

# THE DETERMINING EFFECTS OF LAND USES IN COASTAL AREAS OF SEFERİHİSAR, TURKEY

Nermin Merve BAYKAN

Nuriye SAY

Cukurova University, Department of Landscape Architecture, Adana, TURKEY

## 1. INTRODUCTION

In Turkey, nearly 60 percent of the population live in coastal areas which is approximately 8,000 km<sup>2</sup> and coastal tourism is highly demanded among all tourism activities. With respect to this, sensitive ecosystem in coastal areas are affected by urbanization such as building development. In Turkey, the Environmental Impact Assessment (EIA) policy was implemented legally since 1993 to prevent environmental pollution, but in spite of this, the adverse effect of building in coastal areas has been on the increase for about 20 years. For this reason, the EIA land usage agreement was invoked to address these issues.

Cittaslow Union which was established in Italy, in 1999, became the mark of quality for smaller communities with less than 50,000 residents. Cittaslow Union member cities are not state capitals or the seat of regional governments, but are strong communities that have made the choice to improve the quality of life for their inhabitants without being tied to economical standards, but intended to protect local identity and historical factors.

İzmir- Seferihisar which is located on the Aegean coast of Turkey, its endowments such as natural, cultural and touristic sites, are under threat of urbanisation. In anticipation of a decrease in the rate of urbanization in Seferihisar, it was observed that there was an increase in tourism activities and spatial usage demand in the affected region. Seferihisar's membership in the Cittaslow Union in 2009 may have suggested the rise in these tourism and spatial usage demand activities. One of the aims of Cittaslow is to protect the environment and improve the quality of life of the residents within a given community.

Globalization has a direct impact on cities. Most cities are re-modeled after another making them have similar physical characteristics. Given prototype structures, recent plans and buildings are similarly designed and also produced with similar construction materials which makes most cities have homogenous physical and structural appearance thus, damaging the original traditional features. In most cities, this policy (Cittaslow) restricts or conforms individuals to rather the same standard of living or sociological life style. Consequently, the emergence of new approaches to urban management and the uniformity of certain cities around the world with high tourism potential is a cause for concern.

In Turkey, Cittaslow movement took off officially on 28 November 2009, due to the Seferihisar's participation in Cittaslow Union. After gaining membership into the union, there was a significant increase in population and tourism activities especially during summer seasons.

The main objective of this study is to determine the alteration of buildings on coastal areas in Seferihisar from the first time of the appearance of the secondary residence to present by utilizing GIS techniques, and to establish the alteration in interval of time. Furthermore, the efficiency in the impact assessment systems for future alteration process will be evaluated in this study.

## 1.1 Urbanization in Turkey and Coastal Uses

Urbanisation is the physical growth of urban areas as a result of rural migration and even suburban concentration into cities, particularly the very large ones mostly as a result of the presence of certain indicators such as utilities, education, just to mention a few. In recent times, there are a lot of misconceptions on the concept of urbanization as if it were just increase in population. In Turkey, urbanisation was embraced in other meet housing demand for the growing population and not for infrastructural, cultural nor sustainable reasons.

Generally, the social change and transformation which stems from the migration from rural to urban areas affect the use of the cities' attractions and hinders the development of the cities.

Tourism in Turkey is common factors which accounts for migration especially, change that occur in the coastal cities and the towns which are highly endowed due to their characteristics and traditional features.

The emergence of globalization (tourism and other activities related to it) has caused manycity centers of coastal settlements to have a wide range of impact such as the destruction of natural factors, the disappearance of the socio-cultural values, vernacular architecture and loss of historical identity

InTurkey, the entire secondary settlements in the southern and western parts are approximately 8,300 km<sup>2</sup>, and are ranged along the coastline which is mainly used for tourism purposes. There are two significant factors resulting to the bad outcome of coastal usage and these are:

1. **Structural System;** disruptions in services, infrastructure and superstructure.
2. **Land Use;** improper use of urban land such as transformation of maquis, citrus fruits, olives groves and forests to developed settlement.

## 2. THE RESEARCH AREA

Seferihisar is a town located in the South-west part of İzmir in the Aegean region (Figure 1) which is 47km away. Seferihisar is bounded by Urla to the north, and Menderes to the east. To the South and West is the Aegean Sea. Its town centre is approximately 5km away from sea and located on İzmir-Kuşadası highway.

Seferihisar's geographical coordinates are 26°45'00" east; 27°01'30" east longitude and 38°17'00" North; 38°02'00" North latitude. Seferihisar is 18m high above sea level. Coastal areas in the west of the city center are of great importance in terms of tourism activities. Therefore, this feature influenced the selection of Seferihisar into Cittaslow membership.

This town, where population growth and tourism activities are predominantly observed, has expanded to a wide area where human mobility is concentrated according to the several types of uses.

### **3. METHOD**

In the execution phase of the study, satellite imageries were utilized for exploration of the method. The most recent image is the WorldView-2 satellite imagery, dated November 2012. In addition; urban plans ranging from different scales were utilized belonging to the study area.

The research methodologies used in the study are listed below:

**1. Analytical data gathering regarding the natural structure of case area:**

At this stage, soil structure, forest, coast and hydrology are examined.

**2. Determining and mapping of the current land use:**

The land cover is categorized by digitizing the WorldView-2 satellite imagery. This classification is based on CORINE land cover classification.

**3. Evaluation of the land use decisions in the previous years:**

Evaluation of the municipality's land use decisions in the previous years regarding the case study. Urban growth in Seferihisar is evaluated using the historical data for projection. At this stage, not only the local government's upper scale decisions were evaluated, but also the centralized managements' decisions as well.

**4. Examining the land use type change and landscape change analysis:**

The general landscape change analysis is carried out by comparing the land cover maps of previous years and current land uses.

**5. Evaluation and interpretation of results:**

The changes of the surface areas of the land cover classes and result of the landscape structure of the case area is evaluated.

### **4. RESULTS**

In the research area there are four main types of land usage namely, tourism, agriculture, forest and housing. Use of land in Seferihisar is determined according to the study of land cover as 26.6 % of the research area is agricultural area. Total agricultural land area is 9,898 hectares. Olive groves land is 6.005 hectares, citrus fruit garden is 1.269 hectares. The field land is 1,020 hectares in total. 48.25 % of the people in town work in agriculture sector. In the region agriculture is the fundamental sector. The agricultural land in the coastal area is used as mandarin gardens and olive groves land. However, in recent years, employment in this sector tends to increase investments in the field of tourism especially, the agricultural areas located around the coasts which are now converted to residential areas.

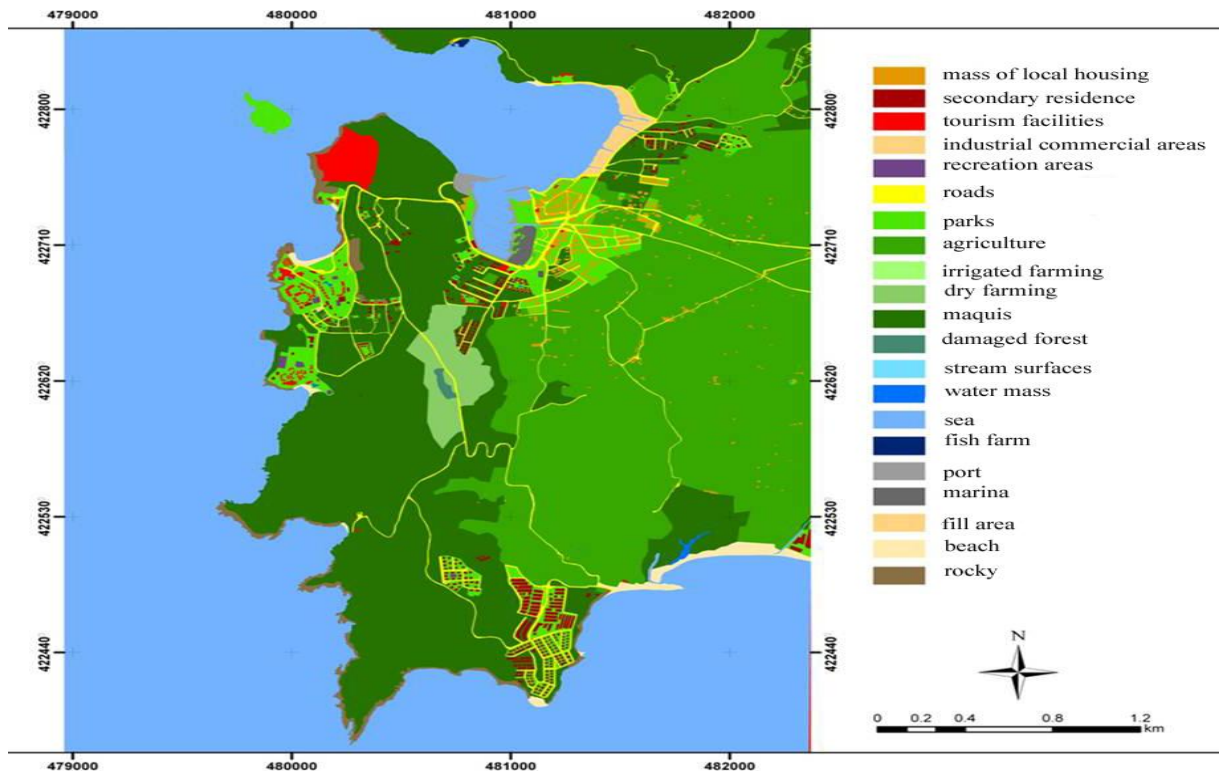


Figure 1. The Research Area

A significant part of the field area is forest. Forested areas are located in 13,633.5 ha and are 30.4% in total. However, some parts in this area, particularly ones near the coast, have damaged forested features. 8% of this research area is protected, and located in 3,577.5 ha. This protected area is mainly natural and archaeological. The feature of this area provides a significant contribution to Seferihisar's becoming Cittaslow Union member. All natural protected areas are located on the coastal areas. Up to the present, local authorities have maintained the protected status of the areas and as a result, the natural beauty of these shores is largely retained.

4.55% (9,898 ha) are military zones. These zones are located in coastal areas for a long time for preventing the coasts from other intruding sectors.

If general assessments of land use types (Figure 1) and land use changes are completed; Due to the existing fertile soil in the coast line, agriculture is the most significant sector in this region. However, as urbanisation increases, agricultural areas are fast turning into residential areas. The residential areas are generally divided into the two groups: residential and tourism areas

- From the output of the landscape analysis, it is obvious that as the demand for tourism increases the purposes of agricultural land use decreases due to development of residential areas
- The most significant outcome is that agricultural land is occupied by tourism purposes and dwellings for tourists. The agriculture area has been decreasing as a result of the high cost of production and thence profits from secondary housing market.
- The output suggests that the most important dynamics of the urban growth are population growth and tourism activities.

- The urban plans which were prepared in the area were perused and the differences in the land usage were surveyed. Accordingly, the housing within 444.5 ha areas, which are the newly permitted construction areas, are considered to increase to 950 ha. The agricultural areas are planned to decreased to 8,800 ha. Also tourism facilities are planned to increased to 781,4 ha.
- Being on an active fault line all the residential areas require a control mechanism in the process of construction. Therefore, to construct on the coast, the right action would be to build 7 km away from the coast towards the mountainous areas
- In the region, secondary housing and chalets houses were observed. This situation adversely affects the natural beauty of the coast.
- The fish farms which have economical high input lead to pollution which possesses a threat to tourism because of its near-shore construction.
- Seferihisar, especially during summer, is one of the regions which have the highest fire risk. Forest fires are known to have substantial damage on coastal vegetation and it cannot be ignored to the effects of the population growth and the development of tourism activities.

Seferihisar, in comparison with the other tourism centers having similar situation regarding population and physical standards in Turkey is one of the settlements which is on the coastline and has partially protected its own natural and cultural features. Due to its unique characteristics, Seferihisar was selected as the first Cittaslow city in Turkey. However, in recent years, the population growth exerts pressure on the coastal areas and makes the housing highly demanded.

In conclusion, the main reason for the selection of Seferihisar as a Cittaslow Union member was to protect its natural endowments however, it can be concluded that with the recent physical and tourism usages, there is a significant difference between the current status of Seferihisar and the Cittaslow aim of protecting the environment and improving the quality of life of the residents within the community.