defined as to leave and never return to that thing or place because of danger and/or loss of interest (Merriam-Webster, 2015). In the case of properties, abandonment can be defined as to give up with the intent of never again claiming a right or interest. However, in many legal systems, it is not possible to abandon ownership, except the loss of ownership as a result of unforeseen

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<sup>21</sup> The Centre for Spatially Integrated Social Science (CSISS) was founded in 1999 with support from the National Science Foundation under its program to promote research infrastructure in the social and behavioural sciences. CSISS programs (1999–2013) recognized the growing significance of space, spatiality, location, and place in social science research. To read more see: <http://csiss.org>

circumstances such as giving up control over a property to the influence or control of another person or entity, which is usually associated with force and involuntary abandonment.

This study contests the claim that abandoned properties within conflict zones – semi-like brownfields – are not just typical vacant and derelict areas resulting from economic deficiencies and lack of interest. Indeed, there is often great interest in them, and their original owners frequently have a strong will to return to their properties. However, the political situation and uncertainties, which may be unique in each case, will not allow them to return. These uncertainties can be found in both psychological and physical patterns of affected areas. This is a paradox in the situation of abandoned properties, where the geographical location associated with time and political attributes of the area is the base of that paradox. In other words, at the time of abandonment of a land, either by will or force, there are vacant properties (lands and buildings) that fall into dereliction, and on the other hand, there are strong desires to possess them and make them functional again. The meaning of abandoned properties in geopolitical conflict zones are the subject of intense conflicts of interest. The present argument addresses the gap in the literature related to field of land management and urban studies on abandoned properties, since very little is known about the management of brownfields (or semi-like brownfields) in conflict zones.

The issue of abandonment of properties in conflict zone is one of the main tangible consequences of disputes and conflict of interest over a particular geographic location. Corresponding to the global understanding of abandonment, it is difficult to mark the left behind properties due to population transfer as abandoned because it is incompatible with the intent of never again claiming a right or interest. Such abandoned properties are insufficient to legally present loss of ownership nor physical vacancies and derelictions. Unless status of such properties not defined correctly, the comprehensive and effective policies and actions can never be given. Therefore, it would be very naive to search for simple and normative answers to such complexity, in which defining and characterizing this complexity would be an essential task.

Correspondingly, this argument about meaning of abandoned properties in conflict zones, demonstrate one dimension of complexities related to dealing with semi-like brownfield sites in conflict zones, which is linked to diverse legal frameworks, political situations, geographical settings, economics, and social complexities. One of the most important factors of this level of complexity is related to conflict of interest from national and/or international actors, emphasising geopolitical interest of actors that are outside the area, apart from interests or the political conflicts that could exist locally. This type of place-based conflict of interests can certainly bring military and armed confrontations into urban environments that can produce sudden changes or on-going conflicts in urban systems, which evidently results in property abandonment and production of semi-like brownfield sites.

Unfortunately, in geopolitical conflict zones, many decision-makers are struggling for the best proposals and strategic plans to deal with abandoned properties, without seeing insufficiencies within definitions of abandonment, vacant, and derelict real-estate properties (lands) in conflict zones. It can therefore be

assumed that lack of comprehensive plans and integrated policies to deal with realities of abandoned properties suggests another level of complexity of disputes related to ownership status and property regimes. Property rights, ownership status, property regimes and their associated disputes identified in this study among the most important factors related to abandoned properties, which present the most tangible evidence of insufficiencies of understanding the term – semi-like brownfields – in conflict zones. This is an important issue that neither is about literature and meaning of the term nor about legal arguments, indeed it is a tangible fact about problems of actual brownfield cases in conflict zones such as Cyprus disputes on abandoned properties that is involved in many aspects of socio-economic developments of the area.

### **2.5.2 Ownership Status and Property Regimes in Conflict Zones**

The territorial behaviour of humans towards lands and properties has been widely acknowledged as an interest in land ownership. In other words, the natural consequence of territorial behaviour is an interest in real estate property ownership and has been regulated by different regimes in history through policies related to land law and property ownership practices. This interest is generally known in real estate as possessory interests, which describe the intent and right of a party to occupy or exercise control over a plot of land. The conflict of interest influenced by territorial behaviour over land administration and control has historically caused disputes and wars. This type of confrontation is usually associated with an act of forced occupation and destruction. However, after one party successfully occupies a territory, the conflict is resolved, or after destruction of the area is complete, developmental processes take place to turn the degraded areas into beneficial places responsive to the needs of the owners. This scenario has taken place many times throughout history. However, in conflict zones where no resolution has been found, destruction becomes a significant barrier to any developmental strategies.

Although, with regards with ownership status, brownfield sites have many complexities in their nature, but they usually have clear registry and ownership status, which has been defined in land registry, town hall, or other public entities. However, in the case of semi-like brownfield sites in conflict zones, the ownership status is often much more complex, as the entity with power has the right to enforce the land law, and consequently former ownership statuses can be altered or manipulated. Over time, this introduces confusion in the practice of property rights, especially if the dispute or the argument is over abandoned properties.

The common definition of abandoned properties, discussed in Section 2.5.1, as voluntary abandonment is highly questionable in the case of conflict zones. In light of this, the present study argues that the left-behind properties resulting from conflict and violence cannot be called ‘abandoned’ as the majority of individual and public abandonment is associated with a variety of forces (armed activities, political accords, community principles, etc.). In addition to this, it needs to be considered that the abandoned lands and properties that are still functional can be also seen to be underused, as they are often occupied by new residents.

The dispute around legal or illegal property occupation and the practice of property rights are not the focus of this study, though the identification and characterization of such properties can be seen as a step toward an improved methodology in dealing with abandoned properties in geopolitical conflict zones. Nevertheless, this is an extremely complex, and sometimes also complicated, process, where diverse property regimes and legal disputes cause deficiencies in legal mechanisms. It is important to bear in mind that this level of complexity of property rights practices in conflict zones can be identified as an element contributing to land management complications. This type of complication may explain why a piece of land can be ignored in geographical maps just to bypass the problem and move on with negotiations toward conflict resolutions. In many cases, such as the Cyprus dispute, ignorance further complicates the existing situation. This study refers to these lands as ‘non-existent space’.

### **2.5.3 Map of Non-Existent Space**

The origin of the term ‘map’ comes from the early 16th century Medieval Latin ‘mappa mundi’, which, in literal translation, means ‘sheet of the world’. It is referenced in the contemporary Oxford dictionary as “a diagrammatic representation of an area of land or sea showing physical features, cities, roads, etc.” (Oxford Dictionaries, 2014). Maps always present a space that is discovered, whilst other spaces that are not discovered will not be shown on any map even though the space does literally exist. This discovery is not just a matter of the physical existence of a place in geographical data; it also refers to many different understandings of what should be seen in through the different perspectives by means of geography, politics, natural environment, social behaviour, geopolitical arrangements, wars, conflicts, and so on.

Therefore, maps show recognized or discovered spaces that have real or metaphorical owners and are registered somewhere, ranging from local authorities to international entities. Maps that represent political orders of geography or, in a more complex way, geopolitical maps of the world, represent the spaces recognized by politicians and their policies. In the case of conflicts and wars in a specific geographical location, one of the classic solutions is to erect a physical barrier called ‘No Man’s Land’ between the stakeholders of the dispute. Since this space belongs to neither party, it produces a gap in political maps, shown as a ‘Buffer Zone’, peace line, green line, or other similar term. Although it once existed, it doesn't exist anymore, no one can own it, operate within it, or pass through it. However, it is not possible that a literal space suddenly becomes non-existent; it exists, and, in fact, it becomes an asset for political negotiation. There are many examples of this in the modern age, such as the land between Israel and Lebanon, or the Gaza Strip, India and Pakistan, North and South Korea, and the most significant one for this study North and South Cyprus. The production of no man’s lands causes abandonment and vacancy in urban areas, in addition to a voluntary abandonment at their periphery that causes its expansion. This is where the complications regarding ownership status and property disputes often begin.

### **2.5.4 Final Remarks**

The main goal of this sub-section was to determine the importance of a place-based approach in analysis of brownfield sites, specifically if the site is located in a geopolitical location. This part of the study listed

the number of essential factors for a place-based approach analysis on brownfield sites such as, 1) the geographical location and settings of the site, 2) deeper look at local geopolitics of the area, and 3) clear understanding of legislations ruling the ownership status of abandoned properties. Depends of each case, the generalisability of these suggested factors for typical brownfields is subject to certain limitations. However, this study identified these factors as an essential and critical factor to be involved in any evaluation of semi-like brownfield sites regeneration strategies in conflict zones.

## **2.6 Socio-Economics in Affected Areas; Geopolitical Conflict Zones**

Valuing brownfield sites is increasingly recognized as a complex task in the process of brownfield regeneration, especially where there is a lack of clear legislation and ownership status, along with environmental risks and contamination. The major challenges in valuing brownfields are generally the difficulty of obtaining accurate data to compare with other properties on the market and being clear about the cost of brownfield regeneration for income projections.

The complexity of brownfield challenge increases when it comes to economic valuation or evaluations of brownfields in conflict zones where access, improvement, and/or development of properties may not be legally permissible at the time of valuation or economic evaluations. So far, this chapter has focused on the physical, geographical, and political aspects of brownfield sites considering both typical brownfields and semi-like brownfields in geopolitical conflict zones. This section will discuss the realities of possible socio-economic evaluation factors of semi-like brownfields, aiming to advance the understanding of the values associated with abandoned properties in conflict zones.

The general approach to such evaluations is oriented to socio-economics and cannot be evaluated with purely social and economic characteristics, nor through isolated economic valuation techniques. The values or perhaps the indicators of values of geopolitical locations engulfed in conflict are usually difficult to identify since the market values are significantly affected by the conflict and this fact hides the real values. Consequently, a holistic approach combining non-market values and relevant factors is explored in a discussion around a possible decision-making tool for the process of conflict resolution, integrating environmental, social, urban planning, and political issues to establish the multi-dimensional perspective of the study. It is important to emphasize that political uncertainties and their associated policies have a direct influence on the understanding of values associated with abandoned properties in conflict zones.

### **2.6.1 Economic Evaluations of Semi-Like Brownfields**

The idea of ownership is the common foundation of real properties, and when a conflict of interest arises, a real physical property (estate) can turn into a conflict zone. Defining ‘conflict zone’ is not easy, as each conflict zone has its own origin and type of conflict that can depend on many different conditions, such as bi-communal conflicts, religious conflicts, ethnic conflicts, international conflicts, geopolitical conflicts,



and many more types of internal and external conflicts. Regardless of the origin, all conflicts of interest over a real property can significantly impact the value of land, where the positive or negative nature of the impact depends on the type, duration, consequences, and complexity of the conflict.

As a first step toward understanding economic evaluations in conflict zones, this study provided a comparative analysis on property asking prices in Cyprus through an investigation into real estate properties and their links to geopolitical problems. This comparative evaluation between both sides of the island demonstrates the existent prices which are defined by access, supply, and demand, all linked to violence and state interests in a conflict zone. A description of the synthesis and evaluation of the Cyprus conflict can be found in Chapter 4, where all these theoretical discussions are made tangible as dimensions of real problems in geopolitical conflict zones.

One of the key steps to successfully deal with semi-like brownfields is estimating and understanding their real worth resulting from both economic and social values. Understanding the value of the land plays an important role in the land management and development process. However, a major barrier to this task is the limited or restricted access to these areas for their improvement and development, which may imply a lack of physical access, legal access, or both, at the moment of valuation. This discussion demonstrates how the difference between real value and current value of these lands can be unclear, and this is where the differences between typical brownfields and semi-like brownfields in conflict zones become evident.

Semi-like brownfield sites are largely located in politically uncertain, economically depressed, socially damaged, and psychologically or literally dangerous areas. It is clear that the negative impact of brownfields in geopolitical conflict zones on the surrounding land values is quite real, and these areas struggle with socio-economic issues, such as high crime rates, unemployment, poor health, etc. (Hara, 2003). These issues generate negative externalities caused by political and economic failures. Generally, externalities are defined in urban economic and market studies as changes of prosperity generated by a given activity without being reflected in market prices and values (Ricci, 2003).

As these negative externalities impact property values at the peripheries of typical brownfield sites (Hara, 2003), it is evident that the same externalities must also occur in the case of semi-like brownfields in geopolitical conflict zones, yet with even more intensive impacts. Consequently, as general political failures persist, little attention has been paid to the land values of periphery areas, and the prosperity of third parties – private landowners who are forced or pressured to abandon their properties – perhaps would not be included in the decisions of political decision-makers. Although there is little quantitative data on the impact of negative externalities on private owners, qualitative studies and reviews suggest a significant negative impact on areas surrounding brownfields in conflict zones. Since usually these negative externalities are not considered and cause biases in real values of lands (Ricci, 2003), it is essential for decision-makers to take a regulatory intervention to correct, or at least manage, these value divergences. However, as has already been discussed, semi-like brownfields in geopolitical conflict zones, commonly referred to as ‘no

man's lands' in international legal systems, are usually suffering from disputes regarding their ownership status; they are a space on the geographical map that does not exist anymore, consequently there is no one to take steps for them, at the same time that many interests (domestic and international) are struggling to own and operate these lands. This topic has been discussed previously as a paradox in the understanding of abandoned properties within geopolitical conflict zones.

### **The Role of Political Uncertainty**

With high levels of political instability and current uncertainties within the social context of semi-like brownfields in geopolitical conflict zones, maintaining a reasonable ownership status with confidence is a very complicated and unclear task. Despite the existence of a very strong negative connection between political uncertainty and possible conflict resolutions, which affects the social context of the affected areas, the nature of this relationship has not been studied in detail in the field of land management and urbanism. It is difficult to ignore the fact that unstable governmental and institutional actions in conflict zones have a crucial role in the extension and advancement of political uncertainty in these areas. These actions usually cause physical or psychological inaccessibility to the regeneration of semi-like brownfields.

The "theoretical model of 'government policy choice' of Pastor and Veronesi (2012, 2013)"<sup>22</sup> (Kelly, Pastor, & Veronesi, 2013), where the government or ruling institutions choose which policy to implement and stakeholders are uncertain about the future policy choice, can be applied to this argument, leading to the suggestion that accepted policies which are associated with political uncertainty increase the level of risk in the prevailing instability of land-management issues in conflict zones. The risk is larger when the conflict resolutions are in progress.

The two main dimensions of political uncertainty identified by Carmignani (2003) can be seen in patterns of land management issues in conflict zones, such as the case of the Cyprus conflict. He described these two dimensions as 'phenomena of socio-political unrest' and 'government termination and electoral surprises'. The first dimension implies domestic violence and armed conflicts, where the main sources are documented as conflicts between ethno-linguistic, religious, ideological, and/or economically-different communities that could not find resolution within institutional channels. The second dimension indicates domestic (or internationally supported) coups or government terminations, either by downfall of political perspectives or total collapse of a regime, where the sources of this dimension can be found in extreme competing interests within political institutions. As both dimensions can be seen in geopolitical conflict zones such as Cyprus, it can be noted that both dimensions together increase uncertainty within communities about the governmental systems, politicians, economic policies, social securities, human

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<sup>22</sup> (Pastor & Veronesi, Uncertainty about government policy and stock prices, 2012) and (Pastor & Veronesi, Political uncertainty and risk premia, 2013)

rights, local economic growth, and international funds. This situation can be called an unstable socio-economic framework associated with socio-political uncertainty (Carmignani, 2003).

### 2.6.2 Exploration in Socio-Economic Valuation Possibilities for Non-Existent Lands

It is evident that non-existent lands (no man's lands), are not traded on any market and have no market value. It is also widely known that value of typical brownfield lands and abandoned properties in normal areas of economic failure are assessed by cost-and-benefit-oriented analyses and methods such as Highest and Best Use (HBU), Cost Effectiveness Analysis (CEA), Benefit Cost Analysis (BCA), Hedonic Price Analysis (HPA). It is also discussed and established in this study that no man's lands share many physical characteristics with typical brownfields such as abandonment, dereliction, existing infrastructure, possible contamination, etc. Taken together in addition to previous discussions, this study suggests that because of inaccessibility, high levels of uncertainty between related stakeholders, and not being closely related to any marketed goods, semi-like brownfields cannot be valued in the same way as typical abandoned properties.

Until now, there has been no reliable valuation method for abandoned properties in conflict zones. Therefore, since the market does not value this area, non-market indicators such as social and cultural values, could be possible valuation indicators. Evidence from geopolitical conflict zones suggests that there should be two main factors for assessing the value of a semi-like brownfield site. The first factor is the economic assessment of land parcels within semi-like brownfield sites, and the second factor is the externalities that these lands exert over their surroundings (peripheries), where market prices do actually operate. The total economic assessment of the eventual regeneration/recovery of such areas implies the addition of both intrinsic and extrinsic values. However, valuation techniques for brownfields in geopolitical conflict zones and their externalities cannot be a straightforward or clear task.

Two of the most well-known tools for assessing intangible assets are 'stated preferences' and 'revealed preference' method. Generally, the 'stated preferences' approach is widely used in intangible ecosystems and environmental valuations<sup>23</sup>, in which it can be a way to directly ask people to state their values, as opposed to a 'revealed preference' approach which assesses values implicitly from the choices made (SEEA, 2003). Land parcels in semi-like brownfields would be best economically evaluated by the 'stated preferences' technique while the 'revealed preferences' technique would be the most relevant way of valuing the externalities. However, as both models are based on random utility theory<sup>24</sup>, the combination of both models and their information would produce more valid estimations (Adamowicz, Louviere, & Williams, 1994). Although this has not yet been tested for geopolitical conflict zones, hypothetically, the adaptation of combined 'stated preferences' and 'revealed preferences' approaches to the situation of semi-like brownfields in geopolitical conflict zones would be a logical suggested approach. In both models,

<sup>23</sup> This approach has been discussed and promoted in the *Handbook of National Accounting – Integrated Environmental and Economic Accounting* (commonly referred to as the SEEA) prepared with the collaboration of the United Nations, European Commission, International Monetary Fund, Organization for Economic Co-operation and Development, and World Bank in 2003.

<sup>24</sup> "Random utility theory is based on the hypothesis that every individual is a rational decision-maker, maximizing utility relative to his or her choices." (Ennio, 2009)

random data are collected from the same individuals; a ‘stated preference’ approach is developed, and the data is collected according to choices from hypothetical choice sets where the attributes are responsive to the series of attributes in the ‘revealed preference’ choice set (Adamowicz, Louviere, & Williams, 1994)

### **Contingent Valuation Methods**

To be able to proceed with a combined ‘stated preferences’ and ‘revealed preferences’ approaches for brownfield sites in geopolitical contexts, this study determined that the most relevant non-market valuation methods that could be applied to the assessment of lands within conflict zones would be contingent valuation methods (CVM). CVMs generally concentrate on observed data extracted either from site surveys or questionnaire surveys, which can eventually lead to an overall assessment of the various components. A key aspect of this method is that the value of, and damage to, the site and affected areas can be directly ascertained from people who live in and deal with these areas, which means the assessor does not have to rely solely on institutional statistics and opinions. In this method, a hypothetical situation is presented to obtain statements about how much people would be willing to pay to have a certain service or access or how much they would be willing to accept to give up same conditions (SEEA, 2003). This method may produce reliable estimations of the real value of an intangible entity for policy and decision makers, such as the value of an inaccessible, abandoned site, (Arrow, et al., 1993). However, it is important to note that the lack of real market value presents difficulties for the CVM approach in establishing correct prices (SEEA, 2003). Accordingly, (Cummings, Brookshire, & Schulze, 1986) argues that direct methods are questionable due to the hypothetical nature of the questionnaire surveys and the lack of actual behaviour observations (as cited in Adamowicz *et al.*, 1994).

### **Contingent Choice Method**

One of the ranges of CVM analysis approaches, the contingent choice method (CCM), which is also referred to as choice modelling (CM), uses an indirect method of data collection and asks people to make choices based on hypothetical scenarios (Mogas, Riera, & Bennett, 2002). SEEA (2003) indicates that CM as a survey method is preferable when estimating relative demand rather than absolute demand. In CM surveys, respondents have a choice between two or more options with different prices or costs, involving choices between the given alternatives (Hanemann & Kanninen, 1999). The SEEA (2003) also highlighted that, since CM analysis is focused on different choices with different scenarios, it can be especially useful for policy and decision makers in cases where their eventual actions may have different impacts. For example, an improvement in conflict resolution and ongoing negotiations may decrease the level of uncertainty and lead to a scenario of mutual decision on land status and ownership.

CM has its origin in conjoint analysis (CA), and since part-worth utilities rely extensively on the statistical fitting of the models used, it may have difficulty gaining the stakeholder’s willingness to pay or accept the conditions. As CA develops its data by focusing on choice experiments and data analysis based on

conventional multinomial regression models, it can demonstrate a ‘characteristics theory of value’ and ‘behaviourism’ (Marmolejo-Duarte & Ruiz-Lineros, 2013). However, many studies have recently questioned the sufficiency of the CA model. (Marmolejo-Duarte & Ruiz-Lineros, 2013) for example, argue that critics question the adequacy of the CA model to determine the attributes to evaluate and the reasons motivating preferences, and to predict the future needs of potential users in their everyday perceptions. Similarly, in other studies, there are those who argue that the CA model may not be responsive in accordance with their actual preference (Wardman, 1998).

These discussions confirm the relation between stated preferences and revealed preferences in providing a combined analysis and results for valuations of lands and externalities of semi-like brownfields in geopolitical conflict zones. The combination of two separate data sources may also give the chance to test their validity. By integrating these two models, the information on actual choices can be collected from the same people who participated in the stated preference survey, and it offers the possibility of comparing and validating the data (Adamowicz *et al.*, 1994). Hence, just as the possibility exists of combining analysis in the case of recreational sites, so it can also be considered for adaptation to the case of semi-like brownfields and their externalities in geopolitical conflict zones:

“Both the revealed preference and stated preference are discrete choice models. In the revealed preference case the individuals choose one recreation site from all sites available to them. The model explains the choice of site as a function of travel distance and quality attributes of the sites. The stated preference model explains the choice of one alternative over the other as a function of the attributes which include travel distance and the same quality attributes. Both models reflect the same trade-offs and both can be considered applications of random utility theory. Since the two approaches reflect the same process of choosing recreation sites based on attributes, it is possible to combine the analysis” (Adamowicz *et al.*, 1994).

However, designing and implementing responsive CM surveys, which would help in combining the results, is time-consuming and requires significant skill. The design of the questionnaire would directly influence the results, as CM results are highly sensitive to respondents’ behaviour and beliefs. Therefore, validating the results by comparison of results from different rounds of surveys is an important task. A series of psychological analyses would also give deeper meaning and allow better understanding of the survey results (SEEA, 2003).

### **Contingent Choice Method for Evaluations of Social Characteristics in Conflict Zones**

Thus far, this thesis has described the methods that may be used to reveal the economic values of affected areas through direct and indirect stated preferences of residents. However, if questionnaires are designed to gather information on the social behaviour of local people, then perhaps the results can also reveal the social characteristics of the area. Taken together, this would demonstrate socio-economic characteristics and values of affected areas as indicators for further analysis and the decision-making process. This study suggests the implementation of such technique for better understanding of socio-economic characteristics, as it can connect technical analysis and valuations to the emotional impact of displacement in conflict zones.

The people who lost their properties as a result of intercommunal conflict also lost a place of that holds fond memories, which gave them a sense of belonging. At the same time, those who have occupied abandoned properties would have also developed a sense of belonging, which is not easy to let go. This is not a simple issue that be answered only by political settlements, in which it requires deeper multi-dimensional investigations to deal with such problems – if identified as problems – using legislation, sociological parameters, political settlements, and international support.

The contingent choice method would also reveal general and specific levels of satisfaction amongst the local community which, if the analysis focuses on particular issues such as users' satisfaction with the top-down governmental decision system in conflict zones, can produce surprising results. In regions of conflict where residents have few chances to voice their preferences, high levels of users' dissatisfaction are usually seen with a top-down governmental decision system, which reduces the community's belief in the government, at the same time as the government avoids sharing their decisions with the community. These circumstances can have a significant negative impact on social characteristics in the affected areas. For example, in the case of the Cyprus conflict, because of the political situation, municipalities, as local actors that are dealing more closely with residents, do not have enough power to make the main decisions according to the preferred choice of the people. This usually happens when central government is more concerned with purely economic situations and pays no attention to social concerns.

Focusing on just one dimension, such as immediate economic relief or international policies, may bring some prosperity, but the question of the long-term impact and durability of these actions remains. For example, in many cases of geopolitical conflict zones such as North Cyprus, no real effort has been made to develop regeneration strategies; instead there has been an investment focus on rapid development of Greenfields to open up new real estate market. In such cases, the public sector does not act as a catalyst for possible regeneration programs nor particularly the management of semi-like brownfield sites, and the private sector finds attractive opportunities to invest in Greenfields, providing quicker financial returns than brownfield regeneration investments would (Shojaee Far & Atun, 2012).

## **2.7 Final Remarks; Introduction to Geopolitical Brownfields**

Having defined what is meant by the term 'brownfield' as well as exploring its complexity and multi-disciplinary aspects, this section will now move on to discuss a new proposition for semi-like brownfield sites in geopolitical conflict zones. Previous sections have analysed the origins of brownfield sites and have argued that the perspectives and approaches of an institution dealing with brownfield issues, in addition to its regional features, can significantly change the definitions found in related policies and hence the regeneration process (

Table 6). It is now necessary to explain the complex process of defining a precise meaning for semi-like brownfields that can address the multi-dimensional aspects of such areas that are caught up in an exercise of extreme power over all the spatial and metaphorical characteristics of a particular geographical location. This study tries to explore and elucidate this complexity through a deeper look into the nature and origins of the challenges associated with such disturbed properties.

**Table 6 - Table of comparison of current understanding of brownfields in different regions (Created by author)**

	Concentrated action / definition	Contamination	Cause		Vacant, abandoned, and/or derelict	Urban	Rural	Requires intervention	Currently not in use	Partially occupied	Agricultural land or forest	Ancient historic buildings or monuments	All land currently developed and used, even if contaminated	Former mines
			Normative (Deindustrialisation & suburbanisation)	Geopolitics & conflicts										
USA	✓	✓	✓	-	✓	-	-	✓	✓	-	-	×	-	✓
UK (PDL <sup>25</sup> )	✓	-	✓	-	□	✓	✓	-	✓	□	×	×	-	×
Spain	×	✓	□	-	□	✓	✓	□	□	□	□	-	□	✓
Germany	□	□	✓	-	✓	✓	-	✓	✓	-	-	-	-	□
CABERNET <sup>26</sup>	✓	□	✓	-	□	✓	-	✓	✓	□	-	×	-	✓
ALKER (Alker, Joy, Roberts, & Smith, 2000)	✓	□	✓	-	□	✓	✓	✓	✓	□	□	-	×	-
This Study	✓	□	✓	✓	□	✓	✓	✓	✓	□	×	×	×	□

✓Included in definitions or understanding (Essential)

□Maybe/possibility (Non-Essential)

×Excluded from the definition or understanding

- Not covered (the definition, guide, or related policy does not include it explicitly)

Taken together, these explorations suggest that unless semi-like brownfields are clearly defined, effective solutions cannot be found. Therefore, the first step in this process is to classify these affected areas as a new land typology, land-use, or a conceptual framework. Any possible definition must bring to the fore all the complexities associated with these lands and distinguish them from other normal degraded properties. In urban planning systems (with its specific norms and rules) associated with political and social perspectives of different actors (the question of power), acts and policies (disciplines) are posed as the solutions to any problem. Therefore, this thesis as an evaluation system for semi-like brownfields, borrowed the global understanding of brownfield sites to describe the physical and spatial characteristics of such disturbed properties. However, as demonstrated, the global understanding of brownfields is not enough to fully describe these properties.

<sup>25</sup> Previously-Developed Land (PDL)

<sup>26</sup> CABERNET (Concerted Action on Brownfield and Economic Regeneration Network)

Following the discussions of brownfield sites versus semi-like brownfields in geopolitical conflict zones, this thesis actively searched for a new terminology with which to define and explain these affected areas in conflict zones. Although the study confirms diversity among current definitions for brownfield sites, using evidence from geopolitical locations and conflicts of interest, this study suggests the term ‘geopolitical brownfield’ to refer to semi-like brownfield sites in conflict zones. The term ‘geopolitical brownfield’ embodies a multitude of concepts which postulates that all space is power, and all power produces space; geopolitical brownfields would be the space of contested powers.

However, to the author the concept of semi-like brownfield sites is challenging to define because the new suggested term ‘geopolitical brownfields’ is a rather nebulous term than a definitive accepted terminology. However, this term and its definition help to distinguish typical brownfields from the semi-like brownfields that are a consequence of aggregation, disputes, and conflicts of interest over a specific geographic location. The term Geopolitical Brownfields (GPB) is coined to address the challenge of land management when dealing with abandoned properties in geopolitical conflict zones.

General acceptance of this terminology may result in a variety of understandings and concrete institutional definitions, which may be a starting point to develop solutions and policies in geopolitical conflict zones. Other aspects of semi-like brownfields – in contrast to typical brownfields – can only be explained by understanding the exercise of power over space. Correspondingly, deeper exploration of the works of many key thinkers on space and place, such as Michel Foucault and Henry Lefebvre, together with the meaning of geopolitical conflict, is essential. Considering this, power-space-place relationships as analytical procedures for the proposition of the term ‘geopolitical brownfield’ and relevant discussions on geopolitical conflicts are described in the next chapter.

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## CHAPTER 3

### SPACE

#### 3.1 Introduction

This chapter will present selected arguments on space and place as a theoretical foundation for arguments about geopolitical brownfields. This literature review does not intend to try to cover the extensive topic of space and conflict in depth, but to provide the necessary theoretical basis and framework for the concept of a 'geopolitical brownfield'. This terminology is a suggested land typology for abandoned properties in conflict zones. They are similar to classic brownfields, but with a significant difference in the cause of abandonment/dereliction. Typical brownfields are the result of economic changes (either economic developments or crisis), while geopolitical brownfields are a product of geopolitical conflicts, in other words the exercise of extreme power over space.

This investigation into space and place was inspired by connections made between the life experience and academic studies of the author in the de-facto state of the Turkish Republic of North Cyprus<sup>27</sup> over the last decade. The motives behind this chapter are similar to those of Edward Said, Bell Hooks and Anssi Paasi, in that both their professional and life experience have affected their intellectual development. This chapter draws from a diverse set of philosophical and geographical sources and has also been extensively influenced by the works of Michel Foucault and Henry Lefebvre. The theoretical highlights are the philosophical works of Michel Foucault on the space-power relationship and the works of Henry Lefebvre on the three-way understanding of space as perceived, conceived, and lived. The space-power relationship of Foucault has been used to address conflicts of interest over space, in addition to an analytical understanding of gaps on a map defined by borders and buffer zones in conflict zones as a spatial language in a space of conflict such as Northern Cyprus. On the other hand, the social quality of space has been revealed and understood through the ideas of Lefebvre on social space and socio-spatial understandings of space. Thus, this chapter gives the background of how the author developed his ideas; particularly about social, spatial and temporal contexts of the de facto state of the Turkish Republic of North Cyprus.

This chapter is organized into four core sections starting with an exploration of the core discussions on space found in the geographical literature. According to the definition of space, the differences between space and place are identified in both definition and practice. The characteristics of space and place with respect to geographical settings are also explained, and the parameters of time and the behaviour of space are examined to highlight the importance of the knowledge-power relationship with regard to geography.

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<sup>27</sup> It is important to not confuse 'de facto state' with 'de facto regime' or 'de facto government', where a de facto regime (partially) and de facto government (fully) advocate for recognition as the legitimate government of an existing state, while a de facto state has the full characteristics of a state but, because of the incompatibility of its establishments and legal systems with international agreements and conventions, it is unable to achieve international recognition and remains internationally as an illegal state.

### 3.2 A Brief Exploration of Contemporary Discussions on Space

An understanding of space is an essential component in any geographical argument in which it is believed that the physical and social characteristics of spaces have changed over time. In other words, what we understand as the concept of geographical space “has meant different things to different people at different times and in different places” (Livingstone, 1993, p. 7). In contemporary geography, the meaning of space can be traced to conceptual spatial theories, which are shaped by the work of several contemporary critical thinkers on the theme of space and place during the last half-century, such as Michel Foucault and Henry Lefebvre. The way they theorised space has been highly influential in the contemporary understanding of geography, where it has become an important indicator for cultural, socio-economic and political characteristics and parameters.

To understand the geo-philosophy of space, by looking at and beyond the works of Deleuze and Guattari, it would be helpful to investigate the relationship between two areas of science: 1) physical science that relies on objective observations, statistics and calculations, and 2) social science that relies on subjective understandings and perceptions of a given space.

In physical science, space is often regarded as spatial understandings of a physical environment that can be mapped, and it is tangible in both definition and description. This understanding of space includes, but is not limited to, regions, zones, areas, urban clusters, urban spaces, and building blocks (Philo, 2011). Correspondingly, space is part of calculations such as those pertaining to real estate properties with their connections to policies, macro-economies, and cultural traditions in spatial forms. Therefore, in physical science, and commonly in classic geography, space is understood as physical parameters with three dimensions of x, y, and z to be analysed as absolute, empirical, objective and mappable along with the objects contained within it (Gleeson, 1996). Thus, human activities are considered to be movements, networks, and nodes on a Euclidean geometric plane. This view can be traced to the work of Kevin Lynch and Reg Golledge, which significantly influenced urban design and its related spatial studies (Philo, 2011, p. 164).

However, in contemporary social science, as opposed to physical science, space has been conceived as a subjective distance between social relations that is both produced and consumed as spatial divisions within society and communities, geopolitics, and territorial behaviours. This understanding can be traced to the works of urban sociologists and human geographers such as Manuel Castells, David Harvey and Neil Smith, and economic geographers and political scientists such as Peter Dicken, Michael Storper and Peter Taylor. However, in the early 1990s the gap in understanding of hard space (physical science) and soft space (philosophy and social science) was bridged with the works of Henri Lefebvre. He advocates for the concept of social space as the fabric or medium of relationships between subjects, actions, and environment, created and configured by human actions (Lefebvre, 1991). As a Neo-Marxist theorist, he challenged the idea of absolute space by seeing space as the interaction of three dimensions of space; perceived, conceived, and

lived. He referred to socio-cultural practice as perceived space, physical representation of space that is advocated by geographers and urban planners as conceived space, and space of everyday life that has reflection on imagination of individuals as lived space (Sheilds, 2011).

The idea of social space fundamentally is in contrasts with the absolute, quantitative terms of space that is defined by physical territory, instead of the result of territorial behaviours and social activities. In fact, this idea “was a critic of disciplinary overspecialisation in economics, geography and sociology, which Lefebvre argued 'parcelled-up' the study of space” and explain the connection between the “capitalist world of nation-states” to all scales of geopolitics (Sheilds, 2011). Scholars such as David Ley, Edward Relph and Yi-Fu Tuan advocated for the experiential properties of space where people live in a space of meanings rather than a Euclidean geometrical plane. Moreover, it is important to consider the correlation between space and time as an important factor in every situation, and in any geographical location. This idea is advocated by Swedish economic geographer Torsten Hägerstrand (1970) who famously said: “...we need to understand better what it means for a location to have not only space coordinates, but also time co-oriented” (Hägerstrand, 1970).

A comparative analysis of the meaning of space throughout history shows that the perceived understanding of the characteristics and behaviour of spaces transform over time. Space have different roles in different periods of time, which create gaps between spaces in different times and the physical and social characteristics will be altered. Thus, the dimension of time plays a main role in the formation of spaces (Foucault, 1980, pp. 63-78).

On the other hands, in question of control over produced social space, Foucault defines space as “a vital battle for control and surveillance of individuals, but it is a battle and not a question of domination” (Elden & Crampton, 2007, p. 2) which indicates the flow of social activities in defining a geographical space. According to Foucault, space has a direct relationship with power and knowledge, and it seems that it attempts to separate the freedom of people, social relationship and spatial distribution in spaces, which this relationship of space-power-knowledge featured as “border space”. Border spaces refer to spaces which are managed regularly to define the territory of powers, where each territory has a different style and language of space (Elden & Crampton, 2007, pp. 1-14). Therefore, the most obvious finding to emerge from these arguments is that space is a dynamic process by means of its definition in time, presentation, and who holds the power.

### **3.3 Principal Concepts Relating to Space and Place**

This sub-section establishes the context of principal concepts relating to space and place as a supportive theoretical framework for discussions related to challenge of defining abandoned space in conflict zones and specifically constructing the argument towards identification the origin of problem. Therefore, the



study presents 6 important concepts that define the context and background of the key term ‘geopolitical brownfields’ in this research:

1. Behaviour of Space
2. Socio-Spatial understanding of space
3. “Place” in Urbanism and Geography
4. Exploring the Framework of the Time-Space-Place Relationship
5. Understanding the Power-Knowledge Relationship
6. The Space-Power Spatial Relationship

Correspondingly, the following discussions examines the relationship between space, place, time, power, and knowledge by means of its socio-spatial and socio-economic dimensions. It goes beyond a simple literature review on the mentioned terms and illustrate importance of different key aspects of analysis criteria with regards to abandoned properties and conflict zones.

### **3.3.1 Behaviour of Space**

Spaces have been associated with different behaviours in different timeframes. To understand the meaning of the behaviour of space in contemporary literature, and the elements that characterize such behaviour, it is essential to consider how space became the main concept in the field of geography. After the Second World War, the focus of geographers shifted from absolute space and geographic coordinates to follow the pattern of human behaviour and quantitative data analysis started to be used to explain how the world works, in terms of spatial orders of space (Johnston & Sidaway, 2004). Hence, the use of census data as a scientific technique became the main approach to mapping the social pattern into the spatial characteristics of areas for analysis purposes and the production of areal classifications (Valentine, 2001).

In the 1970s, the developing understanding of the behaviour of space (positivist approach<sup>28</sup>) led to two critical perspectives of humanistic geography regarding social space, and radical approaches that were advocated by Marxism which characterized space according to social differences (Smith N. , 2008). In both perspectives, society, either as a social experience or as a social force, became a dominant factor in defining and understanding the behaviour of space (Valentine, 2001). This Marxist perspective and analytical approach (toward capitalism) became the foundation of contemporary theories and thinking on behaviour of space (Zieleniec, 2007).

The elements that influence the behaviour of space have been characterized by social theories of space associated with patterns of social and economic activities. Lefebvre (1991) referred to the behaviour of space as a mode of production and power which impacts the way of people’s life, architecture, urban spaces, etc. In this Marxist perspective on capitalism, the importance of space is related to the mode of production in that the owner of the space has the power to control the activities of production. Therefore, the space here is a “force of production”. In this regard, it could be said that the shape of the spaces and their behaviour are changed in a capitalist environment, in which cities are under the control of capitalism and powers.

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<sup>28</sup> “Positivism is a set of philosophical approaches that seeks to apply scientific principles and methods, drawn from the natural and hard sciences, to social phenomena in order to explain them” (Kitchin, 2006)

Power produces the social behaviour of space in favour of economic visions, therefore another element that affects the behaviour of space is “economic activities” (Zieleniec, 2007).

On the other hand, physical characteristics have a traditional role in defining the behaviour of spaces, such as buildings, monuments, urban spaces, public and private spaces, landscapes, etc. However, it could be argued that the characteristics of physical environments are the result of what Foucault called the conduct of conduct “conduire des conduites” of powers (Dreyfus & Rabinow, 1983) for the reproduction of space, which shows the behaviour of space according to the exercise of power through different dimensions of human activities.

### **3.3.2 Socio-Spatial Understandings of Space; Reading Lefebvre**

Henry Lefebvre, the Neo-Marxist theorist of space and place, argued that the main concept of space depends on mentality and can be defined as "mental space". He identified mental space as the consequence of theoretical practices that are managed by knowledge (Lefebvre, 1991). This new perspective on defining space is very similar to working with codes. The codes generate spaces as a message and people as a reader. Lefebvre sees these codes in different periods of architecture, urbanism, politics, etc. He suggests that the codes can be translated as a “science of space” which shows that society is under the control of politics and knowledge, meaning that politics produces spaces through knowledge (Lefebvre, 1991).

In an exploration of the works of Marx and Engels, it was determined that any production is a consequence of three main subjects; 1) nature 2) function (labour) and 3) body of function such as knowledge and technology. Lefebvre argued that spaces can be analysed according to their physical, mental and social dimensions. Physical space is defined as a singular space (place as a natural concept), mental space is determined as a general space (which is related to mathematics and logic), and social space is defined as a particular space (which is related to social practices).

#### **Social Space**

Additionally, Lefebvre introduced the concept of social spaces, which are consequences of mentality and thoughts as a social product (Lefebvre, 1991). Thus, two important appearances of social space are identified as 1) the social relationships of people toward organizing the family or "the social relations of reproduction" that represent symbols of sexuality, age, etc. and 2) the emergence of social function or "the social production" as a power, which has been represented in buildings, art, etc. This social production includes three concepts: spatial practice, representation of space, and representational space, which will now be described as perceived, conceived, lived space.

By seeing space as the interaction of these three dimensions (perceived, conceived, and lived) Lefebvre challenged the idea of absolute space. He referred to socio-cultural practice as ‘perceived space’, physical representation of space that is advocated by geographers and urban planners as ‘conceived space’, and space

of everyday life that has reflection on imagination of individuals as 'lived space' (Sheilds, 2011). These three dimensions is explained in a simple way by Klaus Ronneberger (2008) as:

“To define socio-spatial processes further, Lefebvre developed a differentiated schema that distinguishes three dimensions of the production of space. First, *perceived space* refers to the collective production of urban reality, the rhythms of work, residential, and leisure activities through which society develops and reproduces its spatiality. *Conceived space* is formed through knowledge, signs, and codes. Conceived space refers to “representations of space” by planners, architects, and other specialists who divide space into separate elements that can be recombined at will. The discourse of these specialists is oriented toward valorizing, quantifying, and administering space, thereby supporting and legitimating the modes of operation of state and capital. Finally, Lefebvre talks about *lived* and *endured* space: “spaces of representation.” Users of space experience lived space every day, through the mediation of images and symbols. Lived space offers possibilities of resistance.” (Ronneberger, 2008, p. 137)

Spatial practice is related to the concept of perceived space that Lefebvre understood as a paradoxical association between daily routine and urban realities. Spatial characteristics of urban realities empirically provide a network and at the same time disconnection between place of work, private life, and entertainment (Lefebvre, 1991). It could be said that spatial practice is a materialization of social activities and a network of interactions, communications, and the production process (Schmid, 2008). It is what a subject that can perceive from any given space, with the five senses - seeing, touching, hearing, tasting, and smelling - in addition to analytical senses which are related to the physiological aspect of the subject (Lefebvre, 1991; Schmid, 2008).

The second concept of space identified by Lefebvre, 'representation of space', or 'conceived space', can be defined as mental spaces that are organized according to knowledge and science. In other words, it can be understood as a "conceptualized space" that is not limited by the power of ideology and knowledge (Lefebvre, 1991). It is a depiction of social and political practices. It depends on logic and the relation of objects with people and plays a principal role in people's lives. To briefly describe the representation of space, Lefebvre (1991) said it is a "fluid", "qualitative", "alive" and "dynamic" space. As mentioned above, the representation of space is related to ideology and practices that determine the relationship between the representation of space and the production of space (Lefebvre, 1991). Thus, power and knowledge define what is lived or what is perceived and conceived in space, in other words, it can be defined as a "domination of space" (Prigge, 2008).

Representational spaces (lived spaces), the third concept, are a physical space that can be defined as a "space of inhabitants" (Lefebvre, 1991). It is a symbol of space, which does not refer to space by itself, but to the dimension of production of spaces that are linked by symbols of spaces. The symbol of space can be nature, buildings, monuments, landscapes, facades, etc. Therefore, it refers to all symbols or materials that exist or are constructed in the space with a direct relationship to power and knowledge as dimensions of production of space (Schmid, 2008). In other words, representational space can be defined as a physical and symbolic space (Prigge, 2008). According to the conceptual three-way perspective of space defined by Lefebvre, representational space is could be understood as something produced by inhabitants, where the

spaces are used in spatial practice and representations. Thus, it could be said that the space by itself does not hold any meaning but plays a key role in the production of space (Milgrom, 2008, p. 269). Overall, lived space can be defined as the consequence of the combination of ideology and physical interaction (nature of space) and the result of knowledge in lived experiences where culture also intervenes (Lefebvre, 1991).

### **Physical Space**

Physical spaces are introduced as the world, territory, or places that are considered properties. Lefebvre defined the three dimensions of physical spaces as energy, space, and time, which are linked to each other and cannot be ignored. When an energy emerged, it must be expanded through the space and shows its direct relationship with physical spaces that could be understood by its effect on the behaviour of the space (Lefebvre, 1991). Therefore, it is crucial to consider the ideological and political roles of space. Generally, the ideology has been traced to knowledge according to a predetermined science, which is an empirical experiment and its reflection on field practice named 'urban planning'. However, urban planning acts as a knowledge of space, but politics has a significant influence on the ideology of space. It could be said, then, that space is an ideological and political metaphor (Brenner & Elden, 2009).

According to the relation of time and space, the conception, perception and behaviour of lived spaces are changed in different time periods, but the production of space is still stable. Therefore, it is essential to analyse the role of architects and designers in the production of space. According to Peter Davey, "architecture must have social effects in at least three areas: direction, production and image" (Davey, 1981). In light of this, architects' and designers' perspectives are comparable with the idea of representation of space. Hence, it is not only a representation of urban form, but also the behaviour of users by spatial practices in spaces (Milgrom, 2008).

Davey (1981) also briefly referred to the process of producing buildings that is influenced by social formation, which is another point of view on the production of space (Milgrom, 2008). The architect plays a role in the image of the city and space; however, politics and lifestyles influence the imagination of architect. For instance, post-modernist architects changed the image of modernism according to the interest of their clients (Milgrom, 2008).

### **3.3.3 "Place" in Urbanism and Geography**

Another important term being reviewed throughout this study is 'place'. This term has been used many times with, or sometimes mistakenly as a synonym of, 'space'. Space and place are generally defined similarly as 'region', 'area', and 'landscape'; however, each of these terms holds a different meaning from each geographical perspective. The term 'region' is the most popular synonym to place and space among geographers in general. However, it could be said that political geographers favour 'territory', in contrast to economic geographers who prefer to use 'location', while cultural geographers see space and place as a

‘landscape’, and social geographers understand them as an ‘area’ (Taylor, 1999). During the 1960s and 1970s, the meaning of space was understood by many geographers through a quantitative analysis of space and place, which was called the quantitative revolution in geography. The quantification methods consider measurable facts such as direction, distance, and connections that are interconnected (Hubbard & Kitchin, 2011). In this way, objects on the surface (things on the earth) could be explained, mapped, and modelled (Wilson, 2000).

It could be said, then, that the term ‘place’ is a materialistic visualization of space. This visualization would represent locations as different units connected by paths or meanings according to how people perceive and remember the physical characteristics of space (Tuan, 2001). Many scholars such as David Lowenthal, Anne Buttimer, David Ley, Edward Relph, and Yi-Fu Tuan argued that place is an individual element with emotional dimensions that can define its scale. Therefore, each space would hold a different meaning for different people. Respectively, Lefebvre (1991) characterized the meaning of place as a pattern of social activities and the mode of production by considering aspects of urban sociology. His three-way understanding of space as ‘perceived, conceived, and lived’ influenced contemporary theoretical understandings of the term ‘place’. Correspondingly, he suggested the definition of place as a ‘form of space’. Thus, from geographical viewpoints, place represents lived space and can be seen according to its identity (Hubbard & Kitchin, 2011).

Indeed, place would be the intersection of the social, political, and economic aspects of space, in which the settings of powers – both real or imaginative – connect “places and social relations within and between them” (Hubbard, 2002, p. 17) to produce a dependency of place among spatial scales of space (Massey, 1991). Therefore, the definition of place and space depend on the perception of those who encounter it. As a result, this so called ‘place-space tension’ as the character of political geography would be a two-way transformation, which represents the conduct of power on state (Taylor, 1999). In this sense, place is more related to state, and state defines the boundaries for space while imposing spaces on places. Place is, indeed, very relative to how nations define ‘state’ and relate their living place to a defined space called ‘territory’.

The philosophical perspectives of critical thinkers on space and place such as Foucault, Leach, Dovey, Bourdieu etc. are important in further explorations. Foucault described place as the space of practice of power in his discussion of ‘governmentality’ and state. Leach and Dovey have discussed architectural behaviour for classifying places according to social divisions, and Bourdieu characterised places as having distinctive identities according to cultural classifications in relation to space, identity, and social geography (Bridge, 2011).

### **The idea of Non-Place**

The modernist or so-called supermodernism understanding of place is challenged by the non-place argument of Marc Auge (1995). He categorized places into two groups: places with a historical/relational

identity, and places without either of them, which he called ‘non-place’. He identified that the general understanding of place is connected to its background, history and identity; however, modern places such as airports, shopping malls, train stations, etc., as well as wireless networks, are all identified in his arguments as spaces of communication that have no history or social identity. From this point of view, places and non-places would be two components that complement each other, where a place is characterized with memory and social identity, and a non-place is characterized with only quantitative aspects (Auge, 1995).

Furthermore, with recent technological developments and the rapid communication of today, similar to challenging non-place idea of Auge, the definition of place is being challenged as well. Manuel Castells (1996, 1997, 1998) suggests calling this era an ‘information age’. Changes in society’s behaviour and the global economy influence cultures, thus, the classic understanding related to the ‘conduct of conduct’ of powers are challenged, and the main components of place would be defined as time, space, and technology (Dijk, 1999). On the other hands, the argument of Auge (1995) referred to the individual characteristics of a non-place as the characteristics of today’s information age (Crang, 2002). However, there are number of critiques on these opinions such as Harvie (1996) that harshly criticised the definition of non-place which is concerned with places without historical/relational identity. “The definition of place vis-à-vis non-place begs the questions: concerned with whose history? whose identity? and relational to whom?” (Harvie, 1996, pp. 144-145).

### **3.3.4 Exploring the Framework of the Time-Space-Place Relationship**

The quantitative analysis and understanding of locations, populations, communities, etc., provides statistical data on how mass population can deal with locations. However, as Hägerstrand (1970) pointed out a few decades ago, the dimensions of spatial relations are usually analysed in a very isolated manner. This is the moment to introduce the important factor of ‘time’ in spatial analysis, because different behaviours and results can be achieved from the same analysis, at the same location, with the same community, in different time periods. This is why many researchers consider it to be the fourth dimension, to be factored into planning approaches, and it meaningfully demonstrates the interaction between human behaviour and time. Many contemporary geographers and regional scientists consider time and space to be an integrated attribute for spatial analysis regarding social, economics, and political aspects (Janelle, 2001). The idea of time-space integration goes beyond the Central Place Theory of German geographer, Walter Christaller, a theory which statistically explains the number, size and location of human activities in an urban system, yet it would be difficult to incorporate the individual or community problems associated with a certain time and place into this model (Hägerstrand, 1970).

To understand the framework of the time-space-place relationship in geography, it is essential to review the constraints of such a framework. In the early 1970s, Hägerstrand introduced the concept of ‘time-geography’ and determined three limitations to the behaviours attached to the physical characteristics of any given location, which are: 1) capabilities, 2) couplings, and 3) authority. ‘Capability limits’ represent

the limitations that arise from biological limitations or mediums that an individual or society can control. This constraint explains a series of major routing events and some minor, yet significant and critical, events during the life cycle of an individual, his/her inability to “pass a certain point in time-space more than once”, but he/she must always be in a place at a certain time. ‘Coupling limitations’ define the location, time, and duration of an interaction by one individual at a certain time and location with another individual, or a medium of action; this grouping of time, location, and duration have been referred by Hägerstrand as a ‘bundle’:

“...Bundles are formed according to various principles. Many follow predetermined timetables, often the same, weekday after weekday... ..The bundles tend to be closely interdependent because individuals, materials, and bits of information have to move from one to the other in an orderly way” (Hägerstrand, 1970, p. 153)

Authority is the third limitation, which explains the ‘domain’ and ‘control’ associated with spatial dimensions. The aggregation of these limitations, which is a reality, appears in many direct and indirect ways. For example, lower-income portfolios provide less access to different domains, mediums and bundles than can be seen in high-income populations, as the result of longer distance between work and living space, duration and cost of transportation, and the time and type of social, cultural and family activities. This aggregation is explained well by Hägerstrand:

“A society is not made up of a group of people which decides in common what to do a week ahead of time. It consists primarily of highly institutionalized power and activity systems. A majority of domains and bundles within them have a location in space, a duration over time, and a composition according to consciously or habitually pre-established programs of organization which are made up with no particular regard to the individuals who happen to enter these systems and play the needed roles for portions of their life-paths” (Hägerstrand, 1970, p. 155)

These attempts to integrate time into geography began after the 1950s and increased in the 1970s. The integration of practical issues of social science into spatial analysis, moved geography from just a descriptive science to a more predictive one (Janelle, 2001). The social reproduction of space shaped a new definition for time-space in geography. Harvey (1990) argues the importance of time-space for describing the place-based activities of individuals and societies, in which time and space are defined by the purpose of the social reproduction needs of each individual of a particular community or society. According to Harvey (1990), spatial function and the understanding of space and place are in a similar position to ‘contested terrain’ with consideration of both theoretical and practical aspects. Thus, the factor of time plays an important role in social processes such as conflicts and competitions. This is how the relationship of time-space-place is related to political-economic practice, in which both factors of economics and politics are closely tied to conflict and competition. It is widely argued that the insertion and conception of the time-space-place relationship were the conceptual foundation of capitalism and socio-economic systems, in which labour force, workplace, resting time, working time, transportation time and distance became part of the quantitative calculation of production cost and turnover times. This is what Harvey highlighted as the “emergence of a new geography of capitalist development”. The framework of this

relationship is constructed by social attributes of human behaviours, in which spaces (and places) are defined in response to time.

Characteristics of space and time can act as “social reproduction”, which is under the control of power (Harvey, 1990). This type of reproduction emphasizes the roles of boundaries, physical identities, legal frameworks, economic systems, and political policies/actions, which are emerging as the necessary components of political science and expressions of power (Hägerstrand, 1970). The issues related to expression of power can be reflected as social conflict within different religious groups, class, genders, and political groups, and it has different representations according to time and space. In this regard, it could be said that the measurability of time and space in quantitative methods influences how elements of power can be effective in the development of technology, transportation, types of communication, and the definition of the behaviour of space and place.

To have a better understanding of the control of power in the social reproduction of space at different times, one must be familiar with the arguments of Michel Foucault on the power and knowledge relationship. There are many spaces that are not in existence today, but that have existed at different times with specific characteristics (Foucault, 1972-1977). In his famous arguments on the “archaeology of knowledge”, the time-space-place relationship is a clear core discussion, in which the discontinuity of space and place are related to different time spans (Gordon, 1980). It could be suggested, then, that time is a strategic factor, and it moves, it is dynamic, it has one direction, it is continuing and ‘live’. Thus, as Foucault (1977) argued “strategies deployed through implantations, distributions, demarcations, control of territories and organisations of domains”, would position time on the same path in relation to space and place, in fact, defining the ‘geopolitics’ of place (Foucault, 1977). Therefore, constant changes in the time-space-place relationship regarding social reproduction are always associated with political decisions (Harvey, 1990).

### **3.3.5 Understanding the Power-Knowledge Relationship**

So far, the explanations in this chapter have enhanced our understanding of space and place, however it is still essential to discuss the relationship of power and knowledge and its role in defining a space, in addition to the foundation of the time-space-place framework. Michel Foucault, the pioneer scholar in this field, noted in many of his writings that power is the concern of geography and knowledge is the concern of control and domination. To understand this relationship, it is important to explore its geographical dimension. Since the 1960s, geographers have paid more attention to the roles of power and knowledge in planning decisions, when political strategies became the global way to utilize geographical knowledge to have more control over regions. The regions could be urban space or a territory with resources to be controlled. It has been famously noted by Foucault that power and knowledge control the behaviour of people in spaces by defining the social attributes of space (Elden & Crampton, 2007).

The relationship between geographical knowledge and politics can be clearly seen as the foundation of globalization approaches and processes. Considering this relationship, it is also important to see the need

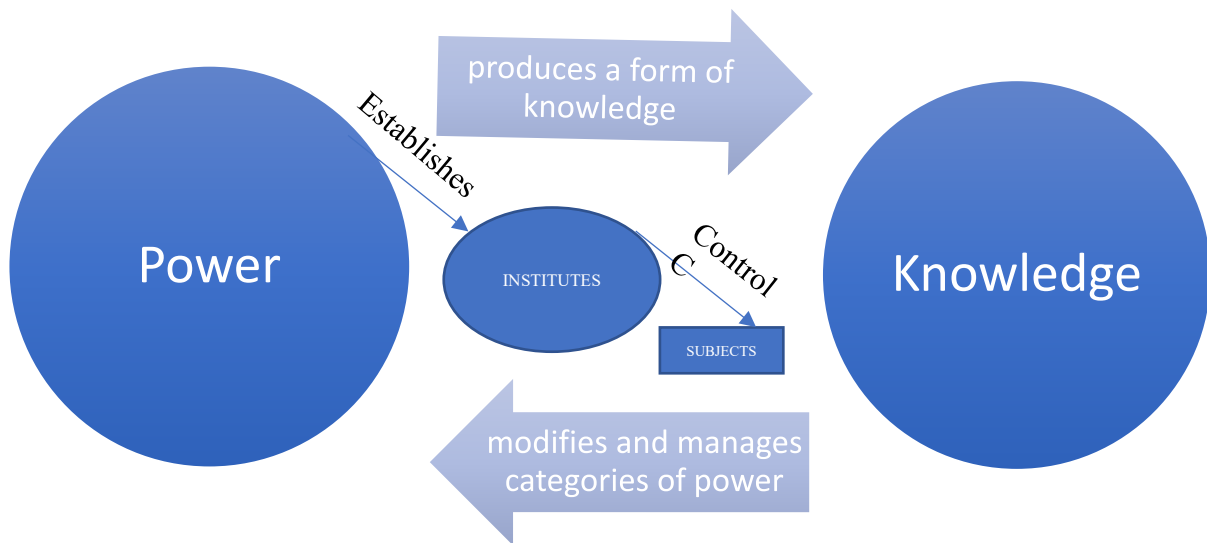


of geographers to expand their knowledge through the aggregation of data and through series of analyses of the political atmosphere and requirements of the state. The process of production of geographical knowledge can therefore be seen as a tool to manage different aspects of space such as economic activities, territorial controls, social services, and social activities. In consequence, the concept of geopolitics as an expression of power over space, or indeed different types of controls over territory, has become a fundamental fact (Harvey, 2001).

Foucault (1973) emphasized that social practices would produce areas of knowledge which would “give rise to totally new forms of subjects and subjects of knowledge”. He described knowledge, or the “truth discourse” such as religion, cultural traditions, science, etc., is different across different societies. In his arguments, he stressed that the factor of time would be also an indicator of such differences. Accordingly, it could be said that truth or knowledge is produced by power and it exerts a social power through institutes which are establishments of power to control subjects. He noted that the backbone of power as an essential factor for any kind of ‘hyper-profit’ or surplus value, is the production of knowledge, and this has become a norm for individuals through institutions, resulting in the appearance of “so-called human sciences, and man as an object of science” (Foucault, 1973).

It is almost certain that the more extreme the power, the more monopolized the knowledge. To explain this fact, John Gaventa and Andrea Cornwall (2001) provided a four-dimensional analysis on the power/knowledge relationship by considering both the works of Steven Lukes (1974) and Michel Foucault (1977-1979). In this analysis, the first three dimensions are based on Lukes’ perspective, in which the first dimension identified power as a “product of conflicts” to use knowledge to control ideas. Knowledge produces competition and challenge between different skills that results in the reflection of power in policy. Thus, knowledge and science give power to some and not to the others. It is the way that power can control space, people, and territories. The second dimension refers to the importance of expertise, since those who contribute to the development of knowledge have more power, it could be said that expertise can produce power. The result of this situation is the appearance of the powerful and powerless, and knowledge is under the control of power to influence the consciousness of society. The third dimension of power is the guidance of knowledge toward popular consciousness and its subsequent transfer to social ideology. The fourth dimension of power that is influenced by Foucault’s vision of power-knowledge is “productive and relational”. This dimension contrasts with Lukes, who sees power as a source of brutality, by which some people gain and exercise power over others (Gaventa & Cornwall, 2001). This fourth-dimension advocates for a range of forces that constitute social relationships. When Foucault (1977) argues that knowledge is power, he emphasizes the bi-directional relationship and the impacts of power and knowledge on each other (Figure 19). Thus, knowledge produces awareness of the importance of any issue, and then, through knowledge, power can control and expand boundaries within space of the given issue. This fact shows the main relationship of power and knowledge; “There is no power relation without the correlative constitution

of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations” (Foucault, 1977).



**Figure 19 – Power/Knowledge Relationship Based on Foucauldian approach (adopted from Carraro, 2015)**

Based on a Foucauldian power-knowledge approach, there are institutions that form a community of experts who share the same ideas and ideologies, in which “centres of power” conceptually manage space through the control of knowledge (Peet, 2015). Peet (2015) described the centre of power with three concepts; economics, ideology, and politics. Economics is defined as the power of control over regional economies and investments; ideologies as the systematic justification of concepts, ideas and perspectives within/throughout research centres and elite societies; finally, politics is distinguished as dealing with ideas in practice and their implementation in policies and legislations. Gordon (2001) gave a good explanation for the power/knowledge relationship that is explained by Foucault (Gordon, 2001, pp. 15-16):

“I have been trying to make visible the constant articulation I think there is of power on knowledge and of knowledge on power. We should not be content to say that power has a need for a certain discovery, a certain form of knowledge, but we should add that the exercise of power creates and causes to emerge new objects of knowledge and accumulates new bodies of information... the exercise of power perpetually creates knowledge and, conversely, knowledge constantly induces effects of power.” (Foucault, 1975)

### 3.3.6 The Space-Power Spatial Relationship

The two main subjects of "genealogy of state", with its political perspective, and "genealogy of the subject", with the ethical view that was discussed in "Discipline and Punish" by Foucault (1975) are key to understanding the geo-philosophy of the space-power relationship. In this discussion he introduced the notion of "govern-mentality" which indicates that the analysis of power is not possible without a full understanding and consideration of politics. This is what Foucault referred to as "conduct of conduct" in

which the government manages and controls all the behaviour of society through interactions with religious, medical, philosophical and many other aspects of social identities to control and guide the way of living (Lemke, 2002). Certainly, one could say that this concept contrasts with common understandings of the government's role that is supposed to consider the rights of people. Foucault believed the real chief concern of governments was to preserve territories and to manage society's behaviour in a specific space according to their own interests (Elden & Crampton, 2007). Thus, based on this understanding, it can be said that spaces are created due to an expansion of "govern-mentality" and those spaces are controlled and managed by power(s) to organize the behaviour and lifestyles of society (Philo, 2011). The government (power) manages spaces according to two main features: thought (mentality) and practices. Therefore, spaces are observed as a place of practices for governors. Spatial features of practices and activities across spaces can be understood as the main exploration of geography (Huxley, 2007). Correspondingly, the painful reality would be that even if people live freely in space of their own choice, their behaviour and mindset are systematised according to the power of capitalism in a particular geographical space (Philo, 2011).

Thus, this argument clearly determines that spaces are 'managed regularity' and by the force of power, knowledge can be managed, wherein its practice would be called geography. The concept of 'physical geography' can be traced through history, where space has a principle role in shaping the behaviour of individuals and social relationships. Hence, the natural characteristics of spaces are ignored, and they become the main focus of politics as domain, soil and territory (Foucault, 1980; Huxley, 2007). The concept of territory is fundamental in various branches of geography, and it gains more importance when combined with strategic outlooks such as political and military. This territorial view of space defines borders and boundaries as geographical spaces. It can be understood that "geographical space" is a bordered space and its physical and social characteristics are managed by powers through 'govern-mentality' (Foucault, 1980).

Foucault (Foucault, 1977), in his interview with the editorial board of the journal *Hérodote* strongly connected the concept of space with time, so that matters or objects take place in space as processes of power. Furthermore, Foucault (1977) explained that the exercise of power goes beyond a simple normative understanding of power. He noted that power is a mechanism of the interaction and intersection of domination and circuits of exploitation, which also provide a supportive framework for each other; however, they do not coincide (Gordon, 1980). Finally, to summarise this section, it would be essential to highlight the five elements of power within the works of Foucault:

“(1) Power is not a thing but a relation, (2) Power is not simply repressive but it is productive, (3) Power is not simply a property of the State. Power is not something that is exclusively localized in government and the State (which is not a universal essence). Rather, power is exercised throughout the social body. (4) Power operates at the most micro levels of social relations. Power is omnipresent at every level of the social body. (5) The exercise of power is strategic and war-like” (O’Farrell, 2005)

### 3.4 Impacts of politics on Space; Geopolitics

As discussed in previous sections, geography has a relationship with power in association with knowledge. In other words, geography is a target of power and power is not capable without knowledge to preserve or develop the concept of state. Geography is not a product of space but a product of power. Indeed, it could be said that state preserves the power associated with a sense of ownership as the main domain of global politics (Tuathail G. Ó., 2005). In light of this, the role of states in defining political maps and boundaries has become clear.

Foucault (1977) highlighted seven components of geographical metaphors: (1) territory, (2) field, (3) displacement, (4) domain, (5) terrain, (6) region, and (7) horizon. The concept of ‘territory’ as the most important of the geographical metaphors is directly associated with legal issues and politics, both of which demonstrate control of a certain geographical location by a certain kind of power (Foucault, 1977). In many ways, territory and territorial behaviours are links with domains, in which the component of ‘domain’ deals more with legal and political notions. ‘Displacement’ also has a crucial role in defining geography and is directly connected with concepts of territory and power, of which population transfer, militarized zones, occupied areas etc. are the consequences of this component. The meaning of ‘terrain’ in geographical metaphors is directly connected to geological and historical concepts with a link also to patriotism. In addition, terrain can refer to the materialization of territory and domains, in which land, property, and ownership practices can evolve. ‘Region’ explains domains and territories in terms of the concepts associated with the fiscal, administration, military, and govern-mentality spheres. The last component, ‘horizon’, refers to the future perspectives of a territory, domain, or region as a strategic concept.

Although the term ‘geography’ was referred to by Foucault as ‘territory’, ‘field’, ‘domain’, and ‘region’, his notions of politics and powers are still strong influences in understanding the term ‘geography’. Power and knowledge play the main roles, as knowledge acts as a form of power to enforce the act of domination in relation to the core concept of geography (field, region, and territory) and power plays a strategic role in controlling a field, region or territory (Foucault, 1980). In view of all these points, Foucault (1982) considered geography as the condition linking a series of factors or notions of space and power that he tried to relate; “Space is fundamental in any form of communal life; space is fundamental in any exercise of power” (Rabinow, 1984).

This study considers space as a product of power relating to social, political, economic, and ethnical interests. Therefore, the aggregation and contest of power, in addition to conflicts of interest over specific geographical locations, would produce hot-spots on geographical maps. In other words, these parameters turn a geographical location to a geo-political location, which represents a different vision from the simple definition of geopolitics as political geography. This study understands geopolitics to go beyond the relationship between power and space in which, according to previous discussions of the Foucauldian approach, a geopolitical location would be the place of aggregation of contested power and conflict of

interests. The influence of Foucault's thoughts on power and space can be found among the works of contemporary scholars such as Saul Bernard Cohen (2003), Serge Cordellier (2004), Yves Lacoste (2006), Colin Flint (2006), Gearóid Ó Tuathail (2005) and many others who share the same mindset. For example, Cohen (2003), an American geographer, argues that since geopolitical hot-spots and geopolitics are an integration of geography and international policies, it is important not to define geopolitics as a school of thought, but as a method of analysis of geographical settings and political powers to determine how powers define geography or vice versa. Furthermore, Tuathail et al. (1998) stressed that it is extremely difficult to provide an exact definition for the term 'geopolitics'; it can be defined and understood through its history and the wide area of its practice, which demonstrate the non-existence of a monolithic definition of the term (Tuathail, Dalby, & Routledge, 1998). Cohen (2003) explained geopolitics as an analytical approach to assess the interaction between geographical settings and the political process as a dynamic mechanism. He argues that, since policies and locations are influencing each other, geopolitics is all about the consequence of these interactions (Cohen, 2003).

One could also say that the term 'geopolitics' is an international policy of governments in accordance with the physical environment and behaviour of foreign policy (Tuathail G. Ó., 1992). It is the interaction of the form of natural geography such as river, mountain, etc. with politics and policy such as state and nation (Tuathail G. Ó., 2005). In other words, the key concepts of political geography are 'state' and 'territory'. On one hand, the elements of politics are "power and policy" and on the other hand, the features of geography are "space, place, and territory", so interactions between these elements lead to the development of an ideology of geopolitics. Here it is necessary to describe the term 'state' and describe its relationship with geopolitics. There are different meanings of the word 'state', but the general understanding is as an "organization that seeks to govern people, resources, and land within defined boundaries" (Jones, Jones, & Woods, 2004). According to this definition, a state, with its territorial concept of physical environment in addition to its ideological framework to govern people, can define its territory for the exercise of power. Consequently, the main application of geopolitics would be the advancement of a state's power in control of their territory (Jones, Jones, & Woods, 2004).

Geopolitics, on the other hand, is also a consequence of the 'social reproduction of power' and 'political economy', which is known as 'critical geopolitics'. This term is a phenomenon of international relationships of geopolitical notions according to social, culture, and political practices which emerged during "cold war geopolitics". Accordingly, one must be familiar with the following arguments noted by Dalby & Tuathail to have a better understanding of critical geopolitics:

Firstly, geopolitics is a "cultural phenomenon" more than its traditional definition that was "wise men of state crafts" in which and it has determined as a "geopolitical imagination". From this point of view, the main understanding of geopolitics is a spatial practice of the state toward expansion of the territory, involving the production of both "space-nation" and "time-nation" as the main metaphors of geopolitical

ideas. It enables nations to show the boundaries of their states to others, which can be defined as “geopolitical representations of self and others” (Tuathail & Dalby, 1998).

The second notion of critical geopolitics is the definition of boundaries separating the inside and outside of territories. It is about the security of border and their preservation from inside the state. It can be defined as a “specialization of boundaries and dangers” (Tuathail & Dalby, 1998). Correspondingly, Dalby & Tuathail (1998) divided critical geopolitics into three categories:

- 1) Popular geopolitics,
- 2) Practical geopolitics,
- 3) Formal geopolitics

**Popular Geopolitics:** Geopolitics is various representational practices which are spread through society, and this notion of geopolitics refers to its pluralism in culture and society. ‘Popular geopolitics’ focuses on relationship between popular culture and geopolitics. The concept of popular culture affects the behaviour of both internal and external policy. It is a cultural policy of politics to preserve the state and develop the nation’s branding through the media, movies, games, etc. (Weldes & Rowley, 2015). Popular geopolitics can be described as a geographical sense of identity and differences, which appears in the media of popular cultures such as visual media and magazines.

**Practical Geopolitics:** Practical geopolitics is focused on people related to foreign policy who recognize themselves as practitioners of statecraft. Practical geopolitics can be described as the consequence of the decisions of political leaders regarding foreign policy (Tuathail G. Ó., 2005, p. 68). It could, therefore, be understood that this type of geopolitics is the connecting point between significant representation and order of space, in terms of spatial practices (Agnew & Crobridge, 1995).

**Formal Geopolitics:** The last category of critical geopolitics refers to its relationship with society, technology and territory. The behaviour of knowledge as power controls the territories and society in order to develop the state. Expansion of research institutes and employed academic researchers lead to the empowerment of the state, increasing control over its territories through intellectual security measures. Formal geopolitics as an attribute of critical geopolitics is more connected with thinkers as practitioners of space (Tuathail G. Ó., 2005). Intellectual spatial theories and strategies developed through formal geopolitics justify and rationalize the acts of practical geopolitics (Dodds & Atkinson, 2000).

### 3.5 Historical Review of Geopolitical Conflicts

To have a historical overview of the evolution of geopolitics and its related conflicts of interest, one must be familiar with works of Tuathail, Dalby, and Routledge (1998) published as ‘The Geopolitics Reader’.

In this valuable collection, geopolitical discourses (conflicts) are categorized into four classes: ‘imperialist geopolitics’, ‘cold war geopolitics’, ‘new world order geopolitics’, and ‘environmental geopolitics’ (Tuathail, Dalby, & Routledge, 1998). Therefore, to have a better understanding of the meaning and functionality of geopolitics in different time periods, each of these concepts will now be briefly explained.

### **3.5.1 Imperialist Geopolitics**

Imperialist geopolitics developed in an era when conflicts and wars between powers and countries had reached the highest levels of their times. Each actor attempted to expand their territory and altered the border of the others in terms of ‘world political map’. The British Empire, that developed its territories by colonization, was one of the main dominant powers in this period. Although the British Empire was the main imperial power of the last few centuries, it is difficult to ignore the power of Russia, France, Italy, the United States of America, Germany, and Japan, as they also played a significant role in imperialist geopolitics. The conflict between the British Empire and Germany that caused two world wars was one of the principal conflicts in this geopolitical period. An exploration of the works of two geographers, Halford Mackinder, who was born in England, and Karl Haushofer, who was born in Germany, will provide a better understanding of this period.

Halford Mackinder taught in Oxford University as a geographer. He believed that geography is a power in contradiction of a power and each person must be taught in terms of geography and imperial manner. He noted the significance of geopolitics as he highlighted a worldwide geopolitical perspective as an international politics to dominate the whole world. “The divine eyes gaze upon the world; the implicit claim that only objective experts, can perceive the real, and the desire to find underlying laws to explain all the history” (Tuathail G. Ó., 1998, p. 16).

In his writings, he emphasized the importance of “mobility of power” in the growth of geopolitics and power. Accordingly, he divided the history of geopolitics into three epochs: The “Pre-Columbian epoch” as a period of horse and camel, the “Columbian epoch” as a period of sea transportation and the “post-Columbian epoch” as a period of railways. His research on geopolitical theories influenced decision makers of the British Empire (Tuathail G. Ó., 1998, p. 17).

Another geopolitical theorist of this period was Karl Haushofer, who became interested in geopolitics after the First World War, in which he served as military commander. In his writings, he has noted that if German leaders had understood geopolitics during the First World War, Germany would have won. He held the same belief as Mackinder that geopolitics is a necessity in the life of each person. His ideas and theories helped Adolf Hitler get into power. Although, Karl Haushofer had an influence on Hitler, they had key differences such as their opinions on the meaning of space. Karl Haushofer’s idea was oriented to the domination and control of space, whereas Hitler focused on pure race power more than space, which apparently led to his failure in the era of imperialist geopolitics. During this period, geopolitics as a crucial

knowledge became the main strategic asset for preserving power in international policy (Tuathail G. Ó., 1998).

### **3.5.2 Cold War Geopolitics**

After the Second World War, world politics was changed in four ways. Firstly, Germany and Japan lost their political influence and military power. Secondly, international policy became stronger than it had been pre-World War II. Thirdly, the weakness of European countries and elimination of German capitalism enhanced the power advancement of the United States (which had endured less damage from World War II) and the United Kingdom as new capitalist countries in the Cold War era. Finally, the defeat of the colonial system in this period that had been the main identity of Germany in World War II (Zhdanov, 1947).

During the Cold War, the main conflict was between the United States and the Soviet Union. The Soviet Union controlled Eastern Europe after World War II, against the capitalist Western bloc. The geopolitical behaviour of the United States influenced the division of Europe. According to Andrei Zhdanov:

“The world was divided into two camps, “an imperialist and antidemocratic camp” led by the United States with the British Empire as its leading ally versus an “anti-imperialist and democratic camp” led by the Soviet Union and the new democracies in eastern Europe” (Tuathail G. Ó., 1998, p. 50).

The consequence of Cold War geopolitics was the division of the global map into three parts: “First World” describing the capitalist countries, “Second World” describing socialist countries and “Third world” as a term for developing countries. History has shown us that during the Cold War era, the geopolitics of the United States were more successful than those of the Soviet Union.

Throughout this period, the geopolitics of the United States had three main themes: first, influence and control over culture and people’s lives through local policies. This time was a perfect economic opportunity for capitalist countries. The second theme, safety, was based on the partnership of the United States with Western European countries and Japan as an important measure of security. It was an opportunity for Americans to have an economic vision in these countries which had been destroyed during World War II. At this time, they perceived themselves to be, and established themselves as, the “empire of the world”. Thirdly, to induce fear of the United States in third world countries; they were seen as a threat and they attempted to control those countries by changing their regimes. It was a time of capitalist economics under the concept of democracy. The economic plan of this period concentrated on control of third world countries by the United States (Routledge, 1998).

Meanwhile, Soviet Union geopolitics attempted to handle their power as another side of power and they promoted their communist ideology in the countries they dominated (Tuathail G. Ó., 1998). According to Mary Kaldor (1990), Cold War geopolitics was the challenge of capitalist versus socialist (Kaldor, 1990). Thus, it could be said that Cold War geopolitics focused more on international political policy, and the global economy became an important issue during this time (Tuathail G. Ó., 1998).



### 3.5.3 New World Order Geopolitics

Cold War geopolitics was ended by the collapse of the Soviet Union and the fall of the Berlin wall. This period is called “new world order geopolitics” (Fukuyama, 1989).

“With the revolutions of 1989, the demise of the Soviet Union and the Gulf War of 1990–1991, the geopolitical discourse of the US in particular, and the West in general, has shifted from that of the Cold War to that of the new world order” (Routledge, 1998, p. 251).

This was the period of the end of traditional policies in what Fukuyama (1989) called ‘the end of history’ and expansion of western liberalism toward a global concept. To understand the ideas of this time and perceive what is meant by ‘end of history’, this study needs to look at the basics through exploration of the works of Hegel. He was the first theorist who investigated a modern social science. “Hegel believed that history culminated in an absolute moment, a moment in which a final, rational form of society and state became victorious” (Fukuyama, 1989, p. 4).

He referred to a level of consciousness of people and an ideology that is not limited to politics; rather it was related to culture and religion. In his works, he distinguished the real world (material world) from ideals which could not impact on the material world anymore (especially philosophical ideologies). Hegel concentrated on the level of consciousness and material world versus ideology, and he noted that the end of history means when the level of consciousness of people improves in a material world, the ideal and ideologies could not be developed anymore (Fukuyama, 1989).

According to Edward N. Luttwak (1990), the main issue during the post-Cold War period was geo-economic, in which the performance of countries was changed towards economic conduct. In this period, the focus of states was more on geo-economics instead of geopolitics; two quite different outlooks. It was generally understood that the historical approach was dead, and the conduct of conduct had changed; thus, geo-economics played a lead role as an indicator in defining power (Luttwak, 1990).

It is important to bear in mind a question asked by Timothy W. Luke (1991) “What did happen after the end of the history?” (Luke, 1991, p. 315). He addressed the question by highlighting the period between 1945 and 1947, in which the United States played a main role in nation boundaries in order to preserve its economic and military power. During this period, the strategies of the United States, in accordance with global security, were divided into four main factors:

- 1) Preventing developing countries from embracing communism,
- 2) Keeping Germany’s power under control,
- 3) Influencing eastern Europe with ideas of western liberation,
- 4) Taking preventative actions to avoid the nuclear threat from the Soviet Union

Another important issue was the emergence of technologies such as the computer and rapid transportation, which affected the behaviour of power and space, and the conduct of geopolitics. Briefly, this period can be defined in one term, the 'information period' (Luttwak, 1990). Correspondingly, the conduct of geopolitics was changed according to the development of technology and the United States became the superpower in new world order geopolitics. Cultural conflict was the principal challenge during this era. It was no longer a conflict of powers; rather it was a conflict of nations and different civilizations.

Religion, identity, language and culture define civilization. However, identity could be understood as the main factor, because religious identity has become more important than the religion itself. Therefore, identity, as an important factor or indicator, caused division between civilizations. According to Samuel P. Huntington (1993), diversity in civilizations will be the principal challenge of future. The question is why did conflict between civilizations happen or why will it happen in the future? First of all, each civilization has its own beliefs, culture, language, and lifestyle, which can lead to differences and conflict. That does not mean that differences between them always lead to conflict, but they are implicated in its occurrence. Secondly, the type of modern communication and interactions between countries and people lead each civilization to discover other cultures and better understand their differences. Thirdly, people's consciousness of political behaviour has improved, so they understand western power as a main power of the world and other civilizations are defined in relation to it. As a result, many civilizations took a position against the west and their allies. Sadly, though, cultural conflicts have never been as easily solved as political and economic differences (Huntington, 1993).

### **3.5.4 Environmental Geopolitics**

The emergence of environmental threats is the next danger after threats of direct military powers in new world order geopolitics, which has been a concern at both national and international level in most countries (Porter, 1995). The global environment and global security were the main concerns of geopolitical issues in recent decades, which is a consequence of both the First and Second World Wars and other political conflicts in the late 20<sup>th</sup> century. The topic of "global environment" became the new form of power and knowledge to define geopolitics in the 21<sup>st</sup> century.

Since the 1980s, the concept of sustainable development has become a significant factor. The Brundtland Commission, which is officially known as the World Commission on Environment and Development (WCED), was established by the United Nations in 1983 to foster sustainable development agendas with a global perspective. The role of politics has been identified as an important factor in a global approach to managing the environmental crisis. Therefore, environmental geopolitics highlights the importance of threats that can destroy planet Earth. However, the fundamental ideological concepts of power, territory and global economy have significant influence on the reformation of concerns related to environmental geopolitics and the global environmental crisis.

Threats that could destroy the planet include population growth, loss of biodiversity, holes in the ozone layer, and climate change. In response to such threats, the term ‘environmental security’ has been coined as a prevention tactic. The water shortage and climate change, which are the outcome of human behaviour, are exacerbating conflict between nations and countries and leading to a new era of wars (Dalby, 1998). For instance, environmental crisis encouraged the people of Pakistan to migrate from rural areas to urban areas, significantly increasing the population of cities, and resulting in violence and conflict between different groups of people from different regions.

This is the phenomenon of ‘environmental scarcity’ and it has different causes. First of all, the available resources and populations of cities are not balanced. Secondly, resource consumption behaviours have affected the environmental conditions. Finally, the power of wealthy groups provides easy access to resources whilst weaker groups of people cannot effectively access the same resources (Homer-Dixon, 1996). Resources can be divided into two main groups: ‘non-renewable resources’ such as oil and minerals and ‘renewable resources’ such as water. Throughout history, one of the main causes of conflict between countries and powers was the seizure of resources. Accordingly, such conflicts have become the concern of “national security”, which are also the main concerns of today’s politicians.

In contrast to the earlier understanding of “national security” during the cold war, which was understood as the competition of powers in relation to territory and states, environmental security has become the application of contemporary powers to preserve the national security. In this period, conflict has arisen as a result of the global environmental crisis and its impacts on society’s welfare (Porter, 1995). Environmental geopolitics is understood to be the main source conflicts in the near future, which is about environmental crisis, shortage of resources, rapid population growth in cities, pollution, holes in the ozone layer, and climate change. Unfortunately, all these factors together may cause competition and conflict between nations and territories all trying to preserve access to resources.

### **3.6 Final Remarks**

This chapter explored the significance of space and its behaviour which served two functions for this study: The first is to identify and summarise selective literature on space and bring together the key factors of relationship between how different aspects of space contribute in conduct of power and formation of geopolitical settings in geography. The second is to construct a bridge between technical discussions (urban planning and economics) on brownfields that discussed in chapter 2 and social, political, and philosophical meaning of space related to brownfields in geopolitical conflicts (chapter 3).

This study has shown that to understand the geo-philosophy of space, relationship between physical science and social science should be considered to provide both objective observation and subjective understanding of situations in conflict zones. The research has also shown that space is a dynamic process corresponding

to its definition in time as well as its presentation. The study goes beyond the essential concepts of space and illustrates how different understanding and implication of space contribute in defining geopolitics as new criteria to analyse abandoned properties in conflict zones.

The discussions on reproduction of space according to behaviour of space and exercise of power through different dimensions explained how codes of different periods generate spaces as a message and people as a reader as Lefebvre (1991) suggests society is under the control of politics and knowledge. This idea that explored by three-way understanding of space (perceived, conceived, and lived) influenced contemporary theoretical understandings of the term 'place' that is a pattern of social activities and mode of production. Relatively, the relevance of time is clearly supported by the correlation between time, space, and place that is always associated with political decisions in different conflict situations. Foucault (1977) emphasised this fact as if one position time on the same path in relation to space and place, in fact, defining the 'geopolitics' of place. In this study, different types of control over territory (power over space) established as a fact with regards to challenges of concept of geopolitics and its impacts on conflict situations.

With regards to Foucauldian approach on geography and geopolitics, geography is explained as a target of power and power depends on knowledge to preserve or develop the concept of state that is established as geographical space managed by powers through concept of 'govern-mentality'. This should not be confused with the concept of political geography which only concerns 'state' and 'territory' that made by two terms 'politics' (power and policy) and 'geography' (space, place, territory). Therefore, this study suggests political geography is not a product of space but a product of power. However, space itself, is considered as a product of power relating to social, political, economic, and ethnical interests. In this sense, geopolitics established in this study goes beyond complex relationship of power and space and explained as place of aggregation of contested power and conflict of interests. In these settings a geographical space can turn into a geo-political location, in contrast with simple understanding of geopolitics as political geography.

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## **PART II – EMPIRICAL STUDY**

*As 2017 begins, Cyprus enters its 53rd year as a politically separated nation and its 43rd year as a physically divided country<sup>29</sup>*

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<sup>29</sup> (Morelli, 2017)



## CHAPTER 4

### CASE OF CYPRUS CONFLICT

#### 4.1 Introduction

The island of Cyprus in the eastern Mediterranean Sea is not just the third biggest island in the region but also plays an important role in defining the political geography between three continents; Europe, Asia and Africa (Figure 20). Over the centuries, Cyprus was a geopolitical asset in the hands of empires; the same situation prevailed in the modern era leading to series of violence and armed conflicts between local and international actors. It is important to highlight that Cyprus conflict is beyond just a simple geopolitical conflict and the route of conflict in Cyprus can be traced back to number of events and circumstances that all interconnected with geopolitics. Such circumstances can be listed as – but not limited – implication of Ottoman millet<sup>30</sup> system, which is known as a pre-modern religious pluralism (Sachedina, 2001), and then British strategies of divide and rule (Tocci, 2002), Greek Cypriot enosis idea, Turkey's interest over the island and more control over Mediterranean sea, and also international power conflicts of Cold War era.

Therefore, in absence of a multi-ethnic society, consequently, between 1960s and early 1970s, a high level of ethnic and intercommunal conflict occurred between Greek and Turkish Cypriots, which resulted in an armed force confrontation and conflict in 1974. Since then, as the result of domestic and international conflict, the island has been divided into two parts; the northern, or Turkish part, known as the Turkish Republic of Northern Cyprus, and the southern, or Greek part, known as the Republic of Cyprus.

“Real conditions of division and the total absence of multiethnic society complemented by irrational fear and prejudice, together with further complicating factors such as extensive militarization and immigration flows, explain the persisting intercommunal conflict on the island. The inability of negotiators to address these real and imaginary divisions partly explains their failure to resolve the Cyprus question.” (Tocci, 2002, p. 60)

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<sup>30</sup> “The millet system in the Muslim world provided the pre-modern paradigm of a religiously pluralistic society by granting each religious community an official status and a substantial measure of self-government.” (Sachedina, 2001, pp. 96-97)



**Figure 20 - Night satellite image from cyprus locating strategically between three continents; Europe, Africa, and Asia (Photo credit: “© [Anton Balazh] / Adobe Stock”)**

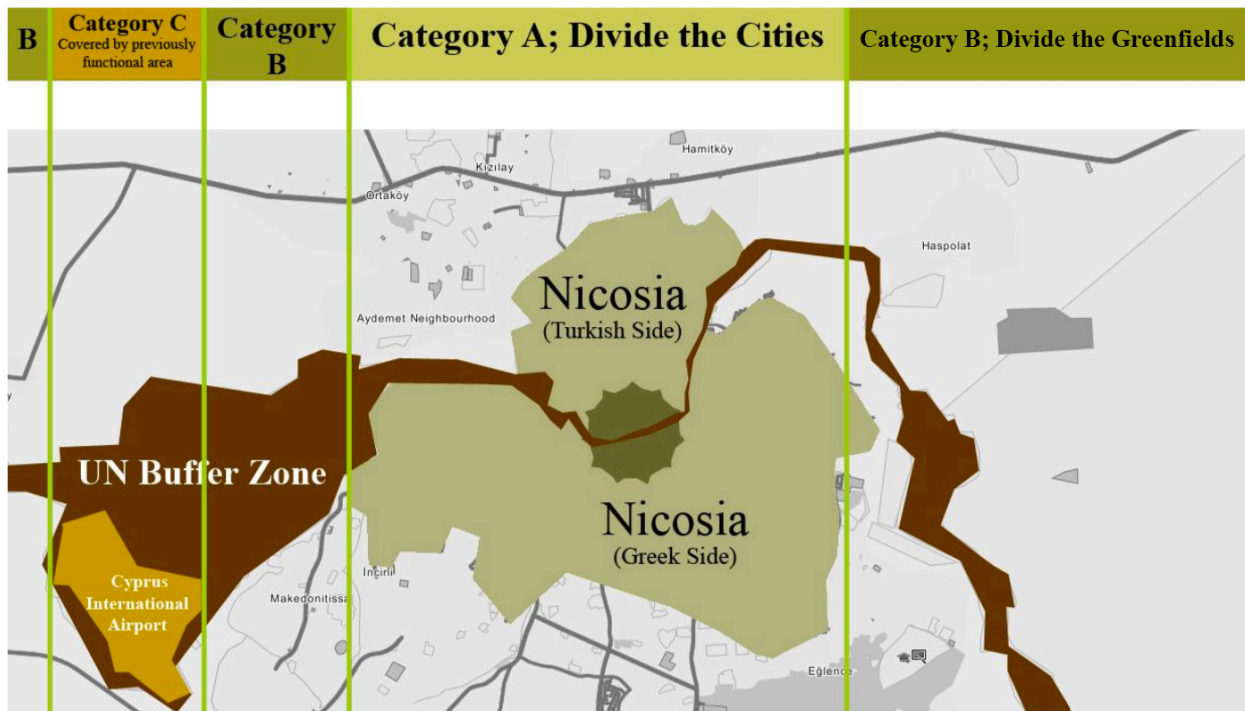
The Greek side of the island, with 76% of the population, restored the republic of Cyprus immediately after the division in 1974 and gained international recognition as the legitimate government of the island, unlike the northern part (19% of the population) which remains internationally unrecognised except by Turkey. 36000 Turkish troops on the northern side, in addition to UN peacekeeping forces (UNFICYP) that patrol the buffer zone, remained on the island as a guarantee of security. In 2004, the Greek side’s political advantages led its inclusion in the European Union, which intensified the conflict resolution process between north and south (Migdalovitz, 2008). The division itself has resulted in production as well as lack of concentrated actions on abandoned properties, and little attention has been paid to brownfield identification and regeneration policies in or near the Cyprus buffer zone. Since the 1970s, different plans have been proposed, unsuccessfully, to deal with both the political and territorial issues of the island and secure its reunification, such as federal, bi-communal or bi-zonal models of republican government. Indeed, in 2002, then United Nations Secretary General, Kofi Annan, proposed adopting Swiss and Belgian models of government, a move which was rejected by the Greeks for failing to respond to their economic and territorial desires. There is little evidence of the implementation of United Nations confidence-building measures that have been accepted by both sides (Migdalovitz, 2008).

By considering the rare case of more than 4 decades of on-going bi-communal conflict, this chapter aims to provide a new perspective on land management issues pertaining to geopolitical brownfields in conflict zones by focusing on the country’s northern region. As discussed in previous chapters, the land

management possibilities in this geopolitical conflict zone are associated with both political and social science techniques that can be defined within the general framework of regional science studies.

So far, as the general framework of this study, a new land typology for semi-like brownfields in such conflict zones has been introduced; geopolitical brownfields. This term refers to previously developed and now abandoned properties (brownfield sites) affected by philosophical notions of power and space as expressed by the French critical thinker Michel Foucault. Geopolitical brownfields serve as a tool to clearly distinguish the multi-dimensional challenges of abandoned properties in conflict zones thus leading to more effective solutions. The focus of this chapter is to demonstrate the socio-spatial, socio-political, and socio-economic characteristics of geopolitical brownfields, in addition to historical review on evolution of a conflict through an exploration of the Cyprus dispute. The identification and characterization of abandoned properties resulted by Cyprus conflict is a step towards improved diagnosis strategies and reactions to such challenge in geopolitical conflict zones.

This study was influenced by the fact that there are numerous abandoned properties in the unrecognised northern half of the island, as well as the militarised, closed, and prohibited areas which are inaccessible and frozen in time. A pilot study of the periphery of the north side of the Nicosia Buffer Zone classified the closed areas (the buffer zone, the internal border, the militarised zones, etc.) into three categories according to their location (Shojaee Far & Atun, 2012). The first category, which divides the city of Nicosia, is located within urban settlements and acts as a geographical gap in the urban planning systems (i.e. the 'Nicosia Buffer Zone'); the second category, which divides the Greenfields, is located in rural areas with the same characteristics and values of surrounding areas; finally, the third category covers areas or facilities such as the Cyprus International Airport and the closed Varosha district in Famagusta which has had an extreme impact on its periphery (Figure 21). This pilot study was the first attempt to classify the buffer zone and its periphery in a comparative approach to 'brownfield' lands and provides prospects on brownfields in the periphery of the buffer zone in North Cyprus.



**Figure 21 - Categorizing the Cyprus buffer zone according to its geographic locations (Shojaee Far, 2011)**

The empirical part of this study is divided into four major parts: following this introduction, Section 4.2 gives a socio-political and also historic overview of the Cyprus conflict, which summarises the process of establishment of the de facto state of the TRNC and the related international circumstances. Section 4.3 investigates the property regime and land ownership issues of North Cyprus since 1974. It summarises the diverse property regulations of titling systems and the deficiencies in the legal mechanism that contributed to land management complications in TRNC. In this section the meaning of abandonment in property issues and the various legal perspectives held by different parties in a dispute is explored. Section 4.4 explores different intervention projects and demonstrates highlights of their outcomes and section 4.5 describes the methodological approaches of this study under the conceptual framework of ‘geopolitical brownfields’ in order to analyse and address the complex and multidimensional challenges of such properties.

## **4.2 Socio-Political and Historic overview of the Cyprus Conflict; TRNC**

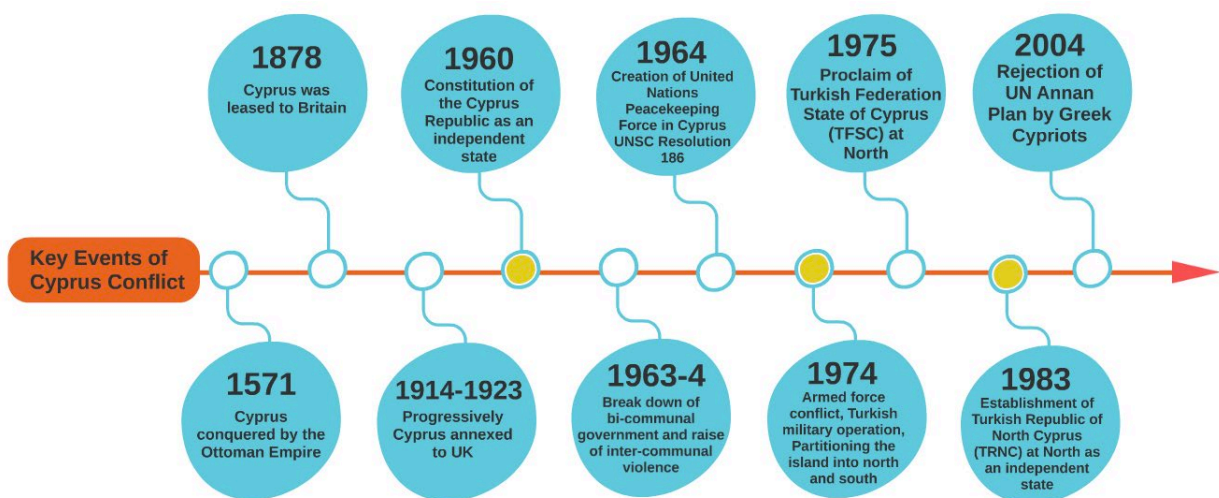
The historical dispute over land and property ownership on the island of Cyprus is one of the fundamental issues of this strategic location in the eastern Mediterranean Sea, implicating both regional and international actors. The geographical proximity of the island to three continents, the size, climate, natural resources and effective territorial control over the eastern Mediterranean Sea are the elements that made the island a strategic, or geopolitical, location. This caused a conflict of interest of regional and international actors over territorial control of the island. The island became a part of the Ottoman Empire as a result of a progressive invasion starting in the late 15th century, then in the late 19th century, by mutual agreement with the Ottomans, the British began to occupy the island, taking control of the administration. In the early 20th



century (1914 to 1925), the island was officially annexed to Great Britain and became a crown colony to protect the British maritime trade routes in the Mediterranean Sea.

British rule over the island was overthrown<sup>31</sup> in 1960, even though in 1958 the minority Turkish Cypriot community was in favour of British Rule, unlike the majority Greek Cypriot population; this led to intercommunal violence on the island. The conflict continued after independence in 1960 reaching its peak in 1974 when Turkey began military operations in Cyprus in response to a coup d'état sponsored by Greece. As a result, the island was partitioned, and massive population transfer took place between the communities. Despite the efforts of the UN and the international community, no settlement took place, and in 1983 the Turkish Cypriots declared their state to be a new country, the new state of the Turkish Republic of North Cyprus (TRNC). The TRNC has not achieved international recognition so far except by Turkey, its sponsor.

Since the events of 1974, the UN has tried to encourage both communities towards a possible settlement, yet the most promising plan, proposed by the UN secretary general Kofi Annan, was rejected by Greek Cypriots in a referendum in 2004 (Figure 22). The presence of Turkish military forces, and their operation in 1974, are internationally identified as an act of invasion and Turkey was correspondingly blocked from membership of the European Union (Wintour, 2017). Learning from previous mistakes in the attempt to find a profitable and win-win proposition for both local and international actors has resulted in a new round of negotiations which commenced in 2015. Any deal reached will depend on the outcome of another referendum involving both sides; it is widely believed by the public that this would be the last such referendum before attempts to reunite the island will be abandoned. Today, Cyprus is the only divided island in Europe as well as its capital, Nicosia, being the last divided city in Europe. This section (4.2) systematically reviews the most important events in the contemporary history of the Cyprus conflict from 1960 to 2017 which can be seen in the simple summary below and a more detailed timeline at the end of Section 4.2 (Table 7).



**Figure 22: Notable occurrences in the timeline of Cyprus and its geopolitical conflicts from 1571 to 2004 with highlighted key events in 1960, 1974 and 1983 (Created by the author).**

<sup>31</sup> limited as the UK kept two areas as its own territory during independence treaties of 1960.

#### **4.2.1 Independence – 1960**

The island gained independence from British rule in 1960. The constitution of the new state was based on international accords (i.e. the 1960 Treaty of Guarantee) between three main international actors interested in the island (the UK, Greece, Turkey) and Cypriot representatives. On 16th August 1960, a bi-communal republic (made up of majority Greek and minority Turkish residents) established the Republic of Cyprus, with the exception of two areas remaining under the sovereignty of the United Kingdom (Treaty of Guarantee, 1960). In parallel, the Treaty of Alliance was signed by the Republic of Cyprus, Greece, and Turkey, and sponsored 650 Turkish and 950 Greek troops for purposes of security and defence (Treaty of Alliance, 1960). The constitution of the new Republic of Cyprus, in 1960, urged power-sharing between both Greek and Turkish Cypriots with a government consisting of a president from Greek Cypriot community and a vice-president from Turkish Cypriot community, and each elected by their own community. However, the constitution of 1960 did not reflect the preference of either group, as most of Greek Cypriots supported enosis (the reunification of Cyprus with Greece) whilst Turkish Cypriots the partitioning concept (Taksim) aimed to divide the island and eventually reunify the Turkish division with Turkey (Migdalovitz, 2008).

#### **4.2.2 Intercommunal Violence – 1964**

Due to the opposing wishes of each community (enosis versus taksim) in addition to their previous social, political, and economic conflicts during the 1950s, the bi-communal government broke down after three years. The suggested – and later implemented – modification of the 1960 constitution, proposed by President Makarios III in favour of the Greek Cypriot community elicited a negative reaction from the Turkish Cypriot community. Consequently, Turkish Cypriots withdrew from the government and established the Turkish-Cypriot administration in 1964. These actions resulted in inter-communal conflicts in 1963-64, and also in 1967, that brought organized violence and the separation of the administration of the Turkish and Greek communities.

Turkey, as the guarantor of safety of the Republic of Cyprus and particularly the Turkish Cypriots, warned of their imminent intervention, but the mediation of international forces convinced Turkey not to take any military action in Cyprus. Meanwhile, on March 4, 1964, the United Nations Security Council passed a resolution (186) to establish security measures to maintain peace, protect against threats to regional peace and provide solutions to such conflict. The resolution urged the government of Cyprus to apply the necessary measures to end violence, in cooperation with both community leaders, as well as to establish a United Nations Peace-keeping Force (UNFICYP) parallel to forces from the UK, Greece, Turkey, and Cyprus. The main mission of the UNFICYP was described in Article 5 of Resolution 186 as “to control the violence and act as a buffer between the two communities” (Migdalovitz, 2008):

“5. Recommends that the function of the Force should be, in the interest of preserving international peace and security, to use its best efforts to prevent a recurrence of fighting and, as necessary, to

contribute to the maintenance and restoration of law and order and a return to normal conditions” (Security Council, 1964)

Accordingly, the buffer zone was officially created by the UNFICYP, and the area was under the authority of UN peacekeepers brought to the island as a result of the intercommunal conflict and violence of 1963. The UN forces were supposed to be present in Cyprus for only three months, but the operation has now been in place since March 27, 1964 (Figure 23). In a recent report by former UN Secretary General Ban Ki-moon, the UNFICYP was presented as an element of the United Nations peace process in which the role of forces in Cyprus was defined as the prevention of violence, building confidence between the two communities, and the maintenance of law and order until normal conditions are achieved (Ki-moon, 2016).



**Figure 23 - Map of divided Cyprus and the Buffer Zone with major cities and towns (Adapted from Adobe Stock by the author)**

#### 4.2.3 Division – 1974

After gaining independence from British colonial rule in 1960, Cyprus experienced an unbalanced or unjustified cooperation of rulers within the bi-communal island. Correspondingly, this unstable coexistence of the Greek and Turkish Cypriot communities brought deep ethnic conflict to the surface. In 1974, the dispute between the communities, and also within Greek community itself, reached a peak, at which point a coup d'état sponsored by Greece and operated by Greek Cypriot militants changed all political equations and settlements in Cyprus. The coup d'état, supported by a military junta in Athens, planned to replace President Makarios with a government formed by enosis extremists. In July 1974, shortly after the coup d'état, the Turkish military, with reference to 1960 Treaty of Guarantee, responded as guarantor of the

safety of Turkish Cypriots. By August 25, 1974, around 36% of the island had come under control of the Turkish military and consequently the buffer zone officially partitioned the island. This partition covers around 240 square kilometres of land and horizontally divides the island into two parts - north and south.

This military intervention and official division of the island resulted in massive population transfer between the two areas, as Turkish Cypriots were forced to move to the north and Greek Cypriots to the south. These population transfers were followed by property problems and dislocated refugees, exacerbated by the appearance of many militarized and restricted zones in the north operated by Turkish army. Beyond the buffer zone and military bases, many other areas subsequently became vacant, abandoned, fenced off, and were finally denominated restricted zones, declared to be a guarantee of peace for both parties, such as the Varosha district of Famagusta which was closed by the Turkish military (Figure 24). However, UN has held the Government of Turkey as the responsible for fencing Varosha district (Ki-moon, 2016).



**Figure 24 – Restricted areas (fenced off by the Turkish Military) at Famagusta – Varosha District (Photo credit: © Mohsen Shojaee Far, 2015)**

Although the population transfer statistics of 1974 serve as the main figures for displaced persons, the displacement occurred progressively from the onset of intercommunal conflict and violence in 1958, with an increase three years after the establishment of Republic of Cyprus (RoC) in 1963 (Figure 25). Two notable displacements prior to 1974 affected mainly Turkish Cypriot minorities (Bryant, 2012), and overall by 1974, 32% of the total population of the island had been displaced (~187,000 out of ~586,000). In Cyprus, small towns and villages play an important role in demographic distribution within the island and Turkish and Greek Cypriot population were distributed – with separation – all over country. Therefore, a



list of origin and destination of displacements can be almost equal to list of all the villages, towns, and cities, where Turkish Cypriots displaced to north side and Greek Cypriots to the south (Figure 26). Unfortunately, there is no exact reliable figure, as the provided statistics vary according to the organization, and the published numbers are based on the authors' personal or institutional perspective on how to calculate the displacement number. According to Greek Cypriot statistics, 142,000 people were displaced from North to the South, and Turkish Cypriot statistics give the figure of 45,000 for population transfer from South to the North (Gürel & Özersay, 2006). An EU funded project in 2011 through Peace Research Institute of Oslo prepared an interactive map with demographic details<sup>32</sup>, which reported over 400 locations of displacement occurrence between 1958 to 1974. The highest records of displacements occurred in 1974, as it reported in 'routes of displacement and resettlement' project, estimated total of 215,000 Cypriots were displaced which is equal to "a third of the Greek Cypriot and half of the Turkish Cypriot populations" of 1974 (PRIO, 2011).

"The term 'routes of displacement and resettlement' refers to historical, geographical and demographic information relating to displacement of Cypriots due to inter-communal conflict from 1958 onwards. The information is organized in terms of places affected by such movements of people. In other words, it is about villages and towns where people were displaced from or were resettled to." (PRIO, 2011)

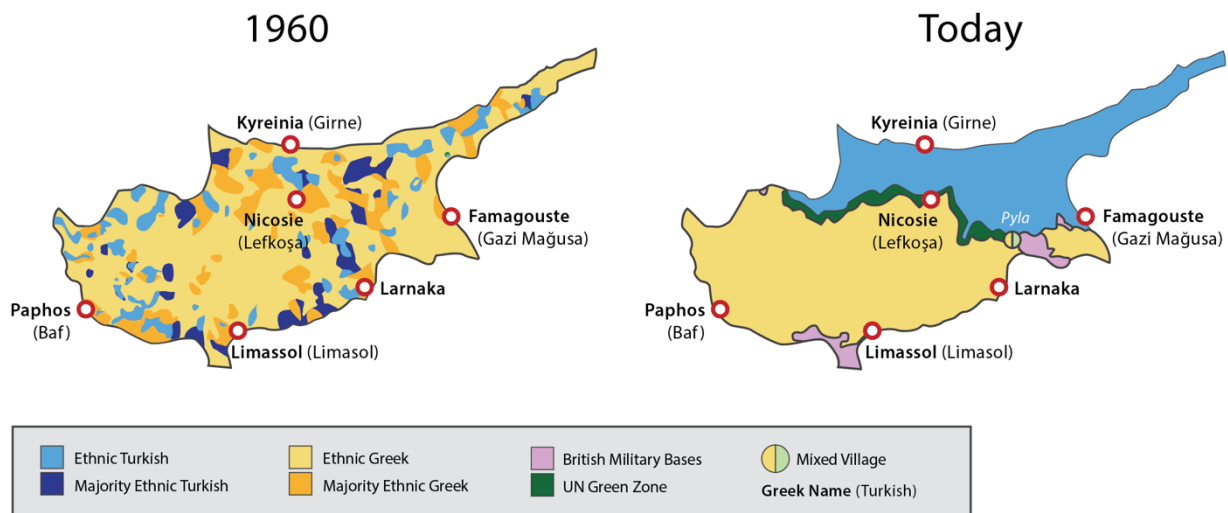


**Figure 25 - Left: a British scout car escorts a group of Turkish Cypriot refugees to another town as a result of attacks by Greek Cypriots on their village in early 1964 (Life Magazine, 1964). Right: Greek Cypriot refugees shelter in Dhekelia following the armed force conflicts in 1974 (Hall, 2014).**

Following the official partitioning of the island by the Turkish military in 1974, the provisional Turkish Cypriot administration (1964 to 1974) re-established itself as Turkish Federation State of Cyprus (TFSC) in 1975. The concept of the TFSC was promoted as a solution, either by the coexistence of both communities as two states in a loose confederation, or by dividing the island into two separate sovereign states. However, until 1983 the northern areas under control of the TFSC were known as an administrated

<sup>32</sup> On 30 September 2011 a new website for mapping the displacements and population transfer in Cyprus launched by Peace Research Institute Oslo (PRIO) with funding from the EU, more information at [www.prio-cyprus-displacement.net](http://www.prio-cyprus-displacement.net)

area in a conflict zone forming part of the internationally recognized Republic of Cyprus without the effective control of central government. Since then, the United Nations focused on conflict resolution between both communities for the reestablishment of a unified government, mainly attempting to find a federal solution. However, the opposing views of the communities regarding a federal system, particularly regarding property regimes, the Turkish residents in Cyprus, and the power distribution at both local and international levels, resulted in many unsuccessful rounds of negotiations in the effort to come to a permanent settlement (Migdalovitz, 2008).



**Figure 26 Left: Demographic map of Cyprus in 1960 Right: Demographic map of Cyprus in 2018 (THO, 2018).**

In 1977, the leaders of both communities (Makarios and Denktash<sup>33</sup>) agreed on an independent bicomunal federal republic with a central government that would secure the unity of the island by providing freedom of movement and settlement, and a common accepted property regime. In 1979, the talks continued on the basis of this agreement (at this point, the community leaders were Kyprianou and Denktash) urging territorial and constitutional agreements for the demilitarization of occupied areas and closed districts (i.e. Varosha). However, Kyprianou held stronger views than his predecessor, and their differing understanding of coexistence in a federal government negatively impacted the talks; this impasse continues even today (Morelli, 2017). One of the main unresolved disputes relates to the arrival of the Turkish army in Cyprus; both Turkish Cypriots and Turkey claim this to have been a “peace operation” whereas both Greek Cypriots and the international community view it as an act of “invasion” (Migdalovitz, 2008). With a socio-political understanding of situation, during all the years after 1974, major Turkish Cypriots supported the presence of Turkish troops as the element of their physical survival, but extensive presence of Turkish troops in the north for Greek Cypriots has been a verification of Turkey’s occupation of their island (Tocci, 2002).

<sup>33</sup> Rauf Denktash led Northern Cyprus from 1975 to 2005.

#### **4.2.4 Turkish Republic of North Cyprus (TRNC) – 1983**

Turkish Cypriots held onto their hope of a unified island under a federal government until 1983, and till then a series of peace negotiation took place. After these talks failed, Turkish Cypriot leaders, with the support of Turkey, held a referendum for the establishment of a separate sovereign state for Turkish Cypriots. On November 15, 1983, the Turkish Cypriot leaders declared independence by the proclamation and establishment of a new republic, named the Turkish Republic of North Cyprus (TRNC). The Turkish military bases and their troops still remain in the TRNC, and unofficial estimates put the figure at 20,000 to 40,000 military personnel (Morelli, 2017). Due to international sanctions against the northern administration and occupying forces, the new-born republic never achieved international recognition (it was only recognised by Turkey). This resulted in the isolation of North Cyprus and, effectively, international ignorance of the Turkish Cypriot community.

The legal base for ignorance and failure to recognize the status of the so-called TRNC is internationally cited to be the incompatibility of such a government and state with the 1960 Treaty for the establishment of the Republic of Cyprus (No. 5476) as well as Treaty of Guarantee (No. 5475) between the UK, Greece, Turkey and Cypriot representatives (Treaty of Guarantee, 1960). Following the proclamation of the TRNC, the UN Security Council responded with resolution 541 that “the attempt to create a Turkish Republic of North Cyprus is invalid and will contribute to worsening of the situation in Cyprus” and it called “upon all States not to recognize any Cypriot State other than the Republic of Cyprus” (Security Council, 1983). As Turkey supported and influenced the creation of the TRNC, it became the only country to recognise it and immediately exchanged ambassadors. This action was incompatible with the first article of the 1960 Treaty of Guarantee which highlights the territorial integrity of the whole island as one state and prohibits division and partitioning activities:

“The Republic of Cyprus undertakes to ensure the maintenance of its independence, territorial integrity and security, as well as respect for its Constitution It undertakes not to participate, in whole or in part, in any political or economic union with any State whatsoever. It accordingly declares prohibited any activity likely to promote, directly or indirectly, either union with any other State or partition of the Island.” (Treaty of Guarantee, 1960)

#### **4.2.5 Macroeconomic Impacts of 1974 Conflict**

To understand the macroeconomic impacts of a socio-political conflict in a geopolitical conflict zone, this study divided the socio-political periods of Cyprus into 3 economic stages of pre-armed force conflict period (1960-1974), armed force conflict period (1974-75), and post-armed force conflict period (1976-1997) known as reconstruction and post reconstruction period. In pre-armed force conflict period 1960-1974, the average annual GDP growth rate of the island reported 7.4% (Pashardes & Hajispyrou, 2003) which was based on exporting agricultural and small manufacturing goods in addition to become a known summer holiday destination. However, this GDP figure address the official published reports of Republic of Cyprus and it does not necessarily include many unregistered Turkish economic activities prior to 1974

conflict. It is also known that economic level of two communities during this period differed substantially (Tocci, 2002).

During 1974 to 1975 the average annual GDP growth of the island dropped down to -17.9% (Pashardes & Hajispyrou, 2003), as the result of armed conflict, territorial division, collapse of government and lack of a functional and/or central government, and militarization on both sides. Similar to debates and arguments on number of displacements, it is also difficult to rely on reported figures and numbers of unemployment rate, public spending rate, or decrease in export. Economics research centre of University of Cyprus (2003) in an economic policy study reported some of these figures that explains -17.9% GDP rate during 1974-1975. It is reported 25% decrease of export, 11% increase of public spending and 12% increase in unemployment rate (from 3% to 15%) during 1974-75. This report relied on published documents by statistical service of Republic of Cyprus in south of island (Pashardes & Hajispyrou, 2003) and does not reflect the opinion of both communities.

However, in post-conflict and reconstruction era (1976-1997), Republic of Cyprus – Greek – took advantage of being the only internationally recognised government of the island and experienced positive growth and economic expansion. The Greek side reported rate of GDP growth for this period is 6.7% (Pashardes & Hajispyrou, 2003) in compare to 3.9% of Turkish side of the island (TRNC SPO, 2017). The growth in Greek side was the result of social transformation that convert their economy from labour-importing to a labour-exporting economy that relied on 3 major economic activities; 1) tourism, 2) construction and 3) banking (Ioannou & Charalambous, 2017).

On the other hand, although Turkish side had the same potentials and capacity – or even more territorial and natural resources – for tourism industry and agricultural development, during the same period it showed much lower average annual GDP growth (3.9%). Turkish side's international nonrecognition and the economic embargos by Republic of Cyprus and Greece and later-on series of economic restrictions imposed by European Union played an important role in such unproductive economy (Tocci, 2002).

#### **4.2.6 Twenty Years of Unsuccessful Negotiations – 1984-2004**

For twenty years, the UN sponsored negotiations between the leaders of both Cypriot communities, with no significant result achieved (Figure 27). They began with proximity talks organised by UN in 1984 and continued with political confrontations between hardliners of both communities (Vassiliou and Denktash) in 1991, when the UN conference on Cyprus was unable to take place as there was no common accepted ground for such activity for Turkish and Greek governments in addition to leaders of both communities in Cyprus. Meanwhile, parallel to the attempted peace negotiations, the political advantage held by the Greek Cypriots led to regional negotiations for membership of the Republic of Cyprus in the European Community (EC), resulting in their official application for membership on July 4, 1990. This application offended the Turkish Cypriots, who claimed that the Republic of Cyprus could not represent the island as a whole, and that the presence of a Turkish Cypriot delegate was required.



In 1992, then UN Secretary General Boutros Boutros-Ghali presented a framework for conflict resolution he called a “set of ideas” which promoted a federal government of two politically-equal communities with one international sovereignty. Part of the plan proposed the return of occupied properties to their original owners, at which point Denktash (the Turkish Cypriot leader) rejected the plan, claiming that this proposal would displace more than 40,000 Turkish Cypriots. The reason for the rejection of the plan has been questioned as it has been alleged that the numbers were inflated (Migdalovitz, 2008) and the withdrawal of Turkish troops was not favoured nor accepted by Turkey. Similar actions and proposals have been suggested over the years as ‘confidence-building measures’, however the political ill will from both sides, on top of the military interest<sup>34</sup> of both Greece and Turkey in the geopolitical location of the island have presented insurmountable obstacles in the period from 1997 to 2002.



**Figure 27** Areas in the Cypriot UN-Controlled Buffer Zone, untouched since 1974 (Nicosia). “Since fighting erupted between Greek and Turkish Cypriots in 1974, the area dividing Greek-controlled Cyprus from its Turkish counterpart, which has been abandoned and left virtually untouched by human activity, has fallen within a buffer zone controlled by the United Nations Peacekeeping Force in Cyprus (UNFICYP)” (UN Photo, 2010)

In 2002, a series of meetings took place under UN supervision between leaders of both communities, in which Denktash, on September 16, 2002, suggested a federation system based on a combination of the Belgium model (for international aspects) and the Switzerland model (for local bicomunal administrations). In accordance with UN-sponsored negotiations, in 2002 the U.N. Secretary General Kofi Annan suggested a draft proposal on November 11, 2002, as a guideline for a comprehensive solution. The proposal was called “The Basis for Agreement on a Comprehensive Settlement of the Cyprus Problem”

<sup>34</sup> The military interest in 1997 –with name of safeguarding the islands and their communities–known as S-300 (SA-10) anti-aircraft missiles disputes, which concluded with U.N. Security Council Resolution 1218. The resolution urged the Secretary-General to intervene in both sides to prevent armed force activities, reducing tension and building trust toward a conflict resolution possibility.

and was subsequently commonly referred to as the Annan Plan. It advocated for the implementation of the Swiss federal model of a common state with two equal political components and a single international identity which would be known as the United Republic of Cyprus (Annan Plan, 2002). Not only Annan Plan but also many other proposals by international mediations are known as failed settlement attempts, where no proposal considered the real, perceived, and conceived division between two communities nor understood “existing separation and disparity between communities, which represents a major cause of the failure of settlement talks” (Tocci, 2002).

#### **4.2.7 Annan Plan, Failure of Referenda and EU Membership – 2003-2004**

This was a critical period of change during the Cyprus conflict resolution process. Objections to the Annan plan resulted in its rejection in a referendum, and the Republic of Cyprus’ membership to the European Union shaped new era of negotiations (Figure 28). Acceptance of the UN settlement plan was a precondition to EU membership, however, as the Annan plan that was proposed in 2002 was politically linked to the accession process. The main components of the Annan Plan put forward in 2002 were (Annan Plan, 2002):

- 1- Formation of a unified federal system (Component states would participate in foreign and EU proceedings as in Belgium.)
- 2- Formation of a bicomunal parliament with a guarantee of a minimum of 25% of seats and equal representation in the Senate.
- 3- The presidency and vice presidency rotate every 10 months between representatives of each community.
- 4- Maximum permitted numbers of both Turkish and Greek troops on the island should not exceed the total figure of 9999, and UN peacekeepers would remain in position; eventually Cyprus will be demilitarized
- 5- For the first three years, the leaders of both communities become co-president
- 6- The 1960 Treaties of Establishment, Guarantee, and Alliance would remain in force
- 7- The new state would have only one type of citizenship; Cypriot
- 8- A property settlement should be planned as a combination of the right of return and compensation for loss
- 9- Turkish Cypriot territory would be reduced to 28.5% of the island





**Figure 28** Then UN Secretary General Kofi Annan travelled to Cyprus for an official visit on February 27, 2003. Mr. Annan (left) and Glafcos Clerides (left of centre), the Greek Cypriot leader, watch as Tassos Papadopoulos (right of centre), the incoming Greek Cypriot leader shakes hands with Rauf Denktaş (right), the Turkish Cypriot leader, following the Secretary-General's meeting with all parties (UN Photo, 2003)

Under these circumstances, both communities objected to the Annan plan and refused to sign on many separate occasions. These unsuccessful attempts of UN Secretary-General Kofi Annan to achieve agreement on a comprehensive Cyprus settlement plan were reflected in UN Security Council resolution 1475, on April 14, 2003. The resolution emphasised the lack of interest in the proposed plan, particularly from the TRNC:

“3. Regrets that, as described in the Secretary-General’s report, due to the negative approach of the Turkish Cypriot leader, culminating in the position taken at the 10-11 March 2003 meeting in The Hague, it was not possible to reach agreement to put the plan to simultaneous referenda as suggested by the Secretary-General, and thus that the Turkish Cypriots and the Greek Cypriots have been denied the opportunity to decide for themselves on a plan that would have permitted the reunification of Cyprus and as a consequence it will not be possible to achieve a comprehensive settlement before 16 April 2003.” (Security Council, 2003)

Shortly after the resolution, both leaders tried to ease the situation in order to put the blame on the other side, and finally on April 23, 2003, the TRNC opened border checkpoints, allowing many residents of both sides to cross and travel freely through the island for the first time (AP, 2003). In response, the Republic of Cyprus declared crossing the border to be an illegal act, but also announced that, based on the Annan plan, they were ready to resume the negotiations (Migdalovitz, 2008). Correspondingly, Kofi Annan presented a revised plan, considering both communities’ objectives, on March 31, 2004 (Figure 29). The main

modification in the revised plan was the change in presidential power as the Presidential Council would exercise executive power, and the rotation between presidential and vice-presidential office was extended to 20 months. The modified plan also limited the return of Greek Cypriot refugees to 18% of the total population of Turkish areas, reduced the number of Turkish troops to 6000 within 42 months, required an eventual reduction to 650 Turkish troops and 950 Greek troops, and the announcement of a referendum to take place on April 24, 2004 (Annan, 2004).

Surprisingly, after all those efforts, a series of campaigns against the plan started in both communities, run on the Greek side by Papadopoulos, the Greek Cypriot leader, and on the North side by Denktash. Papadopoulos mainly argued that two separate nations cannot be governed under one government because future governmental decisions would paralyze the situation, and on the other hand, Denktash was against his Prime Minister (who supported the plan) and was urging rejection of the plan. Finally, the proposed “Comprehensive Settlement of the Cyprus Problem” was proposed in two separate simultaneous referenda on 24 April 2004 and was rejected by Greek Cypriots (76% NO) despite gaining majority support from Turkish Cypriots (65% YES). Therefore, the plan was taken as a failure and did not enter into force.

“This outcome represents another missed opportunity to resolve the Cyprus problem. The effort over the last four and a half years has achieved a great deal which should be preserved. However, none of those achievements is a substitute for a comprehensive settlement.” (Annan, 2004)

The situation became more complicated when, on May 1, 2004, without reaching any settlement, the Republic of Cyprus officially became a member of European Union, and on January 1, 2008, joined the Eurozone. This represents another significant question in process of Cyprus conflict resolution, as surely the Republic of Cyprus (RoC) did not meet the criteria as acceptance of the Annan Plan was precondition and rejected, how could the RoC sign the accession process?

Negotiations in the following years continued with mixed levels of bitterness and optimism from both sides and no significant resolutions. Cited (2008) in a US congress report on Cyprus, both leaders objected to international community interventions, where on March 21, 2005, Papadopoulos said “We will not accept another mediating role of the U.N. Secretary-General. The national issues (...) can(not) be (...) solved through the mediation of a foreigner.” On November 1, in the same year, Talat protested against EU intervention, claiming it is “not an unbiased organization since only the Greek Cypriot side is in the EU” (Migdalovitz, 2008).

“Although Cyprus negotiations have typically been characterized as exhibiting periodic levels of optimism, that optimism has often been tempered by the political reality that difficult times between Greek and Turkish Cypriots always lie ahead.” (Morelli, 2017)



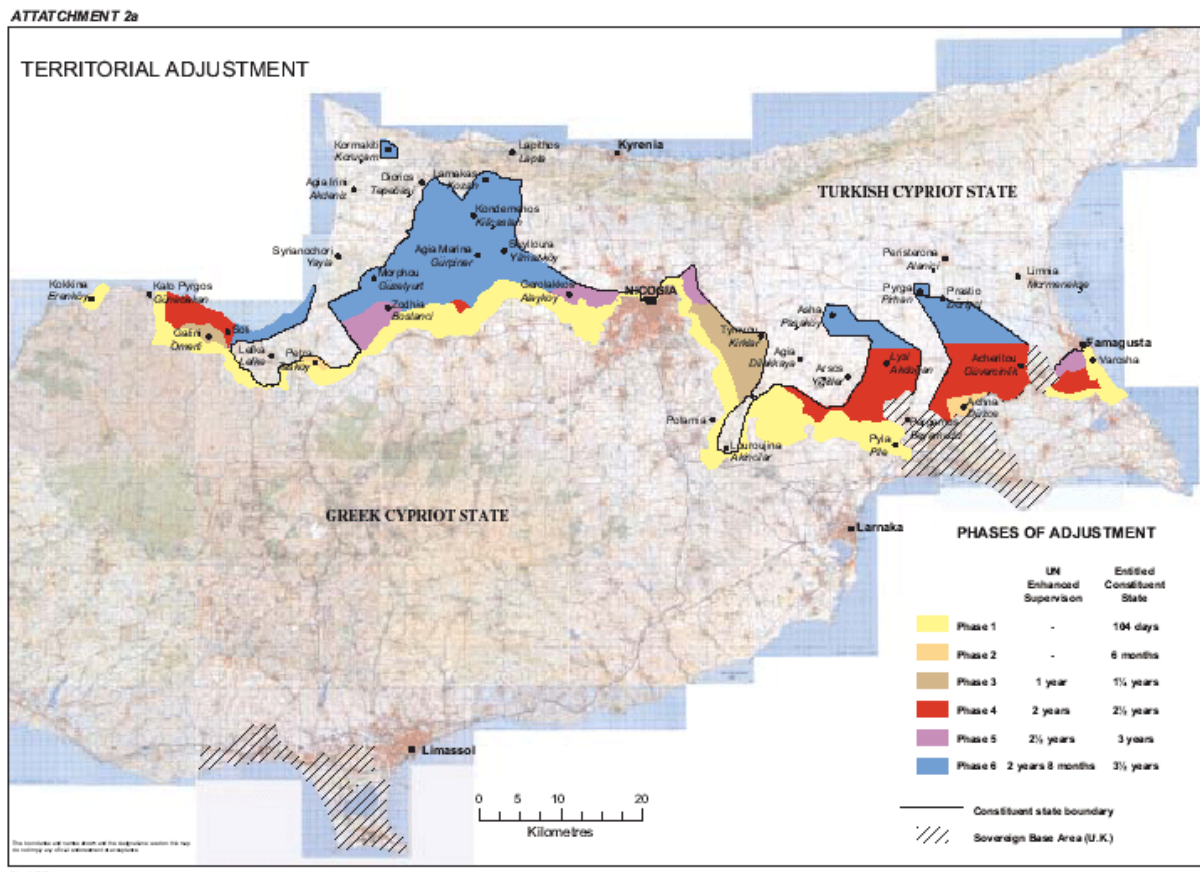


Figure 29 – Territorial adjustment suggested in the final version of the Annan Plan presented on March 31, 2004. (UK Parliament, 2005)

#### 4.2.8 Ongoing Division and Partition 2008-2015

The political events from 2008 to 2015 can be identified as ON and OFF periods for talks and negotiations and turning back to the fact that the island is divided not just by the buffer zone, but also through language, religion, ethnics, and culture. In the year following the simultaneous referenda, the newly optimistic Turkish Cypriot leader, Talat, put all his efforts into finding an acceptable solution for both communities based on the Annan Plan, in contrast to the Greek Cypriot leader, Christofias, who referred to the plan on many different occasions as null and void, and unsuitable as a basis for any settlement. In spite of this, many proposals from the Greek Cypriot side were quite similar to the Annan plan because they advocated for a federal government under a unified international identity, and demilitarization of the island. This was a paradox that can be easily identified by reviewing details of events and proposals. During the leadership of Talat and Christofias, no significant settlement took place and, just before elections took place in TRNC and based on their last formal meeting on March 30, 2010, they jointly declared progress on power-sharing and economic issues. The validity of this statement is questionable given its occurrence directly before the election.

Talat lost the election to the Turkish Cypriot hardliner, Eroğlu<sup>35</sup>, and subsequently the negotiations and talks entered a new stage. In this period, the option of a unified federal government was seriously questioned, and the UN eventually pulled back from sponsoring and encouraging further dialogue. After many years of unsuccessful talks, both communities can be seen to have lost their hope and urgency for reaching any solution. For instance, Eroğlu began advocating for a “soft divorce”<sup>36</sup>, and Christofias was focusing mainly on the upcoming presidency of the Council of the EU for the Republic of Cyprus. In these circumstances, officially in May 2012, the UN suspended its involvement in negotiations, feeling that it was a waste of time to continue such negotiations until both parties had something they could agree upon.

In 2013, the socialist elected president of the Republic of Cyprus, Anastasiades, developed a more global vision of the island and called upon both communities as citizens of Cyprus. Although there were positive signs from both sides, this period was again complicated by the involvement of Anastasiades in the EU presidency, as well as the fiscal crisis in Cyprus, while Eroğlu was clearly advocating for the legitimacy of the TRNC as a separate state.

“Certainly it was possible to find a solution to make these two people live together, however people should bear in mind, it is [not] realistic to establish one state from two separate states.” (Eroğlu, 2012)<sup>37</sup>

In addition to the difficulties presented by both leaders, on the 40<sup>th</sup> anniversary of Turkish military operation in Cyprus (1974-2004), Turkey added another obstacle to this complicated situation by starting seismic explorations in the exclusive economic zone of the Republic of Cyprus. The official explanation of the act was that they were defending the rights of Turkish Cypriots to a share in the energy and natural resources of the island. Consequently, all remaining hopes for any positive negotiations or settlement was blocked during this period. After a year of international pressure on Turkey, in May 2015, Turkey withdrew its exploration activities. As a result of this series of actions, on November 25, 2014, Jack Straw<sup>38</sup> noted, in an interview in London, that maybe it was time that international community accept that there was a division and perhaps both communities were living happily in their own states. At this point, it was clear that the international community seriously doubted both the Greek and Turkish Cypriot communities’ willingness to find a settlement (Turner, 2014).

#### 4.2.9 Recent Events 2015-2017

The year 2015 started with another period of negotiations between the Cypriot communities. Akıncı, with his strong personal opinion on a Cypriot nationality with no interference from Turkey, was elected as the new president of the TRNC, and on the other hand, the Greek Cypriot community, led by Socialist president Anastasiades, welcomed the new perspective and approach. Akıncı’s opinion on the Cyprus situation was

<sup>35</sup> Eroğlu, then a 72-year-old physician and long-time politician, won the election with just over 50% of the vote. Eroğlu was seen as having more hardliner style and views to the former Turkish Cypriot leader Rauf Denktaş, particularly in seeking more autonomy for each community (Morelli, 2017).

<sup>36</sup> Similar to what the Slovaks and Czechs did when they separated

<sup>37</sup> Statements made by Turkish Cypriot leader Eroğlu on various occasions in December 2012 as provided to CRS by the Turkish Cypriots. (Morelli, 2017)

<sup>38</sup> Former British Foreign Secretary

not completely aligned with Turkey, which provided a more positive negotiation environment at the same time as it led to internal political difficulties caused by hardliners in the TRNC.

Based on this positive atmosphere, the UN returned its support; as of May 22, 2015, the U.N. Special Envoy sponsored a new meeting between the two leaders. Several confidence-building measures were initiated and both leaders kept regular meetings. Akıncı's opinion with regards to Turkey had really changed the context of these measures since he noted that the relationship of Turkish Cypriots with Turkey should be that of "brother/sister" instead of "motherland" (Hurriyet, 2015). It has been noted that this period of talks brought settlement much closer than in 2004, however, the majority of Turkish Cypriots saw the process as the final round of talks in which, if no settlement took place, public opinion supported the formation of two separate states with no further negotiations (Morelli, 2017).

The round of negotiations addressed five main topics: 1) property issues, 2) governance model, 3) economy, 4) territorial adjustments, and 5) security measurements for guarantees of safety. The last two topics are currently the most complex issues, in which a successful resolution may lead the talks to a final settlement (Chislett, 2017). Territorial adjustments are in direct connection with property issues and complicate the chances of a settlement. The main impediment is regarding the amount of land that should be returned (mainly from the Turkish side to the Greek side), and security issues primarily address the presence of the Turkish military on the island (Wintour, 2017).

With the recommencement of negotiations, in 2016 then UN Secretary-General Ki-moon endorsed the role of the UNFICYP in supporting the situation and maintaining a positive environment for the success of the process as well as rebuilding trust in cooperation. With the involvement of the UN in the course of confidence-building measures, eight technical committees on 1) broadcasting, 2) cultural heritage, 3) crime and criminal matters, 4) crisis management, 5) crossings, 6) environment, 7) health and 8) humanitarian affairs were facilitated and supported by the UNFICYP (Ki-moon, 2016). The main purpose of the technical committees' activities was and is to develop the political and technical structure of a unified island in preparation for international recognition. If, during 2017, both communities' leaders can reach an agreement, it should also be authorised by the UN (Wintour, 2017), and approved by both sides in two parallel referendums (Chislett, 2017). Correspondingly, a UN sponsored conference on Cyprus problem held during 28<sup>th</sup> June-7<sup>th</sup> July 2018 in Crans-Montana (Switzerland) with aim to come to a final conclusion, but again the negotiations broke down after 10 intense days. On the last day of the conference, the UN Secretary-General (António Guterres) said:

“ I am deeply sorry to inform you that, despite the very strong commitment and the engagement of all the delegations and the different parties, the Greek and Turkish Cypriot delegations, Greece, Turkey, the United Kingdom, and the European Union, as an observer, and, of course, the United Nations team, the Conference on Cyprus was closed without an agreement being reached [...] Unfortunately [...] an agreement was not possible and the conference was closed without the possibility to bring a solution to this dramatically long-lasting problem” (Guterres, 2017)

#### 4.2.10 Final Remarks

So far, this section has evaluated the socio-political and historical events of the Cyprus conflict and demonstrated both the causes of power-sharing disputes and the exercise of extreme power over space. Reviewing the timeline (Table 7) of what has been discussed illustrates that land management (territorial adjustments and properties) and security measures are the most sensitive issues identified in all rounds of negotiations. As this present study has focused on land management issues and has no competency to argue and discuss security measurements of conflict zones, the next section will discuss the issues related to abandoned properties and insufficiencies in property regimes in a conflict zone such as Cyprus.

**Table 7 – Timeline of major events in contemporary history of Cyprus conflict (1914-2017)<sup>39</sup>**

Timeline of major events in Cyprus history	
Date	Event
1571-1878	Cyprus under Ottoman rule
1914	Cyprus annexed to Britain
1925	Cyprus declared a British crown colony.
1955-59	Intercommunal violence between and within both communities and fighting against British colonial rule. Appearance of National Organisation of Cypriot Fighters (EOKA) and Turkish Resistance Organisation (TMT)
1960	Cyprus gained independence from British colonial rule and was internationally recognised as the Republic of Cyprus through a series of treaties guaranteed by the UK, Greece and Turkey.
1963	Changes and modification of constitutional orders, which were rejected by Turkish Cypriots and resulted in intercommunal violence.
1964	UN deployed peacekeepers to guarantee the safety of both communities, prevent violence, and enforce constitutional law, in addition to protecting the island against international actors (i.e. Turkey)
1967	Military coup in Greece (Military Junta)
1974	Coup against the republic organised by the Greek junta and armed response by Turkish troops that occupied the northern third of the island. Massive displacements and population transfer followed.
1975	Self-declaration of Turkish Federated State of Cyprus in the north.
1983	After failure of UN-sponsored negotiations, self-declaration of independence as Turkish Republic of Northern Cyprus in the north. TRNC recognised only by Turkey.
1998	Accession negotiations begin between Cyprus and the European Union.
2004	The settlement plan sponsored by then UN Secretary General Kofi Annan and accepted by Turkish Cypriots was rejected by Greek Cypriots. The Republic of Cyprus became a member of the European Union while Northern Cyprus was excluded from the body of legislation guiding EU policy.
2005	Mehmet Ali Talat, a pro-Annan Plan leader, was elected President of the Turkish Cypriot community.
2008	Limited success in negotiations led to the reunification of Ledra Street in Nicosia that had been divided since 1964. The two leaders meet 40 times over 11 months in a new round of peace talks.
2009	Pro-independent National Unity Party (UBP) won the majority of seats in Turkish Cypriot parliamentary elections.
2010	Re-unification talks resumed with a new hardliner, Dr. Derviş Eroğlu, representing the Turkish north.
2011	Republic of Cyprus and Turkey began exploratory drilling for oil and gas, causing diplomatic tensions.
2012	Fiscal crisis in Cyprus and appeals to the EU for financial assistance.
2013	Socialist Nicos Anastasiades won the presidential election in Republic of Cyprus.
2014	Negotiations were suspended due to Turkey's gas field explorations in southern Cyprus.
2015	Akinci, long term mayor of Nicosia (Turkish Side) was elected president and advocated for change in TRNC's relationship with Turkey as brother/sister instead of a mainland relationship. Talks on reunification resumed.
2016	Internal conflict between political parties of the TRNC (pro-independence vs. pro-reunification).
2017	UN sponsored direct talks in Geneva for a reunification settlement under a federal arrangement. Possibility of another referendum. Failure of talks as no agreements concluded in the UN sponsored conference on Cyprus problem in 7 <sup>th</sup> July 2017.

<sup>39</sup>adapted from Tiryaki & Akgün, 2011; The Heybeliada Talks: Two Years of Public Diplomacy on Cyprus

### 4.3 Property Regimes and Abandoned Properties in a Conflict Zone; TRNC

As explained earlier, normal abandoned, vacant, and misused previously-developed lands – widely known as brownfield sites – have many complexities in their nature, but they usually have the advantage of clear land registry and ownership status. In contrast, lands and properties in disputed areas such as Cyprus have extremely complex and complicated ownership status; as discussed in the previous chapter, in conflict zones, who has the power holds the ability to practice, alter, and manipulate both land law and ownership status. This study identifies a new paradigm through which to understand abandoned properties and geopolitical brownfield sites, where areas are abandoned as a result of fear, violence or combat rather than voluntarily due to economic changes. The intercommunal violence of Cyprus does not originate from a simple historical event of bicomunal conflict, so it is a complex matter to comprehend and is directly linked to the power and space argument discussed in Chapter 3.

Turning now to the empirical evidence in the case of the Cyprus conflict and its associated abandoned properties, this section of the study highlights three critical questions, 1) What is the definition of ‘abandoned’ in geopolitical conflict zones? 2) What is the definition of illegal occupation? and 3) What is the most comprehensive solution to issues arising from abandonment and subsequent occupation of property in geopolitical conflict zones? To answer these questions, particularly in the context of North Cyprus, it is essential to understand the perspective of both parties. During the events of 1958 to 1975, armed activities, political accords, community principles, etc. all brought intercommunal conflict and violence and it is incorrect to refer to left-behind properties as voluntarily abandoned. For instance, after many years of displacement from the south and discrimination against Turkish Cypriots, they had no choice but to rely on Greek Cypriot properties in the north after the division of 1974. At the same time, Greek Cypriots’ rights to return to their homes and properties in the north are fundamental.

This section of the study therefore advocates for an alternative perspective on abandoned properties, which may consider both displaced and dispossessed persons’ rights as a way of dealing with abandoned properties in conflict zones. It is also important to highlight that the abandoned properties of Cyprus are not just limited to dispossessed public and private lands on both sides but also include restricted and abandoned areas such as the UN buffer zone, the closed Varosha district, Cyprus international airport, as well as areas occupied by military forces (Figure 30). This study provides evidence of the need for the conceptual framework of ‘geopolitical brownfields’ as a new land typology for such cases, which was introduced in the second chapter of this study. To find an answer to the aforementioned questions, this section focuses on the characteristics of abandoned properties in North Cyprus by means of legal definitions, spatial characteristics and their associated social and political aspects.



**Figure 30 “Cyprus Airport Sits Abandoned in UN Buffer Zone - A waiting room inside Nicosia International Airport, Cyprus. Abandoned in 1974 when fighting erupted between Greek and Turkish Cypriots, the inoperable airport now lies within the UN-controlled buffer zone. (Source: Right photo: UN Photo/Eskinder Debebe.” (UN Photo/Eskinder Debebe, 2010). - Left photo: Cyprus international airport during 1968-1974, the photo taken from: Varlamov.ru. (2012, March 12)<sup>40</sup>.**

Historical evaluations of the Cyprus conflict established the basis that the abandoned properties of Cyprus and their associated ownership disputes are not just the result of one single divisive event in 1974. In fact, the forced population transfer, and displacements accumulated over three periods from 1958 to 1960, 1963 to 1974 and after the conflict and partitioning events of 1974. These three periods of displacement led to an increase in unresolved property ownership issues with a high level of complexity. Consequently, more than four decades of ongoing conflict and long peace negotiations without any definitive resolution have turned land disputes and property ownership into a complicated scenario. A situation that even today lacks a definitive solution for those who lost their properties or those who occupied those abandoned properties over the last forty years (Figure 31).

The process of production of abandoned properties can be understood to some extent by analysing the issue of displacement, which represents the contemporary political orders of geography with regard to exercise of power over space (Figure 32). In Northern Cyprus, diversity in land ownership property regimes and deficiencies in the associated legal mechanisms contributed to additional land management complications. To enable this study to accurately evaluate abandoned properties of Cyprus and to enhance those evaluations, data was synthesized from local laws and policies in Cyprus, international accords, treaties, and court cases. Four rounds of qualitative surveys, field studies and interviews about abandoned properties and the property regime of North Cyprus added reliability to this data collection and the overall process of evaluation.

<sup>40</sup> The photographer and the year are unknown; however the photo shows the Cyprus international airport during 1968-1974, the photo taken from: Varlamov.ru. (2012, March 12). abandoned Nicosia airport. Retrieved March 10, 2015, from Varlamov.ru: <http://varlamov.ru/536056.html>





Figure 31 The Green Line and abandoned properties in Nicosia, Cyprus (Credits: Marco Fieber, June 14, 2016, CC BY-NC-ND 2.0)

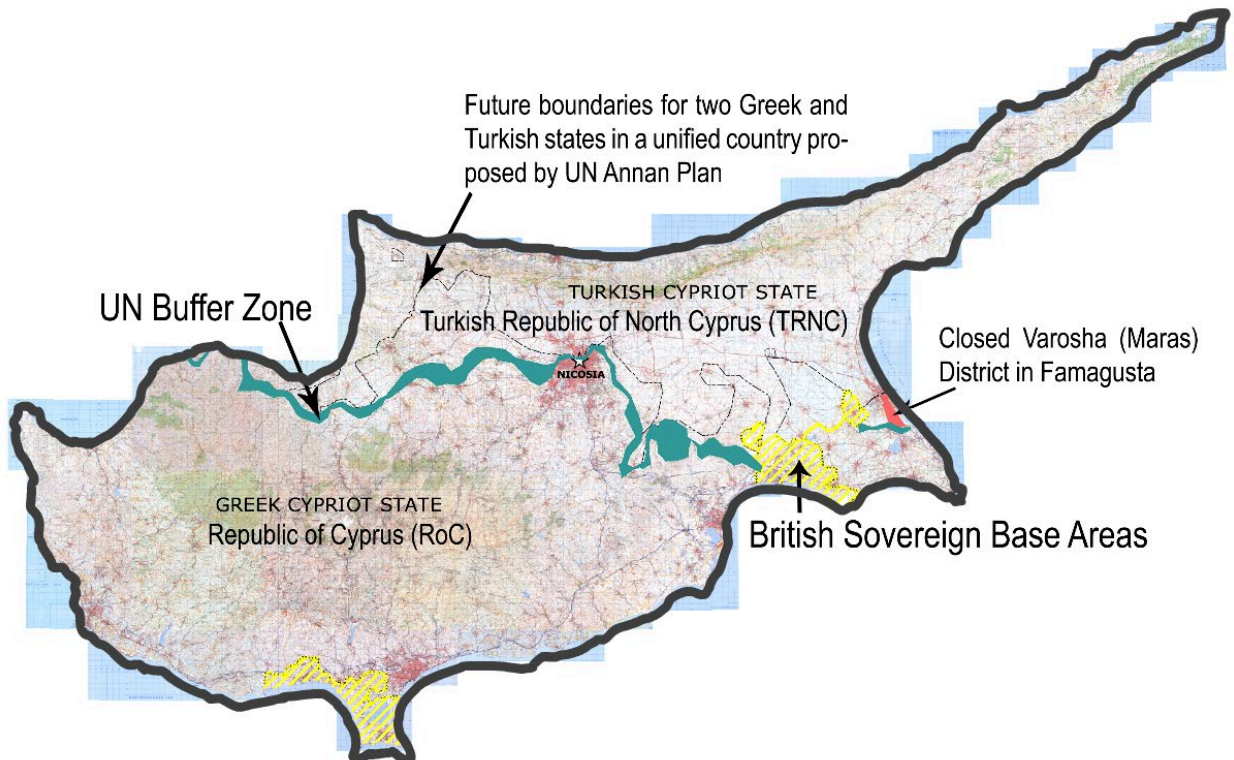


Figure 32 - Map of the political geography of Cyprus illustrating the loss of geographical and territorial integrity of the island (Adapted from UN Annan Plan by the author).

### **4.3.1 Property Regime and Land Ownership Issues of Northern Cyprus (1974-2015)**

Since 1974, land management and property ownership statuses in North Cyprus have been complicating the attempted resolution of the Cyprus problem. Diverse property regimes affecting the titling systems, which are legacies of British and Ottoman land law, 1960 land law, 1974 to 1983 North Cyprus provisional land law, and 1983 TRNC land law, have so far presented insurmountable obstacles. In a bid to address this issue, the present study categorized the title deeds in North Cyprus into three general types. 1) pre-1974 Turkish or foreign (non-Greek) title deeds, 2) pre-1974 Greek title deeds that are not valid anymore in TRNC and are known generally as TRNC Esdeger (Exchange) freehold title deeds, and 3) public and institutionally owned lands (i.e. Vakif lands, military lands, etc.). These three types of title deed are used in North Cyprus to protect the land ownership status of the Turkish Cypriot community and foster security measures within their property regime. This situation has arisen from two general issues, 1) traditional competition and disputes between both the Greek and Turkish communities on claims over land ownership, and 2) protection of the declared Turkish area in the north, in response to historical threats of Greek Cypriot domination (Gürel, 2012).

#### **Pre-1974 Turkish or Foreign (non-Greek) Title Deeds in Northern Cyprus**

These are pre-1974 title deeds owned by Turkish Cypriot individuals or their administrations for land in the northern part of the island under the control of TRNC. It also includes title deeds of any foreign person (majority British) who owns land in the area covered by the now-TRNC before 1974. On average, 30% of the total private- and public-owned lands of Northern Cyprus fall into this category. However, there is a dispute over this figure, which the Turkish Cypriots estimate to be ~36% in contrast with the considerably lower Greek Cypriot statistics of ~21% (Gürel & Özersay, 2006).

#### **Pre-1974 Greek Title Deeds in Northern Cyprus**

After the division of 1974 and its resultant population displacements, Turkish Cypriots had no chance but to accommodate the displaced persons on Greek lands and properties. In addition to the urgent need to accommodate displaced Turkish Cypriots in 1974-1975, in 1982 a series of measures and laws were put in place to provide property for victims of the conflict, their families, and the soldiers who fought from 1958 to 1976. Moreover, between 1974 and the early 1980s, as Ankara planned to increase the Turkish population of Northern Cyprus, agricultural lands and residential properties were allocated to emigrating farmers and labourers from the Republic of Turkey.

The new land ownership policies that implemented in 1982 transferred such properties to Turkish Republic soldiers who fought in the 1974 armed-force conflict and later became residents of Northern Cyprus. The previously owned (pre-1974) properties of Greek Cypriots were the source of this land distribution via a points system established by the Turkish Cypriot administration. Consequently, the occupied pre-1974 Greek properties became part of a legal mechanism and the socio-economic characteristics of TRNC, in



which they were later legally defined as TRNC freeholds title deeds. This type of title deed is also known as an exchange title deed, corresponding to deals for the exchange of land with Greek Cypriots.

In 1983, these land and property allocations were justified in the constitution<sup>41</sup> of the TRNC with a claim that all public and private properties registered in the name of the Republic of Cyprus, Greek Cypriot individuals or legal persons, were owned by the TRNC (TRNC Constitution, 1983). This was a strategic act in TRNC legislation to establish a legal justification for land occupations in Northern Cyprus. This specific article of the TRNC constitution is based on İTEM Law (41/1977) corresponding to housing and allocation of land and property of equal value for Turkish Cypriots. The İTEM<sup>42</sup> law was prepared on August 3, 1977 by the assembly of the Turkish Federation State of Cyprus (TFSC), as a step toward an independent state (ITEM Law 41/1977, 1977). Thereafter, from 1981 to 1988, legislation related to land allocation and ownership of left-behind properties (abandoned properties) of Greek Cypriots was prepared as the legal basis of ownership transfer to the TRNC and its citizens.

In response, a number of dispossessed Greek Cypriot property owners including the Republic of Cyprus itself brought cases to the European Court of the Human Rights (ECtHR) making claims against Turkey and the individuals who had occupied their lands (Thorp, 2010). A few, though not many, cases have achieved success with their claims. As a reaction to ECtHR decisions, the TRNC assembly passed a law<sup>43</sup> in 2005 to protect the future settlement and ownership status of TRNC citizens (LAW 67/2005, 2005). This law regulates the compensation or exchange of property with Greek Cypriots who are claiming their ownership right over immovable properties within the territory of TRNC. Based on this law, an Immoveable Property Commission (IPC) was established with three main authorities: 1) Restitution of the property, 2) Property exchange, and 3) Payment of compensation. Since 2010, the ECtHR recognised the activities of the IPC as an acceptable domestic remedy and suggested that claims should either go to the IPC or wait for global political settlement (IPC, 2006).

### **Public and Institutionally-Owned Lands**

Turning briefly to the history of Cypriot legislation, different types of public or institutionally-owned lands can be identified, such as Vakif lands, Miri lands, military lands, Church lands, State lands, etc. Vakif and Miri lands are heritage of the Ottomans. Miri lands were the property of the Sultan during Ottoman rule, which was ended by the 1946 British Immoveable Property (Tenure, Registration and Valuation) Law (Cyprus Land Law, 1946). However, the Vakif lands and their property regime remained in practice. Vakif lands are properties donated to religion for public or religious benefit and belong to a traditional Muslim established organisation called Evkaf. According to Islamic laws, Evkaf properties are not transferable. In the 1960 constitution of the Republic of Cyprus, Evkaf is recognised as a Turkish Cypriot institution. Both

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<sup>41</sup> Article 159 of the TRNC constitution

<sup>42</sup> Turkish language abbreviation of Settlement, Land Distribution, and Equivalent

<sup>43</sup> Law for the Compensation, Exchange and Restitution of Immoveable Properties (67/2005)

military and Church lands are problematic, complicating property ownership in the TRNC, because neither areas occupied by Turkish troops nor UN bases are under the control of TRNC land legislation, and there is no clear available information on Church lands, which informally fell into what is defined as ‘state’-owned lands.

The TRNC constitution justified the right of ownership of all public properties within the territory of Northern Cyprus to the Turkish Cypriot local government (TRNC Constitution, 1983). Section ‘a’ of article 36 of the constitution declared that “The right of the State to the immovable properties mentioned in Article 159 is reserved”. Article 159 addresses all public immovable properties and lands, including the properties registered to the Republic of Cyprus (such as “roads, waters, water resources, ports, harbours and shores, docks and piers, lakes, riverbeds, and lakebeds, historic cities, buildings, ruins and castles and the sites thereof, natural resources and underground resources, forests, defence buildings and installations, green areas and parks belonging to the public; village roads and rural pathways open to the public; and buildings used for public services”), military installations, and abandoned properties (mainly Greek Cypriot properties).

#### **4.3.2 International Reactions to the TRNC Property Regime**

The TRNC possesses the following characteristics of a state:

- Established legislation and legal mechanism,
- Geographical territory, size, and location,
- Having effective territorial control,
- Existence of diverse political parties,
- Community integrity

However, because of the incompatibility of its establishments and legal systems with international agreements and conventions, it is unable to achieve global recognition and remains, internationally, an illegal state. This description is adopted from what is known as a ‘de facto state’ (Pegg, 1998). It is important to not confuse this term with ‘de facto regime’ or ‘de facto government’, where a de facto regime (partially) and de facto government (fully) advocate for recognition as the legitimate government of an existing state (Essen, 2012). Therefore, the United Nations Security Council (UNSC) responded to the establishment of the TRNC, its constitution, property regime, and exchange of ambassadors with Turkey with two key resolutions - 541 (18 November 1983) and 550 (11 May 1984), which prevent it from being recognised as a state by other UN state members.

“Recalling its resolutions 365 (1974), 367 (1975), 541 (1983) and 544 (1983), deeply regretting the non-implementation of its resolutions, in particular resolution 541 (1983), gravely concerned about the further secessionist acts in the occupied part of the Republic of Cyprus which are in violation of resolution 541 (1983), namely, the purported exchange of ambassadors between Turkey and the legally invalid "Turkish Republic of Northern Cyprus" and the contemplated holding of a

"constitutional referendum" and "elections," as well as by other actions or threats of actions aimed at further consolidating the purported independent State and the division of Cyprus, deeply concerned about recent threats for settlement of Varosha by people other than its inhabitants." (UN Security Council, 1984)

The sanction of non-recognition of the de facto state of the TRNC became one of the main issues resulting in their losing the cases of property ownership disputes in the ECtHR. The only internationally-acceptable legal act of the TRNC is related to 2010 ECtHR recognition of the Immovable Property Commission (IPC) under 67/2005 TRNC property law.

#### **4.3.3 Abandoned Properties in the TRNC and Associated Legal Justifications**

According to the global understanding of 'abandonment', it is difficult to consider the left-behind properties of either Turkish Cypriots or Greek Cypriots to be abandoned because the situation is incompatible with the intent of never again claiming a right or interest. The majority of people who left their properties due to the conflict and displacements considered it a temporary situation with the intent to return at the first available opportunity. This is evidenced by the many applications that have been submitted to various organisations to reclaim the right of ownership (i.e. ECtHR, IPC, etc.). Against the desire of the majority of displaced persons, the constitution of the TRNC declared the properties of Greek Cypriots as abandoned and reserved its right of ownership to them all, as per paragraph 'b' of article 159 of the TRNC constitution, the 'Right of the State to Ownership':

"All immovable properties, buildings and installations which were found abandoned on 13th February 1975 when the Turkish Federated State of Cyprus was proclaimed or which were considered by law as abandoned or not being owned after the above mentioned date, or which should have been in the possession or control of the public even though their ownership had not yet been determined." (TRNC Constitution, 1983)

This point of view is based on the voluntary population transfer of Greek Cypriots from north to the south, leaving behind their properties in the north. It relies on the third Vienna Agreement of August 1975, a bilateral accord of population exchange between both sides; Turkish Cypriots thus assume (from this agreement) that all the left-behind properties are abandoned (Vienna Agreement, 1975). This forms the basis of understanding for Turkish Cypriots that at the time of the population transfer, the properties in the north came into Turkish Cypriot ownership while the properties in the south were relinquished to Greek Cypriot ownership. However, this understanding was not acceptable to either the Republic of Cyprus or international entities such as the ECtHR, since the agreement was for the purpose of population transfer during the conflict years and had no bearing on property or ownership issues. Gürel (2012) argues that this difference in understanding from both sides of the dispute traces back to their respective perceptions of the causes of the 1974 conflict and partitioning events. The Turkish Cypriots see the cause as the violence and conflicts of 1963, while the Greek Cypriots, on the other hand, consider to the problem to be the result of the Turkish military operation in 1974 (Gürel, 2012).

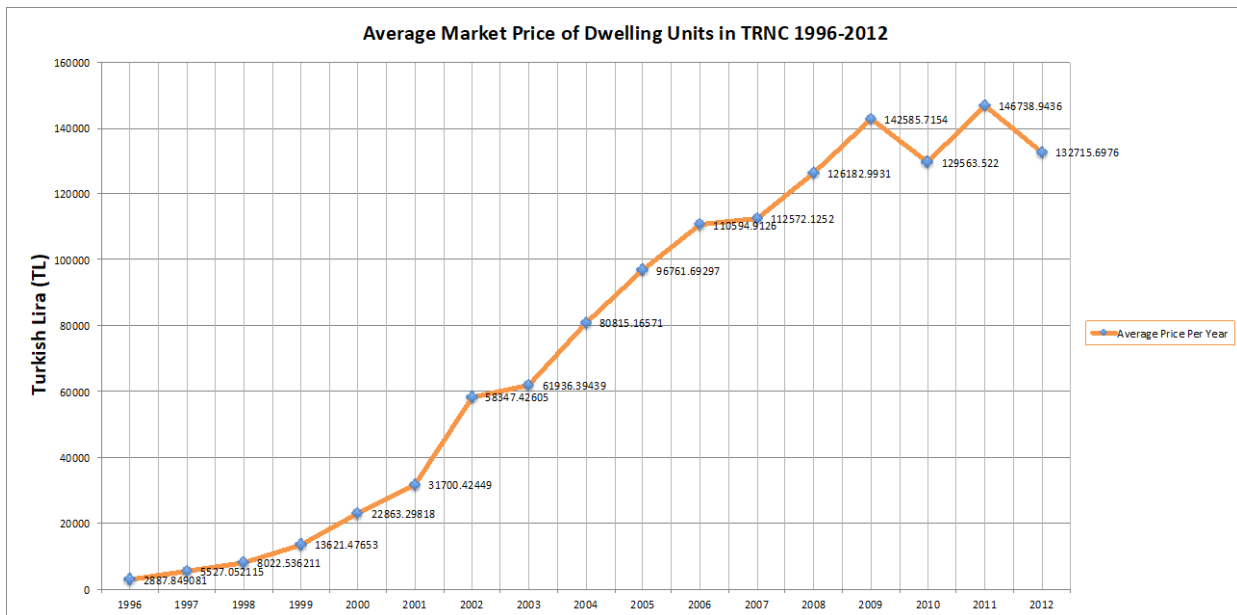
Since 1974, issues relating to displaced persons, abandoned properties, and occupied properties were always the main disputes in the peace negotiations. While Turkish Cypriots insist on a federation system that protects their independency and their domination of northern territories, Greek Cypriots seek the return of their lost properties. A federal government is compatible with the traditional ‘Taksim’ political perspective (division) favoured by Turkish Cypriots, but Greek Cypriots consider this to be against fundamental principles of human rights by preventing them from returning home.

The Taksim (partition) agenda has been promoted by the Turkish Cypriots of the TRNC since the collapse of the bicomunal government in 1963. Gürel and Özersay (2006) noted that they consider the Taksim concept to be the only solution that guarantees their security in terms of the economy and freedom from Greek Cypriot intentions to dominate the island (Gürel & Özersay, 2006). Accordingly, the TRNC solution to the land ownership issue is reflected in their property exchange law (67/2005) through which exchange and compensation solutions were sought by Immovable Property Commission (IPC) actions in 2006. By 2010, this was recognised by the ECtHR as the first step for local a local solution. The general response of the TRNC to land ownership issues is consistent with their view of the ideal resolution to the overall conflict – division.

In contrast, the Greek Cypriots’ argument relies on article one (protection of property) of the first protocol of the “Convention for the Protection of Human Rights and Fundamental Freedoms” that highlights that everyone has the right to peacefully enjoy his or her possessions and no person shall be deprived of their right or possessions (ECtHR, 2010). In the cases of dispossessed Greek Cypriot owners against Turkey or individuals in Northern Cyprus, the ECtHR found evidence of infringements of property rights. The ECtHR identified the property rights infringements to be based on two major acts of the TRNC: 1) Not allowing land ownership transfer to Greek Cypriots who owned the land before 1974; 2) The TRNC legislations that categorised the left-behind properties of Greek Cypriots as being permanently abandoned. The main aim of Greek Cypriot arguments with respect to the fundamental principles of human rights is to ensure the right of all displaced persons to possess and return to their property (Gürel & Özersay, 2006), an aim which is incompatible with the Taksim agenda of Turkish Cypriots.

#### **4.3.4 Socio-Economics Conditions of Abandoned Properties**

As general consequences of isolation and international ignorance, the market values of real estate properties in Northern Cyprus became strongly associated with the outcomes of conflict resolution processes and talks. For instance, the positive forecast of investment value on real estate properties before the April 2004 referendum of the United Nations’ Annan Plan (UN Annan Plan, 2003) brought a construction boom and increased international demands for purchasing real estate properties in Northern Cyprus by a yearly market price increase of 100% between 2000 and 2004 (Chart 1). However, after rejection by referendum and the subsequent failure of the plan, the growth rate of property values increased with only an average yearly ratio of 20% (TRNC SPO, 2015).



**Chart 1 - According to government statistics for the real estate market prices of new constructions in TRNC, market prices from 2000 to 2004 increased around 400%. However, the same statistics show that the average growth of the market price from 2004 to 2012 was around 165% (Reference: TRNC SPO, 2015, Chart created by the author)**

Considering the real estate value of these abandoned properties is another factor that can contribute to the development of problem identification process under the conceptual framework of 'geopolitical brownfields'. In a real estate price comparison (with similar characteristics in both sides) it has been determined that as a result of the ongoing conflict, the prices of properties in Northern Cyprus are cheaper (over 50%) than in the southern part of the island in a sample of ±1000 listed properties for sale in both sides of the island (Table 8; Table 9) (Shojaee Far & Marmolejo Duarte, 2015).<sup>44</sup>

<sup>44</sup> One of the cases was presented as an interview with an Irish couple that invested in an apartment in the northern part: "It was the price, the quality and the stunning scenery which made us change our mind," said Jolene. They had been set to spend £130,000 on an apartment in Agia Napa, a popular tourist resort in the south. A friend suggested they contact a property agency in the north side, and they decided to go and look at some projects in Famagusta. ... "I was immediately struck by the difference in quality and price. We also fell in love with the area, it is simply beautiful," added Jolene. With their £80,000 two bed apartment due for completion next year the couple and their two young children are looking forward to spending up to six weeks a year there and enjoying a rental income (Property-Wire, 2008).

Table 8 - Comparison of market prices of dwelling units between northern and southern Nicosia

	<b>Nicosia (North)</b>	<b>Nicosia (South)</b>
<b>Building Type</b>	House/Villa	House/Villa
<b>Built Area</b>	180 m <sup>2</sup>	170 m <sup>2</sup>
<b>Price</b>	€156,600	€600,000
<b>Location</b>	Urban Boundary	Urban Boundary
<b>Number of Beds</b>	3 Bedrooms	3 Bedrooms
<b>Photo</b>		
<b>Reference</b>	<a href="http://www.borayestates.com/properties/kk1397/#prettyPhoto">http://www.borayestates.com/properties/kk1397/#prettyPhoto</a>	<a href="http://www.ktimatagora.com/properties-for-sale/3-bedroom-house-villa-for-sale-in-nicosia-centre">http://www.ktimatagora.com/properties-for-sale/3-bedroom-house-villa-for-sale-in-nicosia-centre</a>
<b>Building Type</b>	<b>Apartment-Flat</b>	<b>Apartment-Flat</b>
<b>Built Area</b>	90 m <sup>2</sup>	100 m <sup>2</sup>
<b>Price</b>	€64,100	€167,000
<b>Location</b>	Urban Boundary	Urban Boundary
<b>Number of Beds</b>	2 Bedrooms	2 Bedrooms
<b>Photo</b>		
<b>Reference</b>	<a href="http://www.borayestates.com/properties/kk1354/">http://www.borayestates.com/properties/kk1354/</a>	<a href="http://www.ktimatagora.com/properties-for-sale/2-bedroom-apartment-flat-in-lefkosia-nicosia-centre-nicosia-cyprus-2">http://www.ktimatagora.com/properties-for-sale/2-bedroom-apartment-flat-in-lefkosia-nicosia-centre-nicosia-cyprus-2</a>
<b>Building Type</b>	House/Villa	House/Villa
<b>Built Area</b>	176 m <sup>2</sup>	160 m <sup>2</sup>
<b>Price</b>	€183,900	€250,000
<b>Location</b>	Suburb	Suburb
<b>Number of Beds</b>	3 Bedrooms	3 Bedrooms
<b>Photo</b>		
<b>Reference</b>	<a href="http://www.borayestates.com/properties/gn1380/">http://www.borayestates.com/properties/gn1380/</a>	<a href="http://www.ktimatagora.com/properties-for-sale/3-bedroom-house-villa-in-lakatameia-pano-lakatameia-nicosia-cyprus-1">http://www.ktimatagora.com/properties-for-sale/3-bedroom-house-villa-in-lakatameia-pano-lakatameia-nicosia-cyprus-1</a>

Although the prices in TRNC are significantly more attractive compared to the southern part, there are many criticisms and cautions related to the risks of investing in real estate of the northern part. Many displaced Greek Cypriots are looking for compensation and/or return of their property. In 2013, the Foreign and Commonwealth Office of UK government published a guideline to warn their citizens about real estate investment in Cyprus and particularly Northern Cyprus:

“Purchasing property in Cyprus has a number of potential pitfalls [...] Purchase of these properties could have serious financial and legal implications. The European Court of Human Rights has ruled in a number of cases that owners of property in Northern Cyprus before 1974 continue to be regarded as the legal owners of that property. Purchasers could face legal proceedings in the courts of the Republic of Cyprus, as well as attempts to enforce judgements from these courts elsewhere in the EU, including the UK. There has been at least one successful case to enforce rulings in the UK, putting at risk property owned in the UK” (Foreign & Commonwealth Office, 2013)

Evidently, as the TRNC freehold title deeds are just recognised by Turkey and TRNC, their international validity depends on the future political settlement in Cyprus. Although pre-1974 title deeds are commonly known as safe investments, the UK government has also warned their citizens, “even when purchasing pre-1974 Turkish title land, you may still be refused permission to purchase the land/property and no reason for the refusal may be given” (Foreign & Commonwealth Office, 2013).

Besides, it is important to note that in the two decades following the partition events of 1974, the real estate market of Northern Cyprus was significantly disturbed because the majority of the property exchanges (allocations, buy, sell) was done on a point system rather than capital exchange (1976-1997). Apart from this, as the values of the restricted areas still remains unclear and cannot be appraised with market values, it is necessary to consider non-market valuation techniques (i.e. the closed Varosha district, the UN buffer zone, etc.). The possible values of ‘geopolitical brownfields’ can be considered by evaluating the social impact of such disturbed properties on both communities that may be approached by the contingent valuation model and surveys from the local community in the affected areas (discussed in Chapter 2). It is important also to emphasise political uncertainties and their associated policies have a direct impact on the understanding of values associated with abandoned properties in conflict zones (Shojaee Far & Marmolejo Duarte, 2014)..

Table 9 - Comparison of market prices of dwelling units between Famagusta and Larnaca

	<b>Famagusta (North)</b>	<b>Larnaca (South)</b>
<b>Building Type</b>	House/Villa	House/Villa
<b>Built Area</b>	208 m <sup>2</sup>	180 m <sup>2</sup>
<b>Price</b>	€197,300	€385,000
<b>Location</b>	Urban Boundary	Urban Boundary
<b>Number of Beds</b>	3 Bedrooms	3 Bedrooms
<b>Photo</b>		
<b>Reference</b>	<a href="http://www.quralestate.com/tr/re-sale/villa/item/416-saklkent-satlik-villa.html">http://www.quralestate.com/tr/re-sale/villa/item/416-saklkent-satlik-villa.html</a>	<a href="http://www.ktimatagora.com/properties-for-sale/3-bedroom-house-villa-for-sale-in-larnaca-1">http://www.ktimatagora.com/properties-for-sale/3-bedroom-house-villa-for-sale-in-larnaca-1</a>
<b>Building Type</b>	Apartment-Flat	Apartment-Flat
<b>Built Area</b>	90 m <sup>2</sup>	95 m <sup>2</sup>
<b>Price</b>	€43,560	€135,000
<b>Location</b>	Urban Boundary	Urban Boundary
<b>Number of Beds</b>	2 Bedrooms	2 Bedrooms
<b>Photo</b>		
<b>Reference</b>	<a href="http://www.quralestate.com/tr/re-sale/apartment/item/287-ayluka-satlik-daire.html">http://www.quralestate.com/tr/re-sale/apartment/item/287-ayluka-satlik-daire.html</a>	<a href="http://www.ktimatagora.com/properties-for-sale/2-bedroom-apartment-flat-for-sale-in-larnaca-centre-1">http://www.ktimatagora.com/properties-for-sale/2-bedroom-apartment-flat-for-sale-in-larnaca-centre-1</a>
<b>Building Type</b>	House/Villa	House/Villa
<b>Built Area</b>	180 m <sup>2</sup>	170 m <sup>2</sup>
<b>Price</b>	€204,200	€320,000
<b>Location</b>	Suburb	Suburb
<b>Number of Beds</b>	3 Bedrooms	3 Bedrooms
<b>Photo</b>		
<b>Reference</b>	<a href="http://www.quralestate.com/tr/re-sale/villa/item/1177-saklkent-bölgesinde-satlik-villa.html">http://www.quralestate.com/tr/re-sale/villa/item/1177-saklkent-bölgesinde-satlik-villa.html</a>	<a href="http://www.ktimatagora.com/properties-for-sale/3-bedroom-villa-in-oroklini-larnaca-cyprus-17">http://www.ktimatagora.com/properties-for-sale/3-bedroom-villa-in-oroklini-larnaca-cyprus-17</a>



### 4.3.5 Classification of Causes for Abandonment in A Conflict Zone

In previous discussions (Section 4.1) buffer zone and its abandoned properties categorised into three areas according to their physical location and spatial condition; a) areas that divide a city (i.e. Nicosia), b) areas that located in Greenfields and divide them, c) areas that fence a whole district or functional area (i.e. Cyprus international airport, Varosha District). However, after general discussions and exploration on abandoned properties in a conflict zone (presented in Section 4.3), it has become essential to distinguish ‘spatial’ from the ‘causes’ of abandonment. Therefore, buffer zone in Cyprus may be classified on the basis of their legal, social, and political causes into ‘peacekeeping’, ‘peripheries’ and ‘displacement’.

Such classification can be utilised in problem identification process. This system of classification helps distinguish the different reasons behind fencing an area and transforming it (and its periphery) to abandoned properties. This classification has been included for several reasons: it is a method to identify the legal or conventional justifications for an abandonment in a conflict zone; it illustrates each class of causes requires different strategical approach to deal with; and it describes the process of abandonment, as usually it is not result of a single event or act.

#### **Peacekeeping:**

Peacekeeping is a tool for United Nations (UN) to maintain international peace and security, as one the main purpose of UN in its 1945 established charter. Evidences of peacekeeping operation in Cyprus presented in previous discussion such as establishment of UN buffer zone through whole island, green line (part of buffer zone) in Nicosia, fencing Cyprus international airport, etc. Such operations are based on responsibilities of UN Security Council to enforce range of measures for peace and security such as deployment of peacekeeping operation for ensuring best efforts on implementation of “International humanitarian law”<sup>45</sup> with focus on post-conflict environments (UN Department of Peacekeeping Operations, 2008). The published principle and guidelines of UN peacekeeping operation (2008) determined peacekeeping as:

“Peacekeeping is a technique designed to preserve the peace, however fragile, where fighting has been halted, and to assist in implementing agreements achieved by the peacemakers. Over the years, peacekeeping has evolved from a primarily military model of observing cease-fires and the separation of forces after inter-state wars, to incorporate a complex model of many elements – military, police and civilian – working together to help lay the foundations for sustainable peace.” (UN Department of Peacekeeping Operations, 2008)

However, one of the major techniques of peacekeeping operation is holding a neutralised zone between parties of a conflict to avoid further violence and reduce possibilities of unhealthy and problematic interactions. In a simple explanation, although is it expressively complex, this technique parcels up the

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<sup>45</sup> “International humanitarian law is known also as “the law of war” or “the law of armed conflict,” and restricts the means and methods of armed conflict. International humanitarian law is contained in the four Geneva Conventions of 1949 and their two Additional Protocols of 1977, as well as in rules regulating the means and methods of combat. International humanitarian law also includes conventions and treaties on the protection of cultural property and the environment during armed conflict, as well as protection of victims of conflict.” (UN Department of Peacekeeping Operations, 2008)

lands, fence areas, and close facilitates that are in question by both parties. Consequently, such actions impose property abandonment by occupying party(s). The main intention of such technique is to protect the usual fragile peace accords till sustainable peace established.

As it discussed before, the peacekeeping operation of UNFICYP started in 1964 with intention of only three months operation, but up until now this operation is in place. Considering the intention of this operation is for benefits of both sides, this study identifies this as one of the major causes of long-term property abandonment in Cyprus, which the negative side effect of such good intention is upholding lands (abandoned and derelict) as no man’s land (Figure 33).

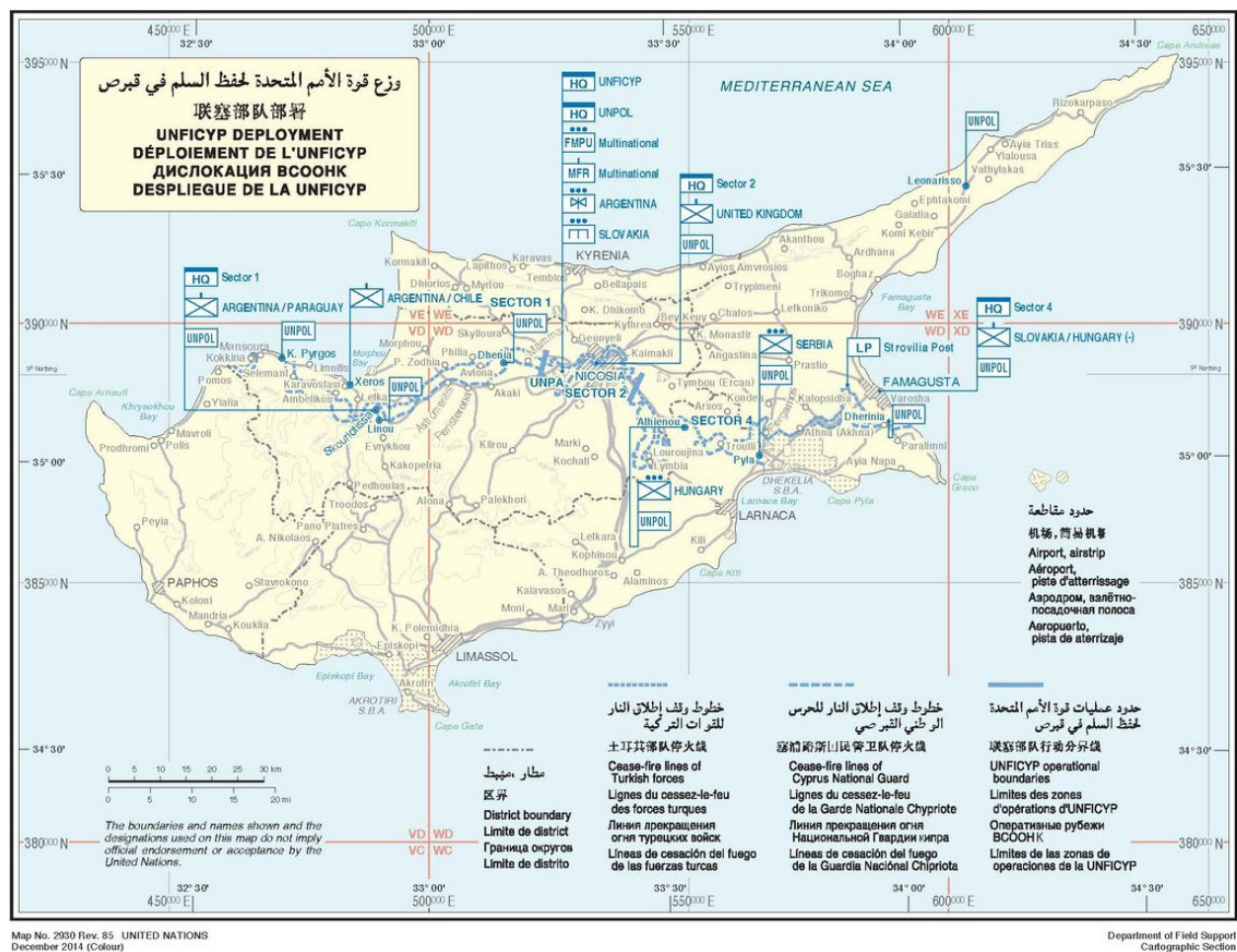


Figure 33 – Map of UNFICYP Deployment, December 2014 status (UNFICYP, 2014).

### Peripheries:

This second category in this classification is ‘peripheries’ of restricted areas (i.e. buffer zone, fenced areas, militarised zones, etc.). Restricted areas are dominant pressure that negatively impact peripheral areas by means of safety, security, infrastructure, legal system, and market values that is already discussed in this Chapter. Such areas usually suffer from local authority ignorance as determined by authorities as the areas with high level of risk associated with uncertainty. This ignorance imposes low level of social integrity and sense of belonging into the area and its local inhabitants (Figure 34). Consequently, what is occurred in

different peripheries of Cyprus buffer zone, the local inhabitants try to sell or ultimately abandon their properties in search of more stable neighbourhoods with higher level of amenities and infrastructure (Figure 35). This phenomena in Cyprus identified as the abandonment of houses, where the most vibrant neighbourhood of the cities used to be (Shojaee Far & Atun, 2012).



**Figure 34 – Northern Peripheries of Nicosia Buffer Zone; a graveyard that converted to industrial warehouses and British military camp and later on a UN camp. In 1964 displaced Turkish Cypriots settled in warehouses and after 1974 other Turkish Cypri refugees resettled in semi-slum conditions (Shojaee Far, 2011)**



**Figure 35 – Northern Peripheries of Nicosia Buffer Zone; Back street of Abdi Ipekci Caddesi that main street renovated under actions of Nicosia Master Plan, but back street remained vacant and abandoned (Shojaee Far, 2011).**

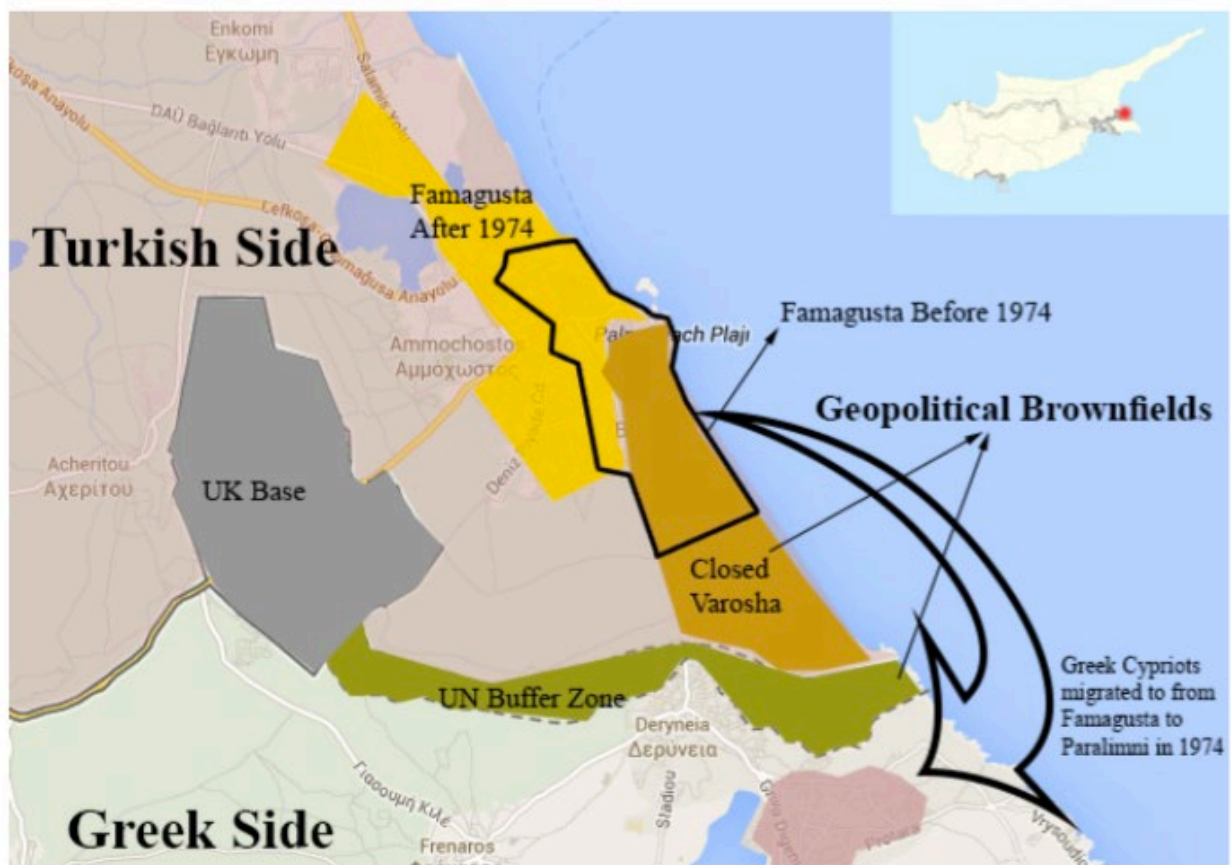
## **Displacement;**

Mass ‘displacement’ in this classification is explained as consequence of fear of armed force activities, with the hope of returning in a short time. However, the owners could never return since the areas closed and their return possibilities became associated with long-term negotiations on political settlement. This category of abandonment cause has quite different characteristics from the other two as they were abandoned as a result of massive population transfer, and then they either fenced up or occupied by other parties of conflict. One of the areas of Northern Cyprus to have been most affected by the 1974 division of the island is the Varosha District in Famagusta. Once a vibrant community, the majority Greek Cypriot population fled to the south on the invasion of Turkish troops and has since been closed and left to decay (Oktay, 2007). Displaced population of both Turkish Cypriots and Greek Cypriots lost their properties as fear of armed force activities and become refugee in their own country.

### **4.3.6 The Case of Famagusta and its Ghost Town; Closed Varosha**

Famagusta (in Turkish Gazimağusa) is an eastern port city of Cyprus with deepest harbour of the island and located in the de facto Turkish Republic of Northern Cyprus. The city burdens glorious history of medieval period as one of the most important ports in Mediterranean region with its walled city and fortifications. The walls and its fortification were also known as shelter and bunker for Turkish Cypriots villagers who fled from violence of 1974 events. Upon the abandonment of Varosha district by Greek Cypriots, the city occupied by Turkish military on 15 August 1974 which Varosha district fenced and new settlers located on the north side of the UN buffer zone. Up until now, no one except Turkish militants and UNFICYP staff could enter the closed Varosha district. This district, which was one of the major touristic resorts of Famagusta, now is dead zone attached to the current city; a geopolitical brownfield (Figure 36). To this study, it is an evidence of the ignored social and cultural value of abandoned properties, where dereliction over more than 40 years has made the area a ghost town.





**Figure 36 - Map of Famagusta region with highlights of sites with suggested geopolitical brownfield land status (Source: Map prepared by the author)**

Both Turkish military and UNFICYP declared all the military bases, buffer zones, closed areas, and restricted zones in North Cyprus were a guarantee of peace for both parties, however the fencing Varosha for more than 4 decades has been always one of the major point of disputes in definition of ‘guarantee of peace’. In Greek Cypriot common opinion, it is the violation of their basic human rights and holding the area fenced is determined as long-term hostage negotiation. (Figure 37). Few people have been allowed in to the area to assess the current situation. Alexis Galanos<sup>46</sup>, a Greek Cypriot politician, stated in August 2017 (Famagusta Gazette, 2017) that plans are in place for the future infrastructure of the area, despite the only access being by drone due to continued Turkish military control. UN engineers have said that very little to no structural integrity remains in the buildings and it is thought that underlying issues such as rampant mould from the closed buildings will be incredibly difficult to eradicate (Famagusta Gazette, 2015). Rumours of a possible move by the TRNC government to re-open the area have been met with some scepticism from the RoC, with calls for the return the land to the previous (Greek Cypriot) inhabitants under UN Security Council 550 (Famagusta Gazette, 2017).

<sup>46</sup> Former President of the House of Representatives of Cyprus during 1991-1996



**Figure 37 – Aerial photo from closed Varosha district (Source: N/A)**

The entire neighbourhood of Varosha has become a derelict and unsafe brownfield site. Meanwhile, unplanned sprawl development to the north of Famagusta and the desertion of the walled city by former communities has put the city in danger of “doughnut syndrome”<sup>47</sup> (Oktay & Conteh, 2007). Low-cost properties hurriedly built by developers to meet the housing demand often took advantage of properties abandoned by Greek Cypriots – which are subject to issues of ownership and land title deeds (Shojaee Far & Marmolejo Duarte, 2015).

Moreover, the port of Famagusta, which previously handled 80% of the island’s marine import and export (The Telegraph, 2014), is closed to international traffic except from Turkey (Cyprus Ports Authority, n.d.), greatly impacting the economy of the TRNC. This, in addition to the lack of an international airport, has effectively isolated the TRNC from the rest of the world and from most international markets and tourism. It has been said for many years that withdraw of Turkish troops from Northern Cyprus would allow the return of Greek Cypriots to Varosha and the international access of Famagusta port and Ercan airport (in the TRNC), breaking the deadlock in the peace talks (Euractiv, 2010). Of course, Turkey is strongly opposed to this idea (Shojaee Far & Marmolejo Duarte, 2015). Simply it can be said that the political situation has isolated two of the major economic sectors of Northern Cyprus through Famagusta; international trade and tourism.

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<sup>47</sup> growing suburbs around a collapsed inner city

## **Famagusta Urban Situation**

Up until the last decade, it was expected that the conservation and restoration of the historic buildings and their contents in Famagusta would have to wait until the resolution of the conflict. In the last decade, however, international pressure was applied to put aside political differences for the preservation of its unique cultural heritage within the Walled City. However, without UNESCO status (since the TRNC is not an internationally recognized state), not so much funding and expertise to maintain the site is available (Starkweather, 2009). As a result of ongoing damage from exposure and lack of maintenance many areas in Famagusta Walled City may soon be destroyed beyond repair.

Two contemporary facts caused people move away from the Walled City; 1) its insufficient infrastructure, 2) to cope with the influx of international students and staff to the East Mediterranean University (EMU) that is opened in 1979. Also, the military bases located in the centre of the city and controlling the coastal port area are off-putting to potential residents (Shojaee Far & Marmolejo Duarte, 2015). Massive sprawl developments have been pressured the northern area of the city, the only available direction for growth. The south-east is blocked by the 'no man's land' of Varosha, while west and south-west lies the British Sovereign Base Area of Dhekelia and the west is obstructed by Famagusta Lake and the surrounding wetlands and nature reserve (Figure 38). Moreover, the situation of the EMU to the north naturally concentrates the increasing university-related population in that direction.

The problematic urban sprawl in the north of Famagusta has resulted from the combination of a lack of planning, policies or regulation with the relatively sudden increase in population (from the opening of the university as well as rural immigrants) and demand for both small, cheap student accommodation in tower blocks and low-density, private housing for the wealthier residents (Oktay & Conteh, 2007; Shojaee Far & Marmolejo Duarte, 2015). Not only is the aforementioned urban sprawl an inefficient use of space and a waste of greenfield, but the abandonment of the walled city has left many incorrect and inefficient land use (Oktay & Conteh, 2007) and brownfield areas nearby the historic Walled City. Also, this study identified main social division in current urban environment of Famagusta is between the national and foreign residents who have moved to the suburban areas, and the tourists visiting the walled city. However, the military occupation of Varosha is a constant reminder of the wishes of the Greek Cypriot community to return, and thoughts of how this reintegration can be successfully managed.



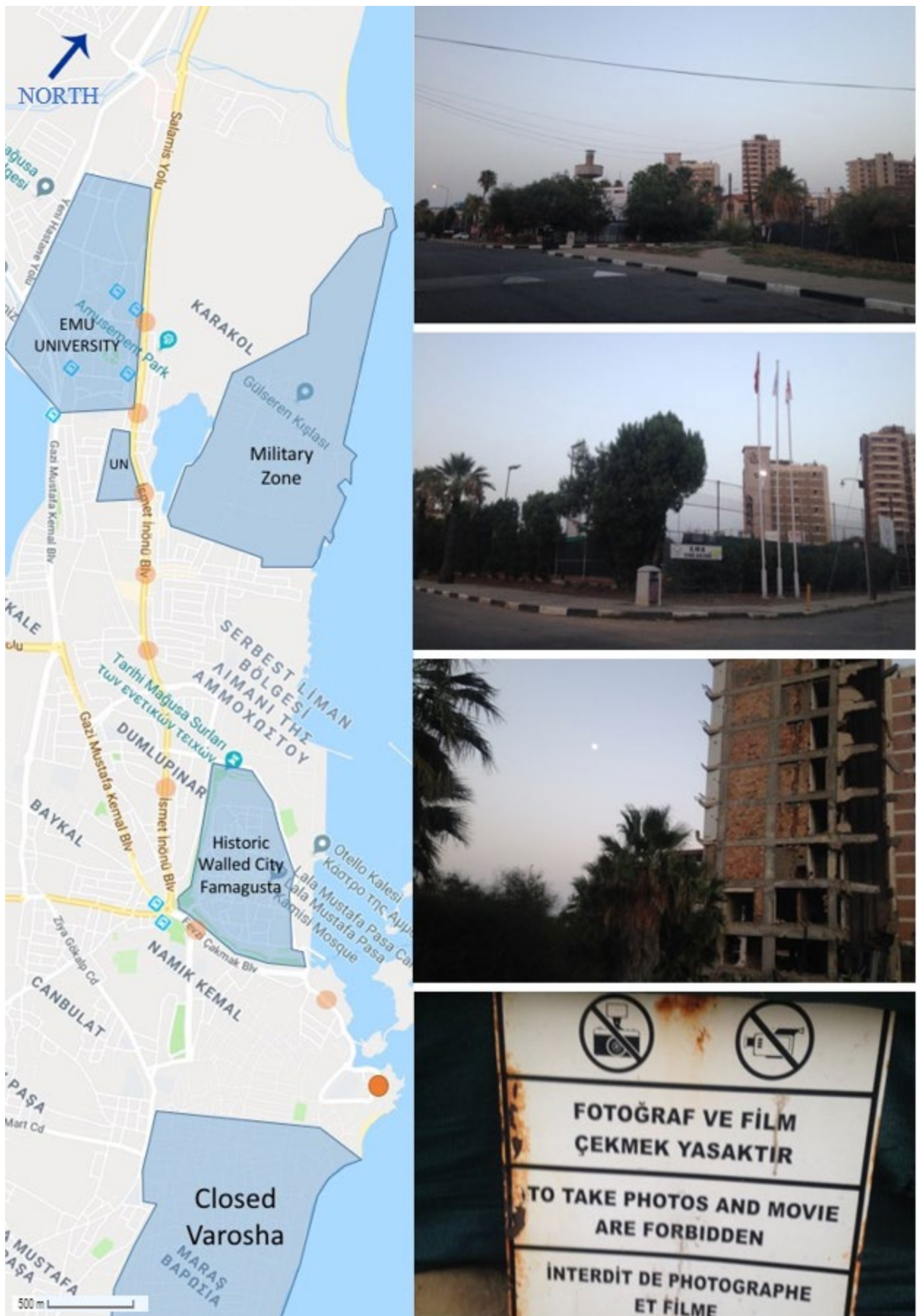


Figure 38 - Closed Varosha area<sup>48</sup> (Photo credit: © Mohsen Shojaee Far, 2018)



Suggestions and proposals for the rehabilitation of Famagusta are not lacking, yet a common characteristic of these proposals is their failure to address all aspects of the problems facing this disturbed city in conflict zone. Either they address urban planning and land management without consideration of the political settlements yet to be made, or vice versa. On top of this, suggestions presented by either political faction are immediately dismissed by the opposition as not responding to their needs (Shojaee Far & Marmolejo Duarte, 2015). One of the most recent proposals for the regeneration of the city, the Famagusta Ecocity Initiative (Famagusta Ecocity Project, 2018) appears to address the socio-economic and environmental issues, but it has yet to be seen whether it will fall foul of political machinations or the resulting failure of integration between the two communities if Varosha is reopened to the Greek Cypriot community. Whatever happens, the situation is not improving with time; as Michael Walsh (2011), associate professor of art history at the EMU, says “The Historic City of Famagusta cannot be asked to wait for a solution to the Cyprus Problem. [...] Stalemate is the reality [and] we should be making plans to deal with it” (Walsh, 2011).

Due to the political and economic isolation of the TRNC for so many years, the tourism sector was decimated. Since the opening of checkpoints allowing tourists to access the area from the RoC (rather than entering through Turkey), there has been some improvement, and EU, UNDP and World Monument Fund (WMF) support enabled the start of critical protection of major heritage monuments, such as the Othello Tower, Martinengo Bastion, Tanners mosque (Tabakhane) and the Ravelin / Land Gate from 2014 (UNDP Cyprus, 2014; UNDP Cyprus, 2015a; UNDP Cyprus, 2015b; UNDP Cyprus, 2015c; World Monuments Fund, 2017). Series of photos presenting current situation of Famagusta (2018) presented in Appendix B.

#### **4.3.7 Final Remarks**

So far, Section 4.3 has established that dealing with abandoned properties in conflict zones is a complex issue implicating a range of legal, political, geographical, economic, and social problems. Inadequate definitions of abandoned, vacant or derelict immovable properties in conflict zones further complicate this matter. This may explain why neither a comprehensive policy that satisfying all parties nor any definitive resolution of the problem exists in presented case. This study emphasised these type of property disputes is product of the exercise of extreme power over all the spatial and metaphorical characteristics of space. Unless such properties are defined correctly, comprehensive and effective policies and actions cannot be formulated.

Taken together, in this study, evidences of inconsistencies in definitions and policies that failed to resolve the problem presented. For instance, on one hand, the UN and ECtHR endorsed the Greek Cypriot request for return by means of ownership and literal usage, while on the other hand, the Turkish Cypriot requirements related to minority safety and territorial control is a valid question. This deadlock situation extended the talks with no conclusive outcome. Therefore, this study suggests need of a new land typology

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<sup>48</sup> For more information check appendix B in present document

that addresses the reality of such areas and their associated disputes by means of local and international legislation, conflict-resolution mechanisms, mediations, and both the socio-economic and socio-political characteristics of the area. The alternative perspective of abandoned properties within conflict zones that is provided by the suggested term 'geopolitical brownfields' framework shows that the real question is not who owns the lands, but how can the situation be dealt with.

#### **4.4 Economic, Social, and Urban Interventions in a Conflict Zone; TRNC**

This section provides an overview on different type of intervention projects since 1970s with different approaches to reduce the tensions related to bi-communal conflicts while intending to be a small or major instrument in settlement talks. However, this overview shows that most of the projects never achieved the expected results as all development in Northern Cyprus has occurred under the shadow of uncertainty for the future identity of the area. Many regeneration, conservation and infrastructure projects have been initiated since the division of Cyprus. Although certain projects are considered by some to have been successful, in empirical observations, the outcomes have been superficial, disappointing and to a great extent have failed with respect to meeting the needs of the residents and restoring trust and confidence between both communities.

Within this context, the issue of Nicosia city as a divided city has been unique. The Green Line division was originally expected to be a short-term one and, as time has gone on, hopes for successful peace talks and a resolution to the situation, if not unification of the city, still remain. Major projects such as Nicosia Master Plan (NMP) have mainly centred on the renovation of historic monuments and areas, both for the purpose of heritage conservation and to boost the tourism economy. With respect to residential areas, the issues of the mainly Turkish immigrant population which has temporarily settled within the city walls, and the doubts about property ownership of the land and buildings abandoned by Greek Cypriots have made long-term planning difficult, if not impossible.

In the last decade or so, there have been attempts to use space and place as an environmental stimulus to confidence-building and re-integration of the Greek Cypriot and Turkish Cypriot community. A 2003 project led by Akıncı<sup>49</sup> aimed to reconceptualize the buffer zone as a "gluing area", forming a "Green Belt for the city"; this was, however, as Akıncı himself admitted, only partially implemented (Bjorkdahl & Kappler, 2017). Also, an example from RoC would be Eleftheria Square project (sub-section 4.4.5); the area of Eleftheria Square holds value for citizens as a gathering place for national events, protests and large celebrations. It is, however, structurally, a bridge, not a square, and the winning project for its regeneration as a unifying space for the population has been criticized by many citizens who perceive that the "bridge is [...] forced to behave more like a square" and, perhaps most significantly given the original aim of the

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<sup>49</sup> Former mayor of north Nicosia and current (2018) elected president of TRNC

project, the design is "destroying rather than reinforcing the identity of the place" (Charalambous & Hadjichristos, 2009).

#### 4.4.1 Politics, Division and the Bicomunal Approach

Attempts at urban planning have also been affected by tensions and poor communication between key stakeholders such as national and local government, local populations, displaced persons, immigrant population and private investors. A deputy town clerk of northern Nicosia protested in an interview with the author: "When we don't have a permanent community how can [we] expect the community [to] be a part of the projects?", referring to the Turkish immigrant population that had moved into the walled city of Nicosia in search of cheaper housing, yet unable to make a permanent home there due to the ever-present prospect of the return of previous inhabitants (Shojaee Far & Atun, 2012).

For instance, many residents of Nicosia feel a lack of belonging arising from the long-term temporary nature of the island's division along with land-ownership issues and lack of investment in low-income areas for social housing. Combining this with the noted passivity of immigrant populations, who are seen as 'temporary citizens' lacking in education and whose voice is not respected, results in the disengagement of the population, and we see a 'Catch-22' situation<sup>50</sup> in which the government neither wishes to, nor feels the need to, engage in collaborative planning with the local community (Shojaee Far, 2011). Contrastingly, in rural areas, where the local population has a presence that precedes the troubles, the approach of deliberative democracy has achieved positive results despite being a somewhat lengthier process, and community involvement is seen by the local population "as their democratic and civic right" (Akortor, 2011).

However, despite many failures, long-term efforts from some Cypriots with support of international community for a bicomunal approach have been in place. In 1978, the mayors of both north and south Nicosia, Lellos Demetriades and Mustafa Akinci, worked together through an informal network to ensure joint plan of sewage treatment plant (sub-section 4.4.4) come to a successful result (Bjorkdahl & Kappler, 2017). In contrast to their inability to communicate through official political channels, mayors continued their weekly meetings which enabled both teamwork and trust in a professional collaboration framework. However, the effects of national politics have been enormous; during the 1990s, permission for border crossings were difficult to obtain for those individuals involved in bicomunal talks and in 1997, after the EU excluded Turkey from potential membership whilst beginning accession talks with the Republic of Cyprus, all cross-community contact was banned until 2003 (Broome, 2005). From their work on the sewage treatment plant, the idea for the Nicosia Master Plan (NMP) evolved, with the aim of developing bicomunal urban planning projects for the common advantage of all residents of the city (Abu-Orf, 2005; Koundouri, 2010). Indeed, this bicomunal approach to the current partition was unique in compare to

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<sup>50</sup> Catch-22 is a satirical novel by American author Joseph Heller, first published in 1961. A catch-22 is a paradoxical situation from which an individual cannot escape because of contradictory rules.

other example of divided cities and has been acknowledged as an example of overcoming conflict through ground-level and pragmatic communication (Abu-Orf, 2005; Oktay, 2007).

With regards to opportunities to remediate and regenerate abandoned industrial areas both inside Nicosia (for example, the Sanayi Holding Binası buildings) and outside Nicosia (the CMC mining and ore processing sites in Lefke), brownfield treatment have been ignored. In all cases, the issue has been financing and motivation. Since the TRNC has lost the continuing income from these industries and the surrounding agricultural land, there has been little inclination to invest in cleaning the sites for further use<sup>51</sup>, despite studies dating back to 1999 demonstrating the negative effects of pollutants on the health of local inhabitants and contamination of the air, water and soil (Doğan, 2002; Aydin & Tatlıdil, 2014; Djamgoz, et al., 2017; Guçel, et. al., 2009) and suggestions of cost-effective methodologies (Sözen, et al., 2017). The land previously owned by Sanayi Holding Binası now holds the Ministry of Finance, along with partially constructed and remaining abandoned buildings (Figure 39) (Balin, 2016). A nearby area for which the probable contamination from its former industrial and military uses and earlier function as a graveyard has not been assessed, is currently a slum-like residential area surrounded by schools (Shojaee Far & Atun, 2012).



**Figure 39 - Sanayi Holding Binası in Nicosia northern part (TRNC) (Photo credit: © Mohsen Shojaee Far, 2010)**

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<sup>51</sup> The remediation of brownfields has either to be financed by the government or by private investors

The lack of an overall integrated plan for urban development in Cyprus is a key reason that so many projects have had short-term success but have ultimately failed in the long-term. Projects backed by politicians can seem to focus on the potential economic benefits brought by increased private investment, whilst failing to adequately consider social and community needs (Adamou, 2017). Back in 1998, Mumtaz highlighted the need for not only monetary investment, but a community-based strategy for organization (Mumtaz, 1998), a sentiment echoed years later by Tsenkova in his 'Top Down' to 'Bottom Up' approach (Tsenkova, 2002).

For instance, in Famagusta, the lack of an integrated approach has exacerbated urban sprawl with property development taking place without any principal strategy for the provision of infrastructural support. This has led to low-density populations requiring private transport and lacking social meeting spaces, and a subsequent decrease in social interactions and social cohesion (Oktay & Conteh, 2007). In addition, a lack of trust in the government, and the public perceptions of corruption (Eroglu, 2017), particularly around the time of the banking crisis of 2012-13, have further increased the divide between the government and the people (Transparency International, 2012; Transparency International, 2013); the SCORE index shows that levels of trust in government institutions, though fluctuating, remain low in both the TRNC and the RoC (Mahallae, 2016).

#### **4.4.2 The Economics, Socio-Cultural and Socio-Economical approach**

With the tentative optimism of a possible resolution to the ongoing peace process in mind, construction development has increased across both the northern and southern regions of Cyprus, particularly with massive focus on tourism (Flights to Northern Cyprus are limited to indirect flights via Turkey to Ercan airport in Northern Nicosia). As result of the decline in agriculture in North Cyprus, which has been affected by limited access to markets (since the TRNC is not internationally recognized, nor has access to EU markets), this seems like a reasonable plan. To better capitalize on potential markets and diversify products, there have been several private and EU-funded rural-, eco- and agro-tourism projects in the TRNC, such as those in Buyukkonuk (Büyükkonuk Eco-Tourism Association, 2018; Akortor, 2011), and around the Karpaz region. Although the Buyukkonuk project is now functioning, unfavourable “political conditions” in 2004 forced changes to its implementation (Touch TD, 2018). It has been said that this form of tourism is limited by lack of government investment, infrastructure and international marketing, as well as the lack of social and cultural unity both in the region and on the island as a whole (Simsek, 2015).

Even in the RoC, there has been conflict between developers, local government, citizens and environmentalists which has negative impacts on projects' progress, such as the rural tourism project in Pera Pedi or the Paphos Marina in the RoC (Fairbanks, 2013; Browne, 2017). There has been little overall structure or planning at the governmental level as to how these forms of tourism will lead to a sustainable or integrated economic boost. In fact, the high costs of development combined with low demand and returns has led some to question the long-term strategy (Sharpley, 2002). In contrast to TRNC, casinos were illegal in the RoC until the licence for a casino project with projection of 100-million-euro tax income was emitted with introduction of the Casino Law of 2015 (Couccoullis, 2016). The recently agreed-upon development

of a massive integrated resort and casino (Figure 40) in the neglected western side of Limassol in the RoC (Melco International Development Limited, 2018) is intended to boost annual tourism to the area and increase local property prices, leading to increased investment in abandoned properties in the area. Even so, environmental issues such as mosquitoes in the area and infrastructural insufficiencies in public transport, electricity and water supply have yet to be actively addressed (Kades, 2017).



**Figure 40 – Rendered image of ‘City of Dreams Mediterranean’ project, the first casino resort to be opened in Zakaki area, Limassol, Republic of Cyprus in 2021 (Image URL source: <http://www.cityofdreamsmed.com.cy>)**

Furthermore, rather than focusing on regenerating brownfield sites, which are frozen in the ongoing political disputes, many of these projects are planned in Greenfields or inhabited villages. Land prices have increased and the burden on the water and energy supplies and infrastructure are issues that urgently need to be considered (Oktay, 2007). This scenario threatens to play out in the TRNC unless environmental and infrastructural policies for sustainable development can be put into place, with adequate, reliable government support that does not change when new governments take power.

This discussion highlights a challenge for the governments of the TRNC and the RoC in working together to build their economies for event of a possible peace accord. World Bank senior economists have stated that the economic development of Cyprus is significantly hampered by the current divisions. A well-managed reunification would lead to job-creation and over a billion euros in investment opportunities (Reinermann, 2017), however, this would depend on maintaining an efficient and streamlined administration for the island and considerable solidarity and cooperation, which is currently lacking. Additionally, it raises the question of whether the respective governments are willing to invest in sustainable income for the prosperity of their residents or whether they will focus on attracting foreign investment and top-level tourism in the hopes that the wealth brought to the island will trickle down the social divisions.

The relative inaccessibility of the TRNC to international visitors and consequent economic inactivity has left the region greatly undeveloped (except resort centres and casino developments), with many areas



remaining relatively untouched. This combined with comparatively low cost of living, cheap land and sparse population led to an influx of expatriates. Continuing uncertainty around property deeds led to warnings from the UK government to potential UK investors (UK Government, 2013), and frustration from buyers who have either not received title deeds for properties they have bought or have been held responsible for the mortgages – financed by local banks in TRNC or private local investment companies – taken out by developers who have gone bankrupt (Beardwood, 2014).

It is possible that even land with pre-1974 title deeds (considered clean freehold) may be subject to court cases from the RoC or the EU following any future settlements (Afik Group, 2015). However, argument on possibility of court cases may have bias as the court and buying problem resolved with IPC and exchanged title deed as local agency recognised by European Court of Human Rights. Up until now, the government is still trying to fix the system following a law introduced in 2015 which failed to sort out the problem in which it is estimated that around 70,000 property buyers – mixed of locals and foreigners – are currently embroiled (Hazou, 2017). Furthermore, the development boom and rising numbers of foreign immigrants threaten the fragile ecology of the island and its scarce water resources (Oktay, 2007). Furthermore, the importance of an integrated and efficient political team following any peaceful reunification, whether federal or otherwise, has been stressed by senior economists from the World Bank to minimize public sector administrative spending and increase international standing in order to improve investor confidence (Reinermann, 2017).

#### **4.4.3 Divided Communities**

The population of the island of Cyprus has always been heterogeneous, with a majority Greek Cypriot population, a significant minority Turkish Cypriot, and a number of other foreign residents. Throughout the 20<sup>th</sup> century there was internal migration towards the cities, and the mid-20<sup>th</sup> century saw significant migration due to the anti-colonialist feeling, political instability and economic depression. However, the largest population transfer came in 1974 with the entry of the Turkish military and division of the island (Solsten, 1991), when the Greek Orthodox Cypriots fled south and the Turkish Muslim Cypriots took refuge in the north. Over the following decades, Turkish immigrants from Turkey, who mainly settled in the de facto capital of the TRNC, northern Nicosia, identified as another demographic change in the region. There are also small populations of Asian, British, East- and West-European, Near- and Middle-Eastern and North African immigrants, bringing the typical tensions of worry for local job security, particularly in times of crisis in RoC (Pashardes, 2011), but also filling vital roles in the service, construction and tourism industries.

In most reports, the minority citizens identifying as Maronites<sup>52</sup>, Armenians and Roma<sup>53</sup>. According to the 1960 census, there were fewer than 4000 Armenians and 3000 Maronites on the island at that time; they

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<sup>52</sup> Member of a Christian sect of Syrian origin, living chiefly in Lebanon and in communion with the Roman Catholic Church.

<sup>53</sup> Roma people have a number of distinct populations, the largest being the Roma and the Iberian Calé or Caló, who reached Anatolia and the Balkans about the early 12th century, from a migration out of north-western India beginning about 600 years earlier. (Mendizabal, Lao, & Marigort, 2012)

have since been counted as part of the Greek Cypriot population, according to the constitution (Solsten, 1991), most likely because they all follow a Christian-based religion. Although Roma have been in Cyprus since the 16<sup>th</sup> century, there remain only up to 1000 in the present-day. Having moved north in 1974 with the Turkish military operation, many left the TRNC when borders opened from 2003 onwards and settled in the abandoned Turkish areas around Limassol. They are considered as Turkish Cypriots despite being ethnically and culturally distinct, and they experience significant suspicion and discrimination as well as difficulty entering the workforce as they tend to speak neither Greek nor English (Pashardes, 2011).

Moreover, although the residents in the north identify as citizens of the TRNC, there seems to be increasing unrest and competition between those with historical Turkish Cypriot ancestry and those who have migrated from Turkey<sup>54</sup> (Johnson, 2007). Many who came from Turkey were agricultural labourers with lower levels of education and they encountered some discrimination and difficulty competing in the job market. It was also said that they were trained reserve military, intended to act as a Turkish army after the demilitarization of the island, if needed, a fact which increased tensions with the Cypriot community on both sides. Although they received land allocations, up until 1995 they were not granted the property deeds and so for a long time were unable to purchase or sell this land, or even to rent it out without permission from the village leader. Meanwhile, it has been established that a great part of the reason for the Greek Cypriot ‘no’ vote to the Annan Plan in the referendum of 2004 was “grossly exaggerated numbers and the myths concerning the ‘settler’ population” coming from within the Turkish Cypriot population (Hatay, 2005).

However, the main division on the island of Cyprus remains between the Greek and Turkish Cypriot populations, the north and the south. Even before 1974, these populations hardly interacted because of their differing cultures, languages, lifestyles and histories (Oktay, 2007), but since the division, the Turkish Cypriot and Greek Cypriot citizens have been both physically and psychologically separated further as a result of the buffer zone and the trauma resulting from the violent events (Johnson, 2007).

Narratives of ‘them’ and ‘us’ have always been used by all groups (Asvaroglu, 2012). Despite obtaining freedom from British rule in 1960, a united Cypriot national identity did not emerge. This may have been influenced by the fact that the struggle for independence was driven by EOKA (the National Organisation of Cypriot Fighters), who were fighting for *enosis*, or unity with Greece. Since the division in 1974, bitterness, suspicion and distrust of the ‘other’ have been entrenched through memories of loved ones lost, nostalgia of former homes, propaganda in the press and the narratives of political parties. Far from being lost as the people who lived through the events are replaced by younger generations, stories are being passed down through families, friends and teachers, with inevitable distortions. Such stories causing children to grow up with images of the ‘other side’ that are far from reality such as “the Turks took away all our trees” or “all Greek Cypriots carry weapons” (Johnson, 2007). The political discourse takes advantage of this situation during all the years of bicomunal conflict within the island.

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<sup>54</sup> indigenous versus immigrant



Pride and competition also play a role in these scenarios, as each side uses their protection and conservation of heritage as a way of demonstrating that they are the better character, suggesting the ‘other’ to be destructive. Both sides have accused the other of either “deliberate targeting or neglect of the heritage of the ‘other side’, linking these to the explicit or implicit attempts of ethno-cultural denial and cleansing”. There are examples on both sides of selectively restoring and maintaining sites with meaning to the ‘other’ side, for example, churches in the TRNC and mosques in the RoC, which is then used to assume a higher moral stance. Other sites have been quietly erased, such as Kalkanli, an ancient olive grove in the north, whose name has been changed to one of Turkish origin and whose heritage is now claimed for the TRNC despite the title deeds of Greek Cypriots for trees there. Also, Alihodes, a Turkish Cypriot village in south of Nicosia which has been demolished without even an indication that it was once a vibrant village of a hundred inhabitants with a mosque and school (Constantinou & Hatay, 2010).

These scenarios have been compounded by the political discourse which, in the south is one of a happily co-habiting population of Greek and Turkish Cypriots invaded by the Turkish army. To further this perspective, the Greek Cypriot administration has made itself available for dialogue and tried to encourage the reuniting of the island and the divided capital, following the *enosis* model. Meanwhile in the north, the view is of a discriminated and mistreated minority population saved by the Turkish forces who are now much happier living separately with their own state and capital in its own right. The events of 1974 are thus viewed either as the “Happy 1974 Peace Operation” or the “the barbaric 1974 Turkish Invasion” respectively. As Papadakis puts it: “each side’s officialdom erases the other’s experiences of suffering and its fears and concerns [and] focuses only on its own side” (Papadakis, 2005).

Accordingly, for the inhabitants of the TRNC, returning to their former homes in the south is not a desired outcome and this adds to the complications of property and land ownership and potential solutions to the current situation. Indeed, given that some of the abandoned areas in both the north and south have been destroyed either intentionally (such as Alihodes) or by time (like Varosha), the resulting geopolitical brownfields require a new comprehensive approach.

#### **4.4.4 A Brief Review on 3 Implemented Projects at Peripheries of Buffer Zone**

##### **The Nicosia Sewerage Plan**

In 1959, a government report recommended the construction of a public sewerage system in Nicosia; this report did not come to any implementation stage due to political instability at the time. Another report commissioned by the government from the WHO (World Health Organisation) recommended sewerage systems for Nicosia and Famagusta. Although work began in 1971 (World Bank, 1971), it was brought to a halt in 1974 due to official division of the island and the city of Nicosia. After careful negotiations between Demetriades and Akıncı, with the support of the World Bank and the UNDP, work resumed in 1978 (Figure 41). There have been various phases to the plan and most recently work on the Greater Nicosia Sewerage System was begun in 2003 (Sewerage Board of Nicosia, 2018).

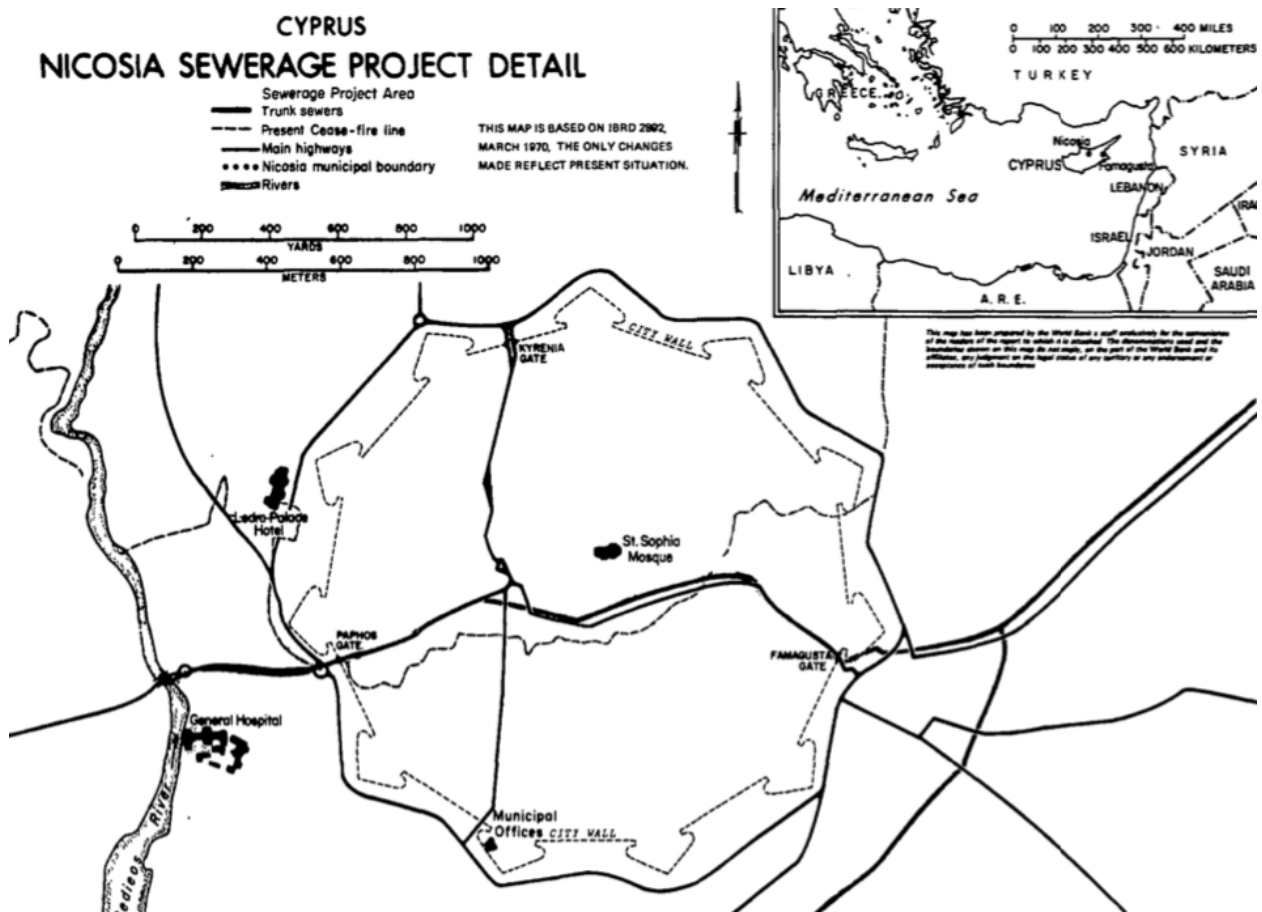
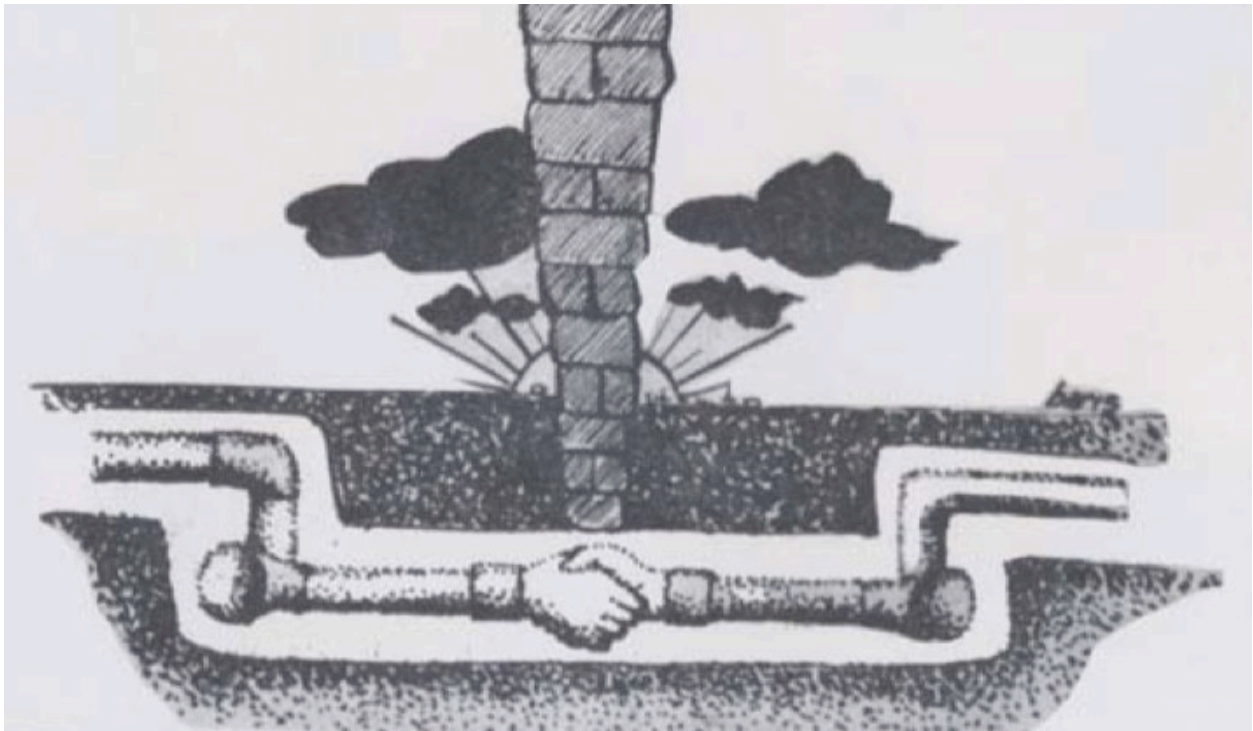


Figure 41 - The map is showing the changes of The Nicosia Sewerage Plan in 1980 (World Bank, 1981)

Despite willing teamwork between engineers from north and south Nicosia, along with the UNDP implementation team and specialist consultants, the project has been greatly affected by the fluctuations in the political situations and restrictions of movement across the border. One example of this is the failure of the flow meter at the Mia Milia Water Treatment Facility in north of Nicosia in the TRNC. In an attempt to foster dialogue between the technical workers of the TRNC and the RoC, a Greek Cypriot supplier was chosen, but due to the ban on Greek Cypriots working in the TRNC, the company was unable to go to Mia Milia to complete the installation. The Turkish Cypriot contractors were unable to install the flow meter correctly and although this failure was noted, it had not been reflected at the time of the final report, hence the effluent flow cannot be measured. This could cause sewage problems that affect the population at any time. Further problems relating to allegations of inadequate training for TRNC engineers, failure by the government to ensure effective local project management teams and occasional breakdowns in communication in which poor or absent advice from specialists led to substandard implementation by TRNC engineers (Development Associates, Inc., 2004). Though, the bicomunal work on the sewerage works (Figure 42) is generally considered to have been a success (Abu-Orf, 2005).



**Figure 42 - Professional bicommunal collaboration during the most intense days after division (UNECE, 2003)**

### **The Nicosia Master Plan**

The Nicosia Master Plan (NMP) was born from the collaboration between Demetriades and Akıncı on the sewerage system for Nicosia. The intention was to work together on an integrated plan for the urban development of the city, encompassing conservation work, renovation and regeneration of damaged and aged neighbourhoods, infrastructure extension and growth of the tourism sector (Abu-Orf, 2005). Many projects have been completed under the auspice of the NMP such as the Chrysaliniotissa, Arabahmet, Samanbahce, Phaneromeni, Selimye and Pyla Revitalisation Projects, restoration of Omerye District, and the regeneration of That el Kale quarter (Petridou, 2003). Increases in tourism have been unevenly spread and visitors do not often go far from the key tourist attractions of North Cyprus border crossing points (Gronau & Constanti, 2008). In addition, the urban improvements in north side failed to have significant impact on the local population within the walled city, whose living conditions are poor and lack integration as a unified community (Asvaroglu, 2012); they have ended up as external, physical changes without the necessary associated socio-economic improvements (Atun, 2012).

The Nicosia Master Plan targeted areas and buildings of cultural heritage to create a 'walk' through the city that passes through both the northern and southern areas, facilitated by the checkpoints opened in 2003 (Figure 43). Its intention was to facilitate the heritage conservation and urban regeneration plans. The participants were optimistic about eventual unification of the city and the plan can take part in future unified Nicosia. Although currently the walk is used relatively little by residents and is most popular amongst visiting tourists, it has had certain benefits in heritage conservation and confidence-building between both communities. Even so, the projects aimed at rehabilitating areas, such as the Omeriye neighbourhood, have

had mixed success (Gronau & Constanti, 2008) with a mainly superficial, physical impact (Foka, 2015) and the migration of wealthy residents to other parts of the city has left an “urban ghetto” of poor, immigrants and the elderly within the walled city (Dolunay & Keçeci, 2017).



**Figure 43 - Nicosia Master Plan Phase 2 (1984-85), Activity Area and Urban Structure (Source: Photo from NMP printed document)**

One of the fundamental objectives of the NMP was to bring together members of the Turkish and Greek Cypriot communities (Figure 44), to strengthen relationships in preparation for a future reunification, working towards an atmosphere of “mutual confidence, trust and respect” (European Commission, 2001). Many projects have taken been initiated over the last two decades on the divided island, which have been mainly aimed at peace and confidence building, heritage protection and sustainable livelihoods, with financing from the UNDP, EU and a host of other NGOs. Despite this, the current political situation in Cyprus remains uncertain and sincere trust remains elusive (Broome, 2005).

Previous attempts to leverage negotiations through the desired accession of the Republic of Cyprus (successful) and Turkey (unsuccessful) to the EU have failed and yet, the influence of the ‘mother-nations’, Greece for the majority Greek Cypriot population and Turkey for the minority Turkish Cypriot people is causing tensions. For instance, the Peace Water Project bringing fresh water by pipeline from Turkey to the



TRNC is seen by many as a way of maintaining Turkish Cypriot dependence on Turkey. Yet with the refusal of the Republic of Cyprus to recognize the TRNC and the isolationist policies which have blocked growth and opportunity in the northern region, it seems that the TRNC have little choice of allies (Bryant, 2015).



**Figure 44 - A bi-communal multidisciplinary team for preparing NMP was formed in 1981 (UNECE, 2003)**

In the walled city of Nicosia, planning regulations require renovations to be done with original material in keeping with the historic style. Some buildings are in trust with the State or are the responsibility of the Department of Evkaf, and therefore are unavailable for maintenance or renovation. Whilst these buildings are often occupied by the Turkish immigrant community or the Turkish Cypriot refugee population, the inhabitants haven't the finances for their upkeep, nor have they tenancy rights and thus they have no long-term ownership to motivate them to make any investment in property maintenance. Meanwhile, the responsible organizations neither wish to profit from, nor invest in them. Private investors, backed by the Social Housing Department, are promoting modern, spacious homes outside the Walled City, away from city centre and buffer zone as result of possible violent outbreaks and the strict planning regulations which demand renovations in line with the original style of construction. Sadly, since these modern developments are frequently planned by distinct developers with a view to maximum profit, they do not offer the green spaces, required infrastructure, or community-opportunities needed for sustainable neighbourhoods (Mumtaz, 1998; Ioannou, 2016).

## Arabahmet Regeneration Project

The Nicosia Master Plan, born from the bicomunal approach, was the stimulus for the regeneration of Arabahmet. The neighbourhood of Arabahmet in northern Nicosia was one of the first regeneration projects to be completed from the bicomunal Nicosia Master Plan. Phase I was from 1987-1997 and Phase II from 1998-2004. Parallel to this, the revitalization of the Greek Cypriot district of Chrysaliniotissa in the south of Nicosia has taken place. As one of the first projects to be undertaken, one could understand that early mistakes may have been made as the stakeholders learned to deal with the situation; however, Phase II was completed in 2004, after completion of several large projects, hence one could expect an evaluation to have taken place in order to adjust the plans to better meet the needs of the inhabitants. Several local experts have observed the project to have been a limited success from the perspective of selected superficial building renovations and preservation of historic buildings. However, a considerable failure from the viewpoint of the original Cypriot population identified as the immigrant Turkish population and displaced Turkish Cypriots from the south.

Arabahmet had been the residence of the wealthy elite of Nicosia; initially abandoned by its Greek Cypriot inhabitants at the time of the division and subsequently by the wealthier Turkish Cypriots as they moved to more comfortable, modern suburbs away from the negative presence of the militarized buffer zone (Asvaroglu, 2012). Empty homes were taken by, or rented to, working class Turkish immigrants and Turkish Cypriots who had fled the south, but without official ownership of the properties, maintenance was neglected and the area, having already suffered some destruction from the violent clashes, took on a derelict and unwelcoming appearance (Figure 45).



**Figure 45 - Residential houses at Arabahmet neighbourhood in within northern part of Nicosia Walled City (Source: google image of the selected point in Arabahmet neighbourhood, 2016)**



The Arabahmet regeneration project, funded by UNHCR-Habitat / UNDP, first displaced this population to new affordable housing (Haspolat Social Housing Units) outside the city walls to allow the restoration of historic buildings and improvement of physical aspects of the neighbourhood. The renovation of Arabahmet that was initially funded by UNHCR was taken over by UNDP/USAID funding and implemented by UNOPS from 1998. It focused primarily on the protection and conservation of key historic sites who provided funding for the project. Investment in infrastructure and environmental regeneration aspects were poor and inconsistent and overall the project failed to overcome the stigma and poor reputation that had become attached to Arabahmet (Asvaroglu, 2012). Notably, the Refugee Rights Association, a Turkish Cypriot organization for the support of asylum-seekers arriving in the TRNC, has its office in Arabahmet (UNHCR Cyprus, 2014), suggesting that this area is already a point of convergence for immigrants. The original inhabitants of Arabahmet, who left to live in the suburbs are unhappy to see the negative changes brought to the area by the new population who moved in.

When the Lokmaci checkpoint opened in 2004, it allowed the Arabahmet area to compete in provision of services such as cafés, restaurants, shops for those visiting the northern part of Nicosia and nearby tourist attractions. However, business owners and employees of the area seem to feel that the continuing presence of the Turkish immigrant population is an issue preventing improvement in the neighbourhood due to perceived crime levels, lack of emotional or financial investment in the area, and lack of cultural integration (Figure 46). They note that unrepaired damage to homes (shutters, windows, roofs), satellite dishes, unsupervised children (Figure 47) and preparation of food in the street present a bad image to tourists (Asvaroglu, 2012).



**Figure 46 - Unrepaired damage to houses (shutters, windows, roofs) in Arabahmet neighbourhood within northern part of Nicosia Walled City (Photo credit: © Mohsen Shojaee Far, 2010).**

Sustainable brownfield regeneration (SBR) has been noted to lead easily to gentrification unless conscious steps are taken in the planning and implementation of a project to avoid this (Armstrong, 2007). It appears, however, that gentrification cannot be said to have taken place fully in Arabahmet in that firstly, the population remains similar (possibly even worse because the Cypriot population now feels very out of place in this neighbourhood), and secondly, the potential for attracting tourists and residential visitors due to proximity to checkpoints and location within the historic centre has not been realized. Both these issues are barriers to attracting young people, professionals and private investment to the area. Furthermore, one of the key objectives of the NMP projects was “to contribute to the development, increase and enhancement of an atmosphere of mutual confidence, trust and respect between the Greek Cypriot (GC) and Turkish Cypriot (TC) communities”. In spite of this, a final evaluation report submitted to the USAID after the completion of the project recognized that the regeneration of Arabahmet and Chrysaliniotissa were able to be completed by the implementing agencies on the Greek Cypriot and Turkish Cypriot sides independently with very little need for cross-community dialogue, discussion or support (Development Associates, Inc., 2004).



**Figure 47 - Presence of unsupervised children in Arabahmet neighbourhood (Photo credit: © Mohsen Shojaee Far, 2010).**

#### **4.4.5 List of Selected Founded Projects by International Community**

During last 4 decades, and specifically in last decade, number of different projects with regards preservation of historic heritage, improvement of socio-economic conditions, and enforcement of peace implemented in both south and north Cyprus. Such projects majorly backed by different departments of United Nations,



European Commission, World Heritage Organisation, etc. This sub-section presents a short list of such projects. Although not all of them related to brownfields, each project has an importance in a sustainable brownfield regeneration in a conflict zone.

### **The Famagusta Eco-City Initiative**

This project aims to rebuild the city of Famagusta as a “centre for peace and sustainability within a troubled region”, combining “environmental sustainability, economic prosperity and peace building” for Famagusta to become “a thriving cultural, economic and environmental hub” (Figure 48). It aims to use past lessons to learn how to create a sustainable tourism development with careful preparation and focus on integrating all members of the community (Famagusta Ecocity Project, 2018).



**Figure 48 - Print Screen from a short documentary movie published in project website, closed Varosha is in background (Famagusta Ecocity Project, 2018)**

### **Participatory Peace-making Initiative**

The aim of this project was to bring together political and civic leaders from both communities to dialogue on their part in the peace process in 2013. Representatives from Cyprus, Northern Ireland, South Africa and the Balkans were brought in to talk about their own experiences of reconciliation (UNDP Cyprus, 2018a).

### **Nicosia Green Line Rejuvenation Programme**

This is a Greek government programme in south Cyprus that incentivised private investment in construction within and near to the buffer zone (the Green Line). It also supported public projects in this area such as the Municipal Arts Centre, car parks on both Ledra and Onasagorou Streets, and a pedestrian pavement and cycle path in Pallouriotissa (Nicosia Municipality, 2018).

## Eleftheria Square Project

In 2010, a project proposal by Zaha Hadid Architects was chosen to be the design for the renovated Eleftheria Square, in an attempt to use the area to strengthen public unity with the use of this symbolic, central Nicosia location as a social hub and civic space. With hopes that it will “become a catalyst for the urban unification of the capital” (World Architecture News, 2010), the new design attempts to connect the fortified Venetian walls and moat (previously difficult to access) with the modern areas of the city. Although the pedestrian walkway has recently been opened to the public, most of the area is still under construction (Figure 49). The project has been interrupted by setbacks in the construction process, changes in contractors and the discovery of archaeological remains, in addition to criticism from the Cypriot population (Cyprus Mail, 2017; Cyprus Mail, 2018).



Figure 49 – Partially opened Eleftheria Square Project in southern part of Nicosia (Chrysostomou, 2018)

## Interdependence Project

The Interdependence Project focused on the business relations between citizens and businesses across both the TRNC and the RoC. It aimed to highlight the mutual financial gains to be made by cooperating with each other and support business expansion. The project was based on research related to current status of corporate and commercial interactions across the island and the possibilities for their development. It was also active at a policy level through collaboration between the Chambers and pertinent Technical Committees (UNDP Cyprus, 2018a; UNDP-ACT, 2008).



## Community Development, Rehabilitation & Infrastructure Project

This project distributed local contracts for work on some of the cultural heritage and infrastructure projects undertaken through the NMP. It aimed to boost local economies and improve the quality of life for residents (Figure 50) (UNDP Cyprus, 2018b) in following villages:

**Galinoporni:** Conversion of an old school building into a cultural/community centre);

**Kalyvakia:** Upgrading of the main square, water pipeline, surrounding buildings and local coffee shop);

**Kampyli:** Upgrading of the main square, surrounding buildings and local coffee shop);

**Komi/Büyükkonuk:** Sustainable rural development, promotion of eco-tourism, home composting;

**Kormakitis:** Conversion of an old school building into a cultural/community centre;

**Kythrea:** Prevention of soil erosion and protection of endemic local plants;

**Lapithos:** Improvement of the local roads infrastructure;

**Lefka:** Upgrading of the main square and surrounding buildings;

**Lefkonoiko:** Improvement of the local roads infrastructure;

**Louroukina:** Upgrading of the main square, surrounding buildings, local coffee shop and sport field;

**Tremetousia:** Upgrading of the main square, surrounding buildings and local coffee shop;

**Zodeia:** Improvements to the storm water drainage.



Figure 50 - 2006-2014 community development and urban upgrading projects. (UNDP Cyprus, 2018b)

### Revitalising Renovated Spaces Through Cultural Activities

Funded by the UNDP-PFF, this project took place across several towns and villages in Northern Cyprus which had undergone renovation work, as well as the Bandabuliya (covered markets) of Famagusta and

Nicosia. It gave successful applicants a small grant for the implementation of cultural or handicraft activities (Figure 51) in order to drive and facilitate urban revitalization through economic and social development (UNDP Cyprus, 2018c).



**Figure 51 – The project trained more than 400 local craftswomen and men, from different villages and towns in the northern part of Cyprus, to become handicrafts entrepreneurs (UNDP Cyprus, 2018c)**

### **Private Sector Development Programme**

By supporting micro-, small- and medium-sized enterprises in Northern Cyprus, this project aimed to smooth “the integration of the Turkish Cypriot private sector into the European Union” through capacity-building, correct implementation of environmental, social and quality standards, and the development of e-commerce platforms (UNDP Cyprus, 2018d).

### **Youth Power (Formerly Cyprus Network for Youth Development) Project**

This project is formed of 12 distinct organizations, both Greek Cypriot and Turkish Cypriot, which all either promote or are affiliated with youth activism. They aim to encourage efforts towards a peaceful and sustainable future and a multicultural Cyprus by giving mutual support and facilitating information exchange, networking and training. The Youth Power network has the objective of growing its reach and activity within political domains, local authorities, NGOs and the Cypriot public through campaigning, lobbying and public relations (UNDP Cyprus, 2018e).

### **Future Together Project**

This project aims to facilitate reconciliation through the promotion of citizen involvement in the decision-making process relating to their lives and communities. The Future Together Project has used lessons

learned from other participatory development models and produced a Best Practice Guide a Training Manual for local practitioners (UNDP Cyprus, 2018f).

### **Multi-Perspectivity and Intercultural Dialogue in Education (MIDE)**

The Multi-perspective and Intercultural Dialogue in Education (MIDE) project is an activity of the Association for Historical Dialogue & Research (AHDR) whose objective is to support education and intercultural discourse through research, the production of education and training materials and raising public awareness (UNDP Cyprus, 2018g).

#### **4.4.6 Final Remarks**

The conversion of multiple interests that is seen in what is often called ‘the Cyprus problem’ is complex; from the international community, represented by the UN and EU, to the national governments of Greece, Turkey, the RoC and the TRNC, municipal leadership, international and national NGOs, environmental groups, public entities, private companies, investors and last, but by no means least, the Cypriot population, there are many stakeholders involved. Despite the intent for collaborative planning that was involved in the Nicosia Master Plan (NMP), subsequent evaluation and feedback has concluded that not only was the allocated timescale for dialogue insufficient, but it also failed to take into consideration the dominant role played by politics in the decision making (Abu-Orf, 2005). As Hazem Abu-Orf (2005) put it, “Planning takes place in a political context in which the agendas of choice making are selectively managed”. With the substantial investment of the UNDP Partnership for the Future programme into the NMP, multiple historical sites in the divided city were repaired and renovated to protect the cultural heritage and encourage tourism. Disappointingly, likely resulting from the overwhelming focus on urban planning in these projects, they had neglected to address marketing of the sites to the target market which is the local residence of the affected areas for interventions as well as potential incoming tourists. This led to areas such as Omeriye and Chrysaliniotissa being largely ignored by the tourist population due to a lack of awareness of their existence, and other areas failing to reach their full economic potential, based on a lack of communication and promotion (Gronau & Constanti, 2008).

On the other hand, political factors have impacted the planning process at multiple levels, and a top-down system of decision-making is seen to have blocked efficient brownfield land use. For example, in the case of the long-abandoned Sanayi Holding Binası building in Nicosia (north), which the municipality wished to implement an adaptive reuse approach for their new offices, it was demolished, and a new building constructed (the Ministry of Finance). This action went against the majority preference of both the local residents and members of the municipal council surveyed by the author. Therefore, when government support (permission) for re-using brownfields was not forthcoming, they were forced to use a different, non-brownfield site. The building in question was most likely on a contaminated soil and water base due to the prior industrial activity and would have been ideal for the brownfield regeneration strategy of decontamination and repurposing. A source in the municipality stated that the “lack of a holistic strategic

plan” and “partial planning and fragmented decisions” were the cause of problems in the urban planning and development of the area (Shojaee Far, 2011).

## **4.5 Route-Sheet for a Diagnostic Method to Deal with Geopolitical Brownfields**

So far, this chapter has focused on different aspects of brownfields in a conflict zone by presenting case of Cyprus conflict as a strong evidence for need of the proposed new land use typology; ‘geopolitical brownfield’. Reasonably, discussions and learning outcomes from Chapter 3 (space) and 4 (Cyprus conflict) determined important points to fill the gap (place-based approach) of missing evaluation criteria presented in Chapter 2 (sub-sections 2.4.4 and 2.4.5). The present section will discuss essential steps for preparation of an initial route-sheet of how to deal with geopolitical brownfield sites (i.e. abandoned properties in conflict zones).

Turning now to the experimental evidence on geopolitical brownfield sites, the exploration of power and space and consequently the space of contested powers led the present study to identify different set of criteria to deal with geopolitical brownfield sites in conflict zones. This topic can best be treated under three criteria: conflict, abandonment because fear or for peace, and geopolitics to redefine a new diagnostic method for geopolitical brownfields. The main aim of introducing such criteria is to determine, deeply understand, and analyse lands within conflict zones to be able to identify and characterise the problems prior to preparation of any strategic or action plan.

### **4.5.1 The Route-Sheet**

To deal with geopolitical brownfields it is essential to have a clear and complete state of mind related to current situations of the area considering all aspects with most possible neutral perspective. After normative understanding of physical, social, and economics situations as discussed in Chapter 2, the major step would be related to three simple and extremely complex keywords as ‘Power’, ‘Space’, and ‘Time’. Correspondingly, following questions as an example must be answered to have clear understandings of the situation in a geopolitical brownfield site:

- What is this conflict about?
- What source of power stimulate or support the conflict? and why?
- What type of space this conflict zone represents?
- Who are the stakeholders of conflict? and what is their background history?
- Could this conflict take place in this geographic location if back in time circumstances change?
- What type of objects and competences are involved in such conflict zone?

To find an answer to these principal questions, after an onsite qualitative experience of realities and challenges associated with study area, a neutral data collection is suggested as the first technical step. This step will help decision-makers in a conflict zone to not miss or ignore the realities while dealing with geopolitical brownfields. Such surveys are essential to review and analyse changes over time to understand



why current situation is in the way it is. Such findings can turn to spatial quantitative data using Geographic Information System (GIS) mapping and analysis tools.

### **Steps of Diagnostic Method for Typical Brownfields**

In exploration into 3 major European brownfield regeneration projects (Section 2.4), neither significant criteria related to geopolitics and power/space struggles identified, nor characteristics related to political and economic geography of the area discovered. This fact discussed previously as lack of a place-based approach as an analysis indicator or decision factor for brownfield regeneration projects. Although no clear diagnostic method identified in previous discussions (Chapter 2), 4 major steps identified as common technical steps of diagnostic methods in brownfield acts and policies:

**Step 1:** Identification of the major physical conditions and relative stakeholders

**Step 2:** Identification of available infrastructure and the source of investments

**Step 3:** Identification of ownership status, local economic mechanism, and urban conditions

**Step 4:** Identification of socio-cultural and socio-economic status and values with concerns of public health and security

### **Steps of Diagnostic Method for Geopolitical Brownfields**

By considering nature and characteristics of geopolitical brownfields, another major step related to geophilosophical exploration of given geopolitical brownfield site in conflict zone should be added to mentioned 4 identified steps. This new step would help decision makers to identify the origin of the problem to deal with complex situation of sites in conflict zones:

**Step 5:** Identification of geo-political, social, economic characteristics of the area

The data collection and analysis criteria (conflict, abandonment because fear or for peace, and geopolitics) of this problem identification step establish general facts. This study suggests two sets of data collections. Firstly, principal investigator(s) can collect data base on their observations of site situations, existing documents, interviews, etc. The results of the first set of data collection will be subjective and relative to general opinion and perspectives of the investigator(s). Such investigation in best scenario can be reflected as a technical report done by a certain investigator or an institute.

Secondly, validating identified facts through Measuring Attractiveness by a Categorical Based Evaluation Technique (MACBETH). This survey technique permits the evaluation of importance (qualitative values) of collected data against multiple criteria. The key action here is the qualitative judgements of survey participants that demonstrates the degree of elements' attractiveness in their decision process, in which we can generate numerical values for each criterion (Bana e Costa & Vansnick, 1995).

“MACBETH is an interactive approach for cardinal measurement of judgments about the degrees to which the elements of a finite set A possess a property P. The name MACBETH, Measuring Attractiveness by a Categorical Based Evaluation Technique, comes from the fact that we



conceived our approach with the aim of facilitating the measurement of (degrees of) attractiveness in decision processes. Nevertheless, MACBETH can also be applied to measure other properties in domains of knowledge others than Decision Sciences, such as in Psychophysics or in Social Sciences.” (Bana e Costa & Vansnick, 1995, p. 93)

This study suggests use of seven MACBETH semantic categories such as no, very weak, weak, moderate, strong, very strong, and extreme. It is important to consider that the results of such survey are correlated with identified facts in the first place and also implementation of the facts as valid criteria for questionnaires. However, subjective institutional or individual opinions would bring high level of bias in defined criteria, which is difficult to avoid in case of studies in conflict zones. Therefore, a mechanism for different round of studies by independent institutes or investigators is suggested as a validation process and technique.

This second round of data collection can be done through survey from local inhabitants and key-informants to establish the findings based on different opinions. In case of Cyprus conflicts, this study suggests a large survey to be conducted from Greek Cypriots, Turkish Cypriots, and immigrants including different working and political classes. The results of such survey can be evaluated against the initial qualitative evaluations (subjective) of the principal researcher. Also, the weight and severity of the different elements within evaluations can be used for purpose of conflict analysis and management.

#### **4.5.2 Proposed Guide for Second Round of Data Collection**

The survey method would be series of questionnaires’ asking two types of questions in an online or paper base format<sup>55</sup>. The first set of questions can identify socio-cultural and socio-political aspects such as demography, religion, culture, and community history. By identifying these items, the investigation can determine the social characteristics and historic path to identify how given community formed, developed, and possibly transformed. Establishments of facts with regards to social characteristics and its historic path can demonstrate social desires, culture, and traditions of given community. This is a complex factor as it identifies existent of communities and their role and desires that would be very complicated to determine in a conflict zone. Correspondingly this study suggests a sample matrix for data collection from each identified community (Table 10).

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<sup>55</sup> Considering technological advancement and internet accessibilities in 2019, mix of paper based and online surveys are recommended to be able to access to wider range of audience in conflict zone, however in online systems, a verification system is required to avoid multiple entries by the same participant.

**Table 10 - Sample matrix for data collection from each identified community in a geopolitical brownfields area to conduct social survey. The X1 and Y1 serve in case of existent of more than two communities or international actors involve in a given geopolitical conflict zone.**

	From your perspective	From perspective of other community X1	From perspective of International actor Y1	What are the similarities and differences between different perspectives (to be answered by the investigator)
What is the name of the community?				
What is the role of this community within given society?				
What are the identical cultural factors?				
What are their religious / believes characteristics?				
How do you involved / merged within the X society?				
What and how is your community relationship with other community (X1)?				
What and how is your community relationship with International actor (Y1)?				
What are your socio-cultural desires?				
What is your opinion about your connection to the X territory?				

The sample questions presented in this matrix can be expanded to more detailed questions. However, the most important factor is to identify the most neutral or perhaps honest answers (with subjective opinion of the investigator). For instance, this matrix can determine the socio-cultural characteristics by finding the similarities and differences, which are the qualitative determinations of this initial established facts. This sample social survey should be done separately for each community. According to this study, the differences represent the main points of socio-cultural conflicts, which can be prioritize in other surveys and multi-criteria regression analysis models.

The second set of questions can level of agreements with different established, known, and/or identified facts to be able to importance and common opinion on validity of different facts. This type of surveys would also address the impacts of the fact on different dimensions using indirect questions (revealed preference techniques). For instance, in case of Cyprus conflict, questions about number of properties (or their family) the participant owned in 1970 and how many do they own in present day, would reveal economic impacts of the conflicts on the families (both positive and negative) to not only rely on official published statistics. The statements in such revealed preference survey would generally include several topics such as:

**Political atmosphere and interests;** presenting statements related to domestic political perspective and international influences addressing the major events and transformations.

**Governing policies (land-law and ownership policies);** presenting statements related to the constitutional law, annexed policies, legislations, with regards to their first and last editions highlighting the changes.

**Spatial characteristics (physical environment);** presenting statements related to physical settings and characteristics of both urban scale and regional scale of the affected areas.

**Environmental conditions addressing soil/water/air contaminations;** presenting statements related to contaminations and health hazards remaining from past activities with regards to conflicts (not ordinary industrial contaminations) such as military, explosions, etc. It is important to consider if the revealed preferences and opinions provide any suspension of presence of high level of contamination, scientific assessments by experts should be immediately suggested (if possible and accessible).

**Urban capital;** presenting statements related to existing civic and regional infrastructure that define resources and physical/economic backbone of urban structure of a city or region such as roads, railways, bridges, urban furniture, public infrastructures, industrial facilities, etc.

**Economic characteristics;** presenting statements related to real estate values or economical evaluations with regards to both affected areas and their peripheries

### **Prioritisation and Mapping Techniques**

The collected data within conflict zones can be associated with different levels of bias. Therefore, if the data should be included in any quantitative research, this research suggests categorising the collected data as poor-quality input information. Also, it would be important to extend the finding by prioritising the aggregated data of each criteria. This study suggests prioritised aggregation operation method proposed by Yager (2004) that demonstrate how “lower priority criteria are related to the satisfaction of the higher priority criteria” (Yager, 2004). This method can help to re-score the importance of weights associated with criteria. Corresponding to different behaviour of each participant (with regards to their personal opinions), a multi-criteria linear regressions analysis using aggregated data can provide conclusions regarding correlation between different variables.

However, the level of bias remains in identification of important factors and perhaps most problematic areas. The best scenario for identifying problems would be involvement of local decision makers with investigation team to be able to judge and prioritise the results concerning personal perspective, education, culture, etc. of local decision maker and validate the priorities against previous results. Involvement of decision makers in such analysis would significantly impact the decisions with regards to identified problems. To prepare a spatial relation between findings of survey and location of geopolitical brownfields, this study suggests preparation of map that show the locations and severity of damages. Such map can help decision makers in regeneration projects to be able to identify, mark, and rank geopolitical brownfields.

## 4.6 Final Remarks

Considering the opportunities of effective geopolitical brownfield regeneration in conflict zones, Cyprus is trailing behind other countries such as the US, UK and Spain. It has no recognized land-use category encompassing the concept of a brownfield, hence there is a lack of policy guidance for the relevant government organizations (Shojaee Far & Atun, 2012). No positive financial incentives have been considered to encourage investors, such as tax breaks, reduced liability for contamination, nor limitations on the development of Greenfields. And whilst several ambitious projects have been proposed for brownfield areas, such as the creation of a duty-free zone on the site of the old Nicosia International Airport, these have so far remained unfulfilled (Morley, 2013).

Contention between the Greek and Turkish Cypriot populations has led to both destruction and protection of heritage in a bid to both remove uncomfortable physical reminders of the past, whilst holding onto the moral high ground. In a more passive way, the property issues resulting from the population movement in 1974 have also led to a neglect of areas that has unintentionally kept them safe from development. With possession of land, but without full legal ownership to sell it for development, in addition to the only partially-realized tourism market, some areas in the TRNC remain untouched by the advance of construction, although it may not remain this way for long (Constantinou & Hatay, 2010).

The exodus of wealthier inhabitants from the walled city as it became a less attractive residential prospect left a population dominated by the elderly and poor. The gaps were soon filled by a low-income, low-education Turkish immigrant population, bringing with them a different way of life. This, in combination with the changing land use to “light industry, whole-sale units, low profile restaurants, fast-food and retail units” (Oktay, 2007), greatly changed the character of Nicosia over a relatively short time. In the absence of long-term planning and relevant legislation, high-rise buildings materialized to meet the need for both office space and residential buildings in the face of rising land prices. Developers looking to make maximum profit without restrictions chose cheap building materials and many compact spaces within smaller plots, reducing the quality of living spaces with low ceilings and small one-sided balconies. Reinforced concrete increases the energy consumption of buildings and the lack of natural air flow is inappropriate for hot climates. On top of this, the demand for more accessible roads and vehicle parking have led to the paving of dirt roads and green spaces which reflects solar energy, raising the ambient temperatures (Öngül, 2012; Ioannou, 2016).

The result is a city where one-level free-standing houses surrounded by ornamental, fruit and vegetable gardens accessed from dirt roads have almost entirely been replaced by multi-storey buildings with paved parking areas and tarmac roads, yet there is no continuity between neighbouring buildings to give the space a sense of identity (Öngül, 2012; Ioannou, 2016). Both physically, and within society, there is discord and a lack of congruence. There is a critical need for an integrated city plan that can provide a harmonious city space that will allow for future developments regarding the political control of the city whilst meeting the

current needs of the population and maintaining historic and cultural values. Ongul (2012) suggests that this will require the planning to be separated from the changing influence of political parties and supported by real citizen participation, highlighting perhaps the key mistake in the development projects from recent decades: A city is more than just a façade.

In the absence of a holistic plan for urban development in the TRNC along with a lack of guiding regulations, the construction industry is moving the region forward in a chaos of individualistic motivation (Yapicioglu & Lawlor-Wright, 2014). Khademi (2014) summarized the main causes of late completion of construction projects to be lack of expertise, logistical issues such as material delivery, and slow decision-making or planning changes. The structure of the construction industry in the TRNC is greatly influenced by the collective history of violence which affects trust of outsiders, whilst the low skill-level of the available work-force limits their ability to work on the kinds of complex projects being instigated by foreign investors, both private and institutional (such as the EU). As a consequence, the local construction industry is at risk of losing tenders to outside contractors who are more skilled, experienced, and have more comprehensive and efficient planning and evaluation systems in effect; the perception of low quality, poorly executed and delayed projects in the TRNC is a major obstacle in the development of the industry (Yapicioglu & Lawlor-Wright, 2014). During 2016-2017, as part of a Growth Framework, RoC ministries are expected to prepare three-yearly Strategic Plans. The fact that in both the north and south of the island, planning is subject to political changes every 3-4 years gives further weight to Ongul's (2012) advice to dissociate urban planning from political change. In his analysis of 'Quality Assurance of Major Public Infrastructure Projects in Cyprus' in 2017, Adamou highlights issues in the Project Appraisal Framework such as the political pressure on project engineers, the ability of political leaders to circumvent the vetting process for their own political gain, and the lack of importance and consideration of the social and environmental implications of a project in comparison to its economic benefits; factors which almost certainly are replicated in the TRNC administration too.

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## **PART III – CONCLUSIVE FRAMEWORK**

*A mistake, liking power, it's the kiss of death...*

## **CHAPTER 5**

### **CONCLUSION; GEOPOLITICAL BROWNFIELDS**

#### **5.1 Introduction**

This study contributes to better understanding of abandoned properties in geopolitical conflict zones through identification of other type of land typology that has been coined in this study as geopolitical brownfield. This identification and conceptualisations related to geopolitical brownfields have become principal theoretical implication. Although this study started with an optimism to find a solution to deal with geopolitical brownfields, the results presented that there is no simple technical solution and the answer is more in the context of geopolitical settings and diplomacy.

Initially, this study set out to compare characteristics and possible regeneration approach between typical brownfield sites and geopolitical brownfield sites in geopolitical conflict zones. This comparison has identified that abandoned properties in conflict zones share many similar physical characteristics with typical brownfield sites, such as being previously developed, associated with a possible level of contamination, or requiring a series of 'RE' concept interventions (reclamation, remediation, redevelopment, regeneration, etc.) in order to return these affected areas (lands/properties) to a state of functional use. However, this identification also recognized a contrasting issue that makes geopolitical brownfields in geopolitical conflict zones significantly distinct from typical brownfields. The differences identified as cause and origin of the abandonment in such zones with direct link to conflicts and violence within geopolitical contexts in contrast to economic changes and urban expansions. However, this study led the researcher to an understanding of impossibility of a simple solution for geopolitical brownfields; this study showed existing urban and brownfield regeneration methodologies are not working in geopolitical conflict zones, but the problem identification and understanding of impossibility of a simple and/or technical solution, may go toward a direction that lead to a solution. Correspondingly, the effectiveness of typical intervention approaches by professional urban planners, architects, engineers, economists, and similar pragmatic professions has been questioned due to the level of complexity and challenges of possible solutions for these areas. Such normative proposals have usually been failed as a planner may impose an idea to the world, but external factors may not let the plan happen. In other words, the empirical part of this study demonstrated that it is difficult to find a project result in geopolitical conflict zones that is matching with how it was originally planned.

Accordingly, the evidences from this study have shown that there is no definition of geopolitical conflict as a cause of brownfield sites in any planning systems in the world and suggests the need to fill this gap by including geopolitical conflict as a new cause for appearance of brownfields in geopolitical hotspots. Therefore, after comparison task, this study set out to explore responsiveness of brownfield regeneration policies and regulations in conflict zones. It is identified that if an abandoned property in a conflict zone



remain idle for long periods of time, then a complex and multi-disciplinary approach should be offered to deal with power struggles over space, or in other words exercise of extreme power over space.

This study has argued that combination of information related to a geolocation (space) with aspects related to conflict of interest over space (power) provides a powerful mechanism for integrating technical sciences into social and political sciences. This mechanism requires an interdisciplinary approach to provide stronger frameworks to deal with abandoned properties in conflict zones or the proposed term for it; geopolitical brownfields. However, the realities of land management in conflict zones urge local and sometime international authorities to deal with affected areas as urban intervention project, as well as political assets of negotiation with stakeholders of conflicts. Exploration of different projects determined the key problem as project's decision makers do not always know how to choose the most profitable opportunities in land assessment and re-concept processing within their available options. Correspondingly, in areas of geopolitical brownfield sites that usually associated with short histories or little experience of modern planning, the urban planning solutions are usually adapted from the models of developed countries, without consideration of local geopolitics and its impacts that influence local planning systems and requirements.

On the other hand, during this study, it has been identified that quantitative surveys can have high level of bias in complex political situations and locations such as Cyprus, in which this study failed to run a successful Delphi and similar surveys. Therefore, awareness of complexity and complications associated with geopolitical brownfield may assist in understanding of the role and disabilities of computer science (numeric surveys and quantitative approaches) and the results it can produce. Of course, there are success stories in urban planning using GIS, Excel, and other type of numeric data sheets, but the case of Cyprus with many years of efforts serving as an evidence to prove numeric data sheets in geopolitical brownfield sites are not enough. The most important limitation lies in the fact that dealing with geopolitical brownfield is not only a technical topic and it has direct correlation with field of social science, in which technical tools such as GIS data may not offer what reality is about in geopolitical context.

During different site visits and field studies (Cyprus), this study experienced and identified that facing the realities of geopolitical brownfields cannot be explained by numbers and surveys and relying on numeric data in geopolitical context can bring the study to a brutal stop. Notwithstanding these limitations, the conclusion of this study suggests that the great differences between both side opinions (sometimes more than two sides) can be identified as the main element of bias of demonstrating realities in geopolitical context studies.

## **5.2 Restating the Aims and Highlights of the Main Findings**

This study has raised important questions about the nature of a complex and multi-disciplinary approach to deal with geopolitical brownfields, which led to deeper investigation to answer the core research question:

‘What diagnostic method for decision-making strategies can be used to identify land management problems in geopolitical conflict zones?’

Surely as strategies come after identifying the problems, this study identified no existing theories fit the regeneration challenge of abandoned properties in geopolitical conflict zones. Therefore, this study was undertaken to identify and evaluate existing brownfield regeneration diagnostic method and suggests necessary steps to prepare general framework of a diagnostic method for geopolitical brownfields. Correspondingly, to build a diagnostic framework that enables project stakeholders to consider or apply most profitable options, four major steps were identified in Chapter 2, and one step suggested corresponding to inputs from Chapter 3 and 4 (Step 5):

**Step 1:** Identification of the major physical conditions and relative stakeholders

**Step 2:** Identification of available infrastructure and the source of investments

**Step 3:** Identification of ownership status, local economic mechanism, and urban conditions

**Step 4:** Identification of socio-cultural and socio-economic status and values with concerns of public health and security

**Step 5:** Identification of geo-political, social, economic characteristics of the area

These steps determined as an instrument (geopolitical brownfield diagnostic framework) for the initial evaluation and production of a route-sheet of first-time practice of sustainable brownfield regeneration in countries/territories within conflict zones. Such route-sheet can illustrate how different entities within conflict zones can identify and prioritise problems related to contests of power over space and work towards possible solutions. It seems possible that implementations of such framework redefine problems related to property issues in geopolitical contexts and enhances the method of understanding and analysing approaches rather than contributing to the solutions. However, the proposed geopolitical brownfield diagnostic framework determined as a necessity of first step action for problem identification.

The suggested framework is based on the integration of the global understanding of the term ‘brownfield’ through exploration into technical issues and implemented policies and integration of social, political, cultural, and economic aspects relating brownfield management to abandoned properties in conflict zones. The philosophical argument that guided this diagnostic framework is based on a Foucauldian concept of power and space. History has provided evidence that the exercise of extreme power over space poses challenges within urban settlements engulfed in domestic or international conflicts, or urban areas fractured by social and religious divisions. Therefore, critical reviews on fundamental theories related to space, power, and conflict of interest supported this study to find a responsive answer to its research question.

To ensure the proposed framework is not a simple pragmatic suggestion, an in-depth analysis through cases of Cyprus conflict with high level of complexity were presented. Although this study is inductive research with a qualitative approach, the theoretical features of quantitative research are used in combination with practical features of qualitative research. The evidence from this study enabled this research to discuss and explore the complexity of geopolitical brownfields. This mixed method of qualitative and quantitative study

suggests that there is a multi-dimensional link between brownfields and power struggles over space that are neither a qualitative nor a quantitative approach alone could present. For instance, long-term legal disputes on ownership status and property rights have been identified as major property issue in geopolitical contexts such as Cyprus conflict. Having defined what is meant by geopolitical brownfield diagnostic framework, the next sections will now move on to discuss conclusions that can be drawn from the present study.

### 5.3 Brownfields

Although there is no universally accepted definition for the term ‘brownfield’, in western English literature generally originating from North American and British institutes or scholars the meaning of brownfield has spread and gained near-complete acceptance. However, as Philip Hanham in 1997 noted that the development of policies without a “clear straightforward definition” was “pointless”, this study adopts brownfield global understanding with following clear definition for purpose of this research:

*‘A brownfield site is any previously-developed land, which is either abandoned, vacant, derelict, or contaminated, or any combination of these.’*

This definition includes both urban and rural lands but excludes the natural environment and historic urban quarters. It also includes presence of real or perceived contamination but not as a necessity. Corresponding to the multi-layer complex challenges associated with brownfield sites, local geopolitics has considered by this study as a contributory element in the production of typical brownfield sites. However, it is determined that the local geopolitics cannot justify the impacts of regional geopolitics in the production of brownfield sites in conflict zones. Therefore, to distinguish brownfields from semi-like brownfields in conflict zones, this study suggests a new term (land typology) denominated as ‘geopolitical brownfield’ with following definition:

*‘Geopolitical brownfields embody a multitude of concepts which postulates that all space is power, and all power produces space; geopolitical brownfields would be the space of contested powers’*

Since very little is known about the management of brownfields in conflict zones, this study filled the gap in the literature related to abandoned properties in conflict zones and contributed by contesting the claim that the global understanding of abandonment (never again claiming a right or interest) is incompatible with the term abandonment used in conflict zones as result of different types of displacement and production of no man’s land, buffer zones, restricted areas, etc. In such circumstances a literal space suddenly becomes non-existent; although it exists and becomes an asset for political negotiation, all physical and psychological access to such space becomes restricted. Considering the similarities of geopolitical brownfields with brownfield sites, the inaccessibility, political uncertainty, and not being related to any market values present different challenges to deal with geopolitical brownfields. This is evident in the case

of Cyprus conflict, where geopolitical brownfield sites have significant negative impacts on their peripheries and have incompatibility to be valued in the same way as typical abandoned properties.

Correspondingly, evidences from this study suggest that there should be two main factors for assessing the value of geopolitical brownfields. The first factor is the economic assessment of land parcels, and the second factor is the externalities that these lands exert over their surroundings (peripheries), where market prices do actually operate. Since the market does not value these areas, non-market indicators such as social and cultural values, could possibly contribute to valuation technique. The people who lost their properties as a result of intercommunal conflict also lost a place of that holds fond memories, such as North Cyprus, where no real effort has been made to implement comprehensive regeneration strategies; instead there has been an investment focus on rapid development of Greenfields to open up new real estate market.

## 5.4 Space

The term ‘geopolitical brownfield’ suggested as land typology for abandoned properties in conflict zones, where they are products of geopolitical conflicts and exercise of extreme power over space. Links between physical and social science can fit the best scientific explanation for this term; from one side physical science relies on objective observations, statistics and calculations, and from another, social science relies on subjective understandings and perceptions of a given space. However, differences between disciplines defined and explained such link in a different way. Taylor (1999) by considering both physical science and social science identified contribution of disciplines that differently explain place and space; geographers widely use the term ‘region’ while political geographers prefer to use ‘territory’, economic geographers use ‘location’, cultural geographers use ‘landscape’ and social geographers use ‘area’. Correspondingly, to contribute and explain the link between physical and social science through the multi-layer concept of geopolitical brownfields, this study relied on geo-philosophical discussions introduced by key thinkers such as Henry Lefebvre and Michael Foucault.

The place has been understood in this study as intersection of the social, political, and economic aspects of space, in which ‘place’ is a materialistic visualization of space. People understand and re-act to places by connecting the paths and meanings they perceived and remembered from physical and social characteristics of a space. Therefore, each space would hold a different meaning for different people. This explains how different stakeholders of conflict in a geopolitical context perceive and conceive space differently, and how it ends with long term ‘catch-22’ situations of disputes and arguments. Lefebvre introduced this idea as mental space that is organized according to knowledge and science, in which both real and imaginative settings of power produce a dependency of place among spatial scales of it. In general, therefore, it seems that long term disputes over place and space turn a place with a historical/relational identity into a place without either of them, which Auge (1995) called it ‘non-place’.

The geopolitical brownfields that lost their historical/relational identity during long term disputes, connect directly with fourth dimension – time – that explained in this study as Time-Space-Place relationship. Geopolitical contexts are directly linked to social power through institutes that establish power to control subjects. This has best explained – based on a Foucauldian power-knowledge approach – by Peet (2015) that there are institutions forming community of experts who share the same ideas and ideologies, in which ‘centres of power’ conceptually manage space through the control of knowledge. When the fourth dimension and its circumstances of given time are considered, they meaningfully demonstrate the interaction between human behaviour and the time that formed centres of power.

This study through evidences from case of Cyprus conflict identified the aggregation of ‘centres of power’ in a certain time of struggles for community and territorial identity, produces contest of power. In other words, consequence of the ‘social reproduction of power’ and ‘political economy’ turn a geographical location to a geo-political location, which represents a different vision from the simple definition of geopolitics as political geography. This is why the case of Cyprus conflict has been discussed as an evidence to provide better understanding of origins of brownfields in geopolitical conflict zones. Thus, these discussions and definitions relating to a geographical understanding of space and place combined with lessons learned from Cyprus conflict have been used in this study to construct the theoretical concept and framework of geopolitical brownfields and its proposed diagnostic approach.

## 5.5 Cyprus

Cyprus dispute presents a conflict between different international powers and national interests and has lasted half a century. Although there are optimistic signs that the younger generation wish to overcome the physical and psychological separation and unite as one Cypriot community, the ingrained beliefs about the historical actions and motivations of the opposing communities are proving hard to break. Any successful progress in reconciliation must be accepted not only by the political parties involved in the talks, but also supported by both the Turkish and Greek Cypriot communities. Peace process between the TRNC and RoC, facilitated by the UN, have so far failed. Based on different interviews conducted during this study, in addition to other presented evidences, this study identified physical and cultural separation of the two communities that have become ingrained and potentially impossible to overcome. Meanwhile, lack of trust is a stalemate between the political leaders regarding the future power structure on the island exacerbated by the continuing influence of Turkey on the negotiations.

The trade embargo that implemented in 1983 as a result of the declaration of the Turkish Republic of Northern Cyprus (TRNC), left the northern part of the island with a devastated economy and financially dependent on Turkey. Since only the southern area (the Republic of Cyprus) holds membership of the EU, the availability of international aid is much more difficult, access to import and export markets is restricted. This situation resulted in far less investment in the area than would have been possible. Unfortunately,

funds through USAID, UNDP, EC have been primarily directed towards conservation of historic and cultural monuments (physical), and little fund has been spent towards socio-cultural activities and community conflict-resolution projects. Although it is clear and known how to use technical solutions for aspects of space, how it was produced is ignored by urban planners that are fascinated by tools. Based on empirical findings, in such fields there is a dilemma that people are stronger than any plans, therefore, this study strongly debates the role of technical solutions offered by national or international institutes. Corresponding to presented evidences, this study identified massive lack of an integrated approach with a long-term plan for general urban development and specifically the geopolitical brownfields of the region. Facts and findings in this study suggest, neither the author nor other urban planners/architects are able to find simple technical solution for case of geopolitical brownfields such as abandoned properties in Cyprus, but the findings of this study – and perhaps similar multi-dimensional studies – can only suggest how to move forward.

Considering the economic decline and the lack of confidence in private investment in the TRNC that have been described above, fund strategies related to regeneration of geopolitical brownfields are unlikely to be successful in this context. Property ownership remains problematic in many areas of both Northern and Southern Cyprus. Since 1974, a resettlement programme has begun to accommodate returning Turkish Cypriots who had fled the violence and those displaced from the south to north. Once the conflicts slowed down, there was also an influx of people from rural areas to the cities in search of work. This huge population transfer led to abandoned properties being granted as residence to incoming population, ignoring the ownership status of Greek Cypriots. This fact presents the problem that participate massively in deadlock negotiations between two communities.

Correspondingly, as it presented in this study, property prices in Northern Cyprus are suppressed compared to the south of the island. This study identified direct link between change in market prices and negotiation process, which level of success or failure of negotiations can be generalised and determined as market indicator for geopolitical brownfields. For instance, as it was discussed, during Annan Plan (2004) there was a construction boom, which slowed down following the failure of the talks. Furthermore, issues of ownership and planning policies are the necessity of considering the return of displaced people to their original land and homes following a peace agreement. Considering the physical and psychological separation of the Turkish and Greek Cypriot communities over the last four decades, this is a move that could only succeed with significant reconciliation programmes to overcome the mistrust and cynicism that currently exist and enable reintegration for sustainable harmony.

The lasting effects of both historical events and years of political propaganda will make the sensitive rehabilitation of former residents both challenging and fundamental to any accord, whether the two populations are brought together as one country or continue to exist in a two-part federal system. Not only the two communities have different perspectives on history, but also distinct cultures and languages. This study contests the claim that is crucial for realizing the full economic potential of a peaceful solution as

well as investments in programs avoiding social implications of discrimination to enable the talks towards regeneration of geopolitical brownfields. With regards to urban planning and land management in geopolitical conflict zones, the conclusion of this study suggests that social science should be more involved and be part of urbanism to be able to offer something more practical than just a technical solution.

## 5.6 Final Remarks

The present study was designed to determine the best possible ways to deal with geopolitical brownfield towards possible sustainable regeneration option. The concepts that postulated the idea of geopolitical brownfields derived from observations of challenges, sentiments and plenty of failed efforts to address the urban planning and land management issues in North Cyprus. This study linked topics from different disciplines within social science and physical science to find the best explanation that suites abandoned properties in North Cyprus. However, the results and findings suggest that data in geopolitical context must be interpreted with caution because up to now neither this study nor any other studies could solve the Cyprus dispute over property using technical solutions. The concept of geopolitical brownfield brought the centre of attention to challenges of land use management in political conflict areas that requires diplomacy and political science integration into urban planning techniques rather than simple technical perspectives. This concept contributes to broader domains in urban studies by bringing insufficiencies of sustainable brownfield regeneration approach within geopolitical conflict zones into evidence. This study emphasized such methods should not be addressed nor could not be achieved through solo technocratic methodologies and policy approaches to deal with geopolitical brownfield sites. Therefore, as a step towards for a practical method to deal with such lands, a multidisciplinary collaborative approach is an essential to enrich the analytic understanding of correlation between politics, power, and abandoned properties in conflict zones.

Varosha district that is commonly called burned city presents all metaphoric aspects of power struggle over space, in which the author perceived it as part of urban characteristics of current Famagusta. Whilst thinking of a city as hostage of political challenges, the nature of argument goes beyond a simple abandonment and sheds new light on the links between what has had happened and what has represented as current lifestyle of Turkish Cypriots. Currently, as a result of embargos and military presence in the cities of TRNC, the existing legal mechanism is obsolete, and the island become a backyard mechanism for casino economy with large resorts, which completely polarised the incoming economy from urban characteristics.

The examples are not limited to Varosha district, and 240 square kilometres of abandoned lands and properties that horizontally divide the island into two parts, specifically representing as one of the borders of European Union, highlights the severity of damages and complexity of the case. A possible solution may require more attention from international community to not just think on peace talks, but also a resourceful plan to find a solution for such area. Therefore, in these circumstances, this doctoral study suggested a conceptual framework of diagnosis to help the actors illustrate a realistic route-sheet and map of the



problem. But also, these findings raise intriguing questions regarding the nature and extent of solutions offered by international institutes in which majorly are disconnected from realities of geopolitical contexts. This may be explained by the fact that tools and techniques that are used in modern institute of urban studies, usually need numbers and figures to function (GIS, Excel, etc.). However, the realities in geopolitical conflict zones are rather contradictory as either there is no reliable number or no numeric data at all. This inconsistency may be due to fuzzy realities in geopolitical context that are mixed with feeling and sentiments.

Therefore, this study concluded that question of geopolitical brownfield is a very complex one as it is not possible to bring both side or more internal side opinions into a valid data sheet. There are several possible explanations for this conclusion as when a researcher travels to a geopolitical field associated with conflict (for example landing in ERCAN airport of north Cyprus), all the hypothesis and possible solutions stop functioning, but upon return to research centre every technical solution sound practical again. The observed realities in dealing with geopolitical brownfields might be described as current urban studies are very far to find a methodology that help to understand space of contested powers. As a final note, it is important to mention that this study achieved a level of maturity in land management issues related to geopolitical conflict zones to debate and question the role of urban planners/architects (such as the author) whom may be fascinated by tools and techniques and intent to provide technical explanation and solution for every situation and problem, particularly, for the case of geopolitical brownfield sites.

## **5.7 Recommendations for further research**

The observations and documentary data collections during conduct of this study present a subjective opinion of the author but grounded in a theoretical and qualitative empirical analysis enriched with a selected number of interviews with locals and key informants. To be able to validate such opinion, conducting of a wide survey as it suggested in section 4.5 would be a fruitful area for further work to expand the idea of geopolitical brownfields. Such conduct may require institutional support and detail planning for implementation. The results from such investigation may illustrate the realities associated with such areas. Whilst this study did not validate identified facts through measuring attractiveness of statements and critical opinions by a categorical based evaluation technique, it did partially substantiate through its theoretical and empirical framework. Despite its limitations, the study certainly adds to general understanding of space and place in conflict zones in addition to its relation to concept of exercise of extreme power over space.

Implementation of proposed geopolitical brownfield diagnostic method would help future works to establish a greater degree of accuracy on this matter. Taken together, it is important to highlight that the findings and suggestions in this study do not support strong recommendations to taking such diagnostic framework as an instruction but to be taken as a conceptual framework to develop targeted interventions aimed to prepare a detailed problem identification procedure for each certain area. To broaden the

perspective, further research may require more case-wise elaborations to evaluate the adoptability of the proposed conceptual framework of geopolitical brownfields in forms of tool-kit-guidelines and procedures to follow.

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## **Appendix A: Field Investigations Report**

A brief report of research trips (2013-2015) to Cyprus to make complimentary investigations related to PhD thesis on “Geopolitical Brownfields”

### **Aim and Objectives:**

The main aim was to observe the current situation throughout site visits, memo notes, conversations with local key informants and collect possible documents and maps related to affected areas.

According to the main aim of this research trip the following objectives were set:

1. Visiting the affected sites by making observation of their current physical situation include buffer zone, closed area and their associated militarized zone
2. Having appointment and interviewing key-informants who deal directly or indirectly with land management policies regarding the affected areas within defined geopolitical brownfield zones.
3. Collecting possible and available documents, statistics, and maps regarding to land policies, current situations, and future plans related to Cyprus conflicts and specifically related to the affected areas.

**NOTE:** Limitations enforced in a geopolitical conflict zones such as inaccessibility to classified documents and access to affected sites have restricted the investigations and limited the field study achievements.

### **Objective 1 (Site Visit):**

In this trip 2 main observations took place:

1. Nicosia Buffer Zone (UN Buffer Zone) where the city divided into two parts
2. Closed district of Varosha (Marash) at the edge of city of Famagusta

Photography or any observation based on documentary methods were strictly prohibited by militarized policies and access to the sites could not be possible without special permission and supervision of military staff.

### **Nicosia Buffer Zone:**

A walk through the border from different gates took place. The only accessible areas of buffer zone are the areas between the Turkish checkpoints and Greek checkpoints. Therefore, only walk-through different checkpoints were possible, which provided observations of surrounding. The existing built environment of 1974 was visible through fences with a high level of physical obsolescence. Despite highly controlled path by border guards and security cameras, where taking photographs, stopping, note taking, sketching were

not possible, to be able to take memo notes of observations, number of cross walks happened in different times.

### **Closed district of Varosha:**

Since 1974 access to the area has almost been impossible due to militarized policies by Turkish military and the area reported to have contaminations from military equipment and mines. Photography and movie recording from the fenced areas are also strictly prohibited by Turkish military, as in each 10 meter there is a sign showing no photo or video in 4 different languages (Figure 52).



**Figure 52 – signs around Varosha district showing no photo or video in 4 different languages (Photo credit: © Mohsen Shojaee Far, 2014)**

Since the area is at the edge of current city of Famagusta, a drive on the surrounding of closed area took place enable a technical observation on the existing situation. This observation gave chance to this study to observe the built environment within fenced area, where it is separated and frozen in time just by one street within the city.

## Objective 2 (Appointments and Interviews)

During these trips, the investigator conducts conversations with many local people about the present study and general idea of Geopolitical Brownfields. Accordingly, summary of 7 interviews with local key-informants presented below. For privacy protection purposes, personal data of interviewees are anonymised.

..... (..... at City Planning Organization of Central Government - Turkish Side)

She was a team member during preparation of Nicosia Master Plan in 1983 as a confidential joint activity between both municipality of North and South Nicosia. In conversation with her, she highlighted many important points about complications associated with their previous attempts for data collections from buffer zone and its periphery.

During the visit, an archived survey document (the survey of Nicosia buffer zone within Nicosia walled city) has been reviewed and discussions about the survey process took place. As it was a classified document due to confidentiality issues, the only way I could access to information was through special permission from UNDP-ACT. However, the permission from Turkish side never granted.

She was interested in seeing development of this research and possible solutions on simulations and proposals on existing built environment in buffer zone and its periphery.

..... (..... at City Planning Organization of Central Government - Turkish Side)

She is an urban planner with more political vision than planning ideas. Basically, she is the main internal manager of planning office and she controls/influence all the urban planning process with ministry of economy and interior. She was a team member of Turkish Cypriots in Cyprus talks. She was very amazed and interested in the new term “Geopolitical Brownfield” and its definition, where she mentioned it is the idea that she has been thinking about over last 20 years and it was the first time she sees someone materialized it directly within an study.

The main topic and discussion with her, during the limited time of the meeting, was about geopolitical brownfield idea and her opinion on reality of Cyprus conflict. She advised to contact the people who are part of the negotiations, or previously they were part of it. She was so interested about non-market valuation discussion of hidden and real values of such abandoned/closed/restricted properties, where the cost of holding the situation, and what they paid as social, cultural, political, etc. were difficult to ignore and it was interesting if we could materialize the non-market costs and values. She promised to help and keep in touch to be updated about the research and having time to time online meeting to present new findings and development of the study to her.



██████████ (██████████ *at technical planning office in City Planning Organization of Central Government - Turkish Side*)

She is a young Cypriot urban planner, and currently she is working in planning office at the same time that she is conducting her PhD studies. I had a meeting/interview with her, and we discussed about current situation of Cyprus government, political perspectives, internal problems and conflicts between professionals (planners, architects, etc.) and politicians. She highlights a big contrast between professional and political opinions in policy developments. The main highlight was the existence of two different visions within politicians, a party that advocate on staying independent and being more connected to turkey (which impact more on isolation of north side), and other party that advocate for unification. So, depending on who holds the power, the planning strategies change even in such small island. She emphasised the most important issue for people in [political] office is statistics and economic returns (or funds) of possible projects and they pay less attention to real necessities of residents and future of their cities by means of built, natural, and social environment.

In discussions about the current situation of buffer zone and militarized areas, she provided an explanation to have understanding on the geographical situation and map of those zones via her perspective as a local professional that already deal with such issues. However, she doubted practical possibilities to materialize the real costs and values of abandoned/closed properties neither with market nor non-market valuation techniques. The major obstacle identified in this discussion was difficulties to collect valid information from people who lived for many years with high level of uncertainty.

██████████ (██████████ *at Cyprus Studies research Center at Eastern Mediterranean University*)

She is a professor of urban planning at Eastern Mediterranean University and ██████████ at Cyprus Studies Research Center. Fundamentally she was a critique to see and evaluate abandoned properties and buffer zone with brownfield perspective. She presented different opinion on dealing with abandoned properties based on planning proposals within Nicosia master plan. Although implementation of original Nicosia master plan (1983) failed in many aspects, but she advocates for implementation of the Nicosia Master Plan (1983 edition) as a good model.

During the meeting, the idea of geopolitical brownfields presented, which took her attention and interest to the topic. She advised to study deeper on Cyprus history related to division. She suggests further studies on some papers that she gave me, to provide better understanding of the situation, and specifically history of division within Cypriots, where it focuses on progressive development of division.

She was also fundamentally against foreigner investigations and hypothesis for Cyprus problem. She was mentioning that as a foreigner (independent researcher or institution such as UN and so on) it is neither practical nor accurate to raise a hypothesis for someone else's problem, as the result of limited information and experience of reality of the area.

..... (..... *at Nicosia Municipality at Turkish Side - Also Team Leader of Nicosia Master Plan Project since 1994*)

He is a practical professional with many years of experience of dealing with implementation of many different projects in Cyprus and specifically Turkish side of Nicosia. He was ..... of Nicosia Master Plan since 1994 and also ..... of vision project regarding to the idea of a unified capital. In his opinions he showed a strong sense of belonging to Cyprus and find himself responsible to find solution to its conflict. He was mentioning that many years ago as an activist he built a symbolic half - bridge in Ledra Palace (one of cross-points) as the symbol of reunification. He was so disappointed from international community and specifically EC, that they not just abandoned them, but also, they ignore them. He was hoping for any solution that would help the conflict resolution

The geopolitical brownfield idea and its framework presented to him and he was interested about the topic and he suggest if such projects can turn to real proposals and take attention of international communities, then there might be possibilities of its implementation. However, with all his interest in conflict resolution, he was almost hopeless and angry about current situation. After the meeting he reviewed the relative research documents submitted to him and apparently it took his attention. Through further email communications he sent the main points of ..... and mentioned it is not a published document, to be used it as original piece of information. In one of email communications he mentioned, “By the way I like both of your papers. If only more concrete solutions could be proposed. I hope our collaboration yields such outcome”.

..... (..... *at UNDP-ACT in Cyprus*)

He is a ..... at UNDP Action for Cooperation & Trust in Cyprus (UNDP-ACT) and through UNDP Partnership for the Future (UNDP-PFF) in Turkish side of Nicosia, the principal researcher established channel of communications with him. After discussions about the project, it revealed that he had authority to permit the access to documents of “Survey of the buffer zone within the walled city of Nicosia” in Turkish side. After receiving authorisation letter, which he says UNDP-ACT has no objection that TRNC planning department shares the survey information (Figure 53), the permission never went through and the full access to documents never authorised from Turkish side.

United Nations Development Programme  
Action for Cooperation and Trust



UNDP-ACT  
(OUT 14) 270

Nicosia, 5 December 2014

[REDACTED]

I am writing in connection with a request made by Mr. Mohsen Shojaee Far (PhD candidate at Polytechnic University of Catalonia) in support of his academic studies. In this regard UNDP-ACT has no objection to you providing access to documents and materials related to a project called "Survey of the buffer zone within the walled city of Nicosia".

Your cooperation in this regard will be highly appreciated.

Yours sincerely  
  
[REDACTED]  
Programme Manager

A circular stamp with the text "Action for Cooperation" at the top, "Cyprus - 1960" at the bottom, and "UNDP" in the center. The stamp is partially obscured by the signature and the name of the Programme Manager.

Figure 53 – Authorisation letter from UNDP-ACT that shows no objection against sharing survey information data by TRNC planning department

[REDACTED] (*Official attorney at Court of Famagusta*)

He is a young Turkish Cypriot lawyer and during investigations he was a help to find related acts and policies for purpose of this study. In his opinion, outdated policies in TRNC is the main problem of legislations. Most of the policies and laws are not updates and still belongs to constitutions of 1960 or even before. As an example, he highlighted the fine for drug dealing is still 1 Turkish lira (0,38 cent of Euro at the time of conversation) and there is no intention of reviewing the policies till they have certain solution for the current conflicts. The situation outdated policies which were applicable to most of land management and ownership legislation (with some exceptions such as exchange policies).

### Objective 3 (Documentary Investigation)

During this study, series of original documents related to urban planning and urban management of TRNC has been reviewed. However, documentations of major parts of documents were restricted and authorisations provided limited access to fast review of documents with supervisions of governmental officials. The related documents collected from different section of the government and a request list for

further documents officially submitted. Some of the documents presented in the following list are already collected or reviewed, but some other documents are on pending for authorisations that never granted.

1. Digital data of vision project and also latest updates of Nicosia Master Plan
2. Information on buildings at periphery of Nicosia Buffer Zone (Turkish Side) by means of listed items and at least for 2 period if available:
3. Usage status
  1. Age of Construction
  2. Conservation Status
  3. Size of buildings
  4. Population information (Age, sex, income, etc.)
  5. Any information regarding the value of real estate assets, even when such value is not market value but property taxes
6. Digital maps of Nicosia in DWG or similar formats
7. If available GIS shape files of parcel plans of periphery of buffer zone, include census track layer
8. Macro-Scale map of population
9. Current land-use plan
10. Existing information on spatial planning of periphery of buffer zone
11. Archived aerial photos from before/during/after the creation of the Buffer Zone
12. Medium to large-scale maps of Cyprus and Nicosia
13. Population and Housing Unit Census
14. Building Construction Statistics
15. Macroeconomic Developments Report
16. Economic and Social Indicators

The documents or documentary information that collected during this study are original data with unpublished status. This presents first hands information on local projects and policy data which presents an added value to this study such as ‘summary of new vision plan of Nicosia’.

## Appendix B: Photo documentation; Main Street of Famagusta Towards Closed Varosha

(Photo credit: © Mohsen Shojaee Far, 2018)



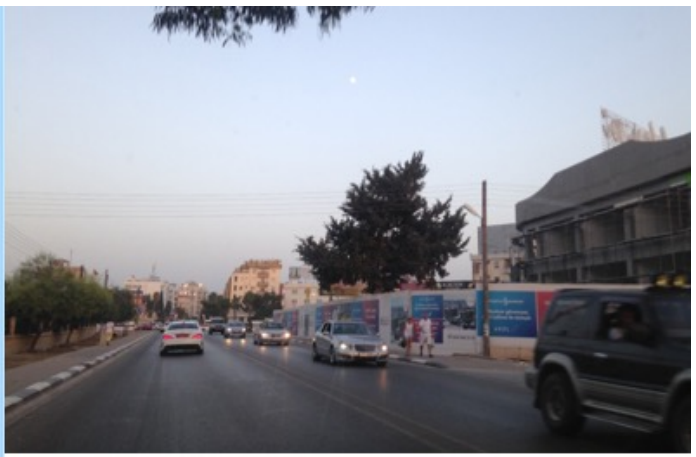










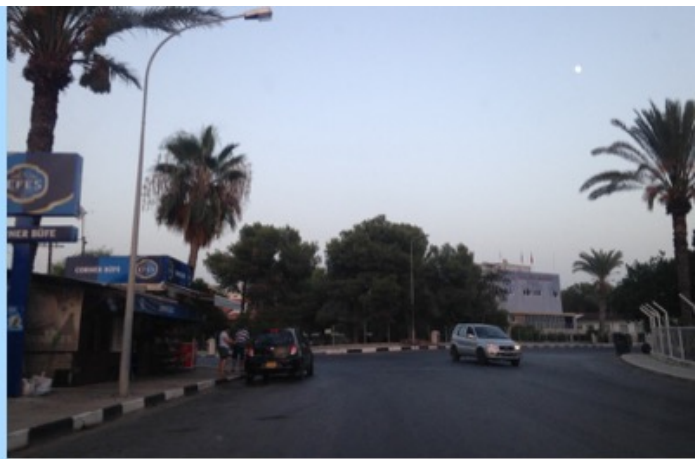














## Appendix C: Main Publications and Works

- Shojaee Far, M., Davie, M., & Marmolejo Duarte, C. (2016) The Others at The Other Side of The Buffer Zone; An Exploration on Correlation Between Geopolitics and Origins of Abandoned Properties in Conflict Zones. 23th European Real Estate Society Conference - June 08-11. Regensburg: ERES.
- Shojaee Far, M., Alasua Pastrana, I., & Marmolejo Duarte, C. (2016). Computer Aided Life Cycle Cost Analysis as a new approach for real estate investment decisions on public contracts. 23th European Real Estate Society Conference - June 08-11. Regensburg: ERES.
- Shojaee Far, M. (2015). An exploration on integrated spatial issues in geopolitical conflict zones to describe the conceptual framework of 'geopolitical brownfields'. 55th European Regional Science Association Congress. Lisbon: ERSA.
- Shojaee Far, M., & Marmolejo Duarte, C. (2015). Impacts of Abandoned Properties in Conflict Zones (Geopolitical Brownfields) on Real Estate Development & Regeneration Possibilities: Case of Cyprus Conflict. 22nd European Real Estate Society Conference - June 24-27. Istanbul: ERES.
- Shojaee Far, M., Alasua Pastrana, I., & Marmolejo Duarte, C. (2015). Building Information Electronic Modelling (BIM) Process as an Instrumental Tool for Real Estate Integrated Economic Evaluations. 22nd European Real Estate Society Conference - June 24-27. Istanbul: ERES.
- Shojaee Far, M., Davie, M., & Marmolejo Duarte, C. (2015). A Critical Review and Alternative Perspective on Abandoned Properties in Geopolitical Conflict Zones; The Case of North Cyprus. 55th European Regional Science Association Congress. Lisbon: ERSA.
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