Kislali, H., Kose, M. / Journal of Yasar University, 2021, 16/61, 215-227

# Effects of Settlements and Recreational Activities on Göller Highland

# Yerleşimlerin ve Rekreasyon Aktivitelerinin Göller Yaylası'na Etkileri

Hidayet KISLALI, Afyon Kocatepe University, Turkey, hkislali@aku.edu.tr

Orcid No: 0000-0002-0978-496X

Mustafa KOSE, Afyon Kocatepe University, Turkey, mustafakose@aku.edu.tr

Orcid No: 0000-0003-3206-2508

*Abstract: Considering sustainable tourism as a broad endeavour to make all forms of tourism sustainable, in this research we try to shed a light onto current developments in one of the most prominent highlands in Mediterranean region. In this research, Göller Highland is chosen to explore effects of highland settlements on ecological environment. Acknowledging multi dimensionality of sustainability, this study focuses on environmental sustainability in highlands. One of the most important tourism activities in Turkey, i.e. Highland Tourism is discussed with multidisciplinary lenses. When nature-based tourism activities in developing countries are studied, it may not be surprising to find that vast majority of them do not fall in line with sustainable tourism practices. With increasing tourism activities, Turkey can be considered one of these destinations that need significant improvements to make tourism activities more sustainable. In order to better grasp details of current situation in highlands, conventional research methods do not seem to be appropriate because of the limits in terms of financial resources and time. Therefore, satellite images were used to analyse the changes in the highland area and the development of residential areas. Analysis of Landsat imagery shows that in the last three decades the area faced dramatic changes in terms of land use. From 1987 to 2019 the land for cultivation shrank in unprecedented levels and residential areas grew exponentially. These changes are discussed in the light of sustainable tourism development.*

*Keywords: Sustainability, Sustainable Tourism, Göller Highland, Landsat Imagery*

*JEL Classification: L83, Z31, Z32*

*Öz: Sürdürülebilir turizmi her türlü turizm çeşidini daha sürdürülebilir kılma çabası olarak kabul ettiğimiz bu çalışmada, Akdeniz Bölgesi'ndeki belli başlı yaylalardan birindeki güncel gelişmeleri ele alıyoruz. Yayla yerleşkelerinin ekolojik çevre üzerindeki etkilerini incelemek için Göller Yaylasını seçmiş bulunmaktayız. Sürdürülebilirliğin çok yönlülüğünü dikkate alan bu çalışma çevresel sürdürülebilirliğe odaklanmaktadır. Türkiye'deki en önemli turizm türlerinden biri olan Yayla Turizmi çok disiplinli bakış açısıyla ele alınmıştır. Gelişmekte olan ülkelerdeki Doğa Turizmi uygulamaları incelendiğinde, bunların büyük bir kısmının sürdürülebilir turizm uygulamalarıyla örtüşmediğini görmemiz şaşırtıcı bir durum değildir. Gelişen turizm faaliyetleriyle Türkiye turizm faaliyetlerinin daha sürdürülebilir kılınması için yapılması gereken pek çok şeyin olduğu destinasyonlardan bir tanesidir. Yaylalardaki mevcut durumu daha iyi anlamak için geleneksel araştırma yöntemleri bu çalışmada finans ve zaman kısıtları nedeniyle uygun görülmemiştir. Bu nedenle, yayla alanında meydana gelen değişimi ve meskun alanların gelişimini analiz etmek için uydu görüntüleri kullanılmıştır. Landsat görüntü analizleri bize söz konusu alanın son otuz yılda inanılması güç değişimini göstermektedir. 1987 -2019 yılları arasında tarım arazileri inanılması güç bir seviyede azalırken, yerleşim alanları aynı hızda artmıştır. Bu değişimler, sürdürülebilir turizm gelişimi ışığında tartışılmaktadır.*

*Anahtar Kelimeler: Sürdürülebilirlik, Sürdürülebilir Turizm, Göller Yaylası, Landsat Görüntüleri*

*JEL Sınıflandırması: L83, Z31, Z32*

## 1. Introduction

Even though sustainability is one of the highly discussed concepts in tourism literature, it may be surprising to see that prior to 1990s it was hardly mentioned (Weaver 2012). After the adoption of the term 'sustainable tourism', a dramatic increase in published articles can be

**Makale Geçmişi / Article History**
Başvuru Tarihi / Date of Application : 1 Ekim / October 2020
Kabul Tarihi / Acceptance Date : 9 Aralık / December 2020

observed. However, there were confusions about the meaning of 'sustainable tourism'. In his article Butler (1999) highlights ambiguities around the concept and criticizes the tacit acknowledgements for it. While discussing various understanding and implementations of sustainable tourism, Hunter (1997) observes that researchers interpret sustainability on a continuum from strict ecological protection to strict economic development. Then he concludes 'perhaps the most appropriate way to perceive sustainable tourism is not as a narrowly-defined concept reliant on a search for balance, but rather as an over-arching paradigm within which several different development pathways may be legitimized according to circumstance' (Hunter 1997, 859).

After devoting great time and effort on debates about sustainable tourism and/or mass tourism, finally the dust settled, as stated by Clarke (1997) research on sustainable tourism has evolved into an endeavour to make all forms of tourism sustainable. This evolution can be observed in Tourism and the Sustainable Development Goals (2015) shared by The World Tourism Organization (UNWTO) as a common vision for tourism development. Therefore, we might say that sustainable tourism can be understood 'as a normative orientation that seeks to re-direct societal systems and behaviour on a broad and integrated path toward sustainable development' (Bramwell, Higham, Lane, & Miller 2017, 2). It aims to sustain economic contribution of tourism and use of resources and environment (Liu 2003).

In this research, sustainability is considered as a broader approach to make all forms of activities more sustainable. As mentioned by Torres-Delgado and Palamaque (2014) measurement of sustainable tourism development is not an area for universal agreement. Hence, as an interdisciplinary research endeavour to contribute sustainable tourism development, in this article we will look into rapid developments in Göller Highlands. When discussing the effects of tourism development on natural resources, Hunter (1997) states "it is impossible to imagine any kind of tourism activity being developed and then operating without in some way reducing the quantity and/or quality of natural resources somewhere" (858).

## 2. Literature Review

### *2.1. Highlands in Turkey*

While in various countries nature based tourism activities are conducted in a more sustainable manner, these activities seem to be less sustainable in developing counties such as Turkey (Alaaddinoğlu and Şerement 2016). *Highland Tourism* can be considered a type of nature-based tourism which is not necessarily follow sustainable development paths in Turkey. The Turkish word *Yayla* stands for Highland. These days, in various parts of Turkey, individuals own a summer house in highlands. While in some highland settlements, lodging and hospitality

services are provided, many highlands keep expanding as places to host summer houses for people who arrive from cities and towns. Three decades ago, prominence of highlands in daily life in Turkey was observed by Hoehfeld(1989) as 'without doubt the most widespread form of mass tourism in Turkey still is the traditional annual mass exodus by the inhabitants of the torrid plains and intramontane basins to the cooler mountain areas'(Hoehfeld 1989, 18). In current days; in various parts of Turkey, traditional summer settlements on highlands transformed from places to grow livestock to areas to offer recreational activities during the summer months (Somuncu, 2016).

Functional changes on highlands occurred through rapid expansion of tourism developments. While discussing developments of *highland tourism* in Turkey, scholars often criticize the current state of the highlands in Turkey. One of the main focal points is the unplanned/unsustainable construction of various buildings on highlands (e.g. Özden, Atmis & Menemencioglu 2004, Tosun 2001). As stated by Tosun (2001) because of the macro economic problems in many developing countries, policy makers may choose a kind of tourism developments which is not necessarily in line with sustainable principles. Even a day trip to Göller Highlands seems to confirm these critics.

### *2.2. Location and Current Status of Göller Plateau*

Giriş paragrafında girinti bulunmaz. The eastern extension of the Taurus Mountain Range is one of the most important places where temporary highland settlements have been established and where transhumance and recreational activities are intensively maintained. This mountainous area, which is located to the north of Adana and Osmaniye provinces, and to the north of Kozan and Kadirli district centres, differs from the Mediterranean coastal belt and Çukurova in its surrounding in terms of its natural morphological features. In this area, topography is rugged and agricultural areas are limited. Therefore, rural economic activities such as animal husbandry and horticulture have been the main source of livelihood for the people living in the settlements. At the same time, the morphological features caused the formation of scatter-patterned settlements. Nowadays, due to socio-economic developments, recreational transhumance activities have increased in the summer months. Temporary summer settlements have been added to rural settlements where elevation value is high and relatively cooler than the surrounding area. In this context, one of the temporary summer settlements at the foothills of the eastern Taurus Mountains, where recreational activities are concentrated, is Göller highland settlement.

Göller Highland, which constitutes the study area, is located to the north of Çukurova within the boundaries of Adana Subregion of the Mediterranean Region. Administratively, it is a

temporary settlement of Akçalıuşağı village, which is one of the rural neighbourhoods of Kozan district. This temporary settlement is 40 km away from Kozan district and 105 km away from Adana city centre. The highland area, which is located in the plateau of Göller between Hopkadağ and Gezit Mountain (Ege, 2016), has an altitude of 1400-1500 m and extends in the north-east, south-west direction (Figure 1). In the northeast of Kozan district and north of Kadirli district, the highland settlement area is spread over the plateau of Göller along the border of Adana and Osmaniye provinces. The dwellings in this temporary settlement were scattered along the Göller Polje with a length of approximately 14 km and a width of 200-700 m in the northeast-southwest direction (Ege 2016). There are 7 artificial lakes of different sizes within the boundaries of the temporary settlement unit and it is known that this highland takes its name from these lakes.

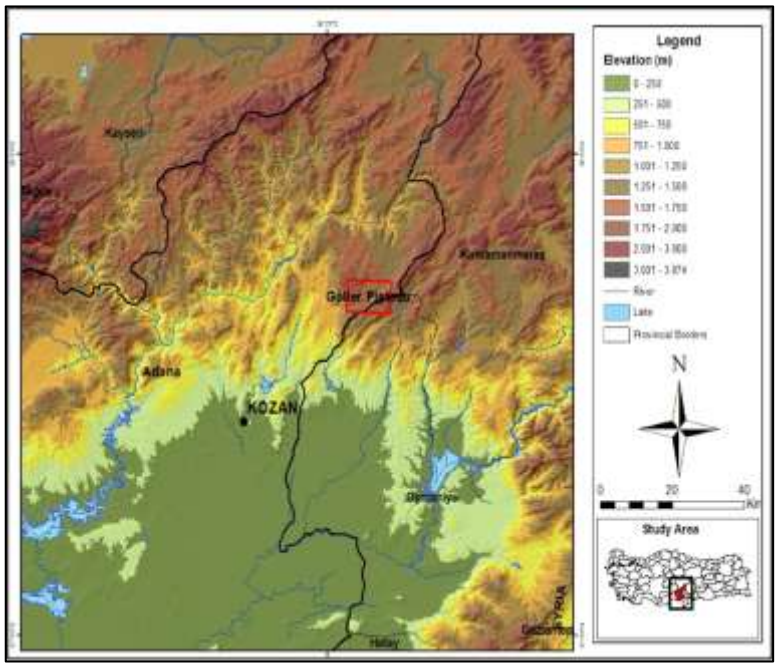


Figure 1. The Location Map of Göller Plateau and Close Surroundings

Temporary residents of this highland settlement are generally from Kozan, Adana and Sumbas and Kadirli districts of Osmaniye province. However, people who live permanently in village settlements of Çukurova, come to the Göller plateau during the summer months and they stay temporarily with their families for a long time (from the beginning of June to the end of October) in highland. It is estimated that the population of the highland centre has risen to over 20.000 during the summer months, when the recreational activities are increased. Access to this area is generally provided by individuals. Additionally, there are bus services in summer months from Adana city centre and Kozan district to Göller settlement.

In terms of land use, there are several differences between the Göller Plateau and other rural settlements. Due to the abundance of pasture areas on the foothills of Gezit Mountain and Gezit

polje where the elevation is high, the settlements established in this area are generally aimed at animal husbandry (Ege 2016), Therefore, tent dwellings are frequently used in these temporary settlements where livestock based transhumance activities dominated. The Yirce Plateau and Hopkadağ Plateau, which are located at the lower elevations, have an important place in terms of both livestock and recreational activities due to the easier accessibility and presence of pastureland (Ege 2016), On the other hand, the Göller plateau is used extensively for recreational purposes due to both the ease of access and the availability of land for second homes. Land pattern which were previously used as dry agricultural land are preferred for the construction of summer houses. Since the Göller Plateau was declared as a highland area by The Ministry of Forests and Water Affairs dated in 2013, the residential areas expanded agricultural areas and the number of summer residences has increased, recently.

The drinking and potable water, which is met by melting the snow accumulated in the winter months in the Göller highland or carrying water by tankers to the highland households, is now supplied from the spring waters in Değirmenciuşağı village which is a rural neighbourhood of Saimbeyli District. In 2015, with the drinking water project jointly carried out by Adana Metropolitan, Kozan and Saimbeyli Municipalities, all the dwellings in the plateau area are able to supply their water needs by receiving a subscription from the drinking water network. There is a road starting from Kozan district centre to Göller settlement area. Asphalting of the entire road is being carried out by Adana Metropolitan Municipality. There are no health centres in the plateau where services such as electricity, water and telephone are provided, but mobile health services are provided on certain days of the week. In the centre of the highland plateau, there are 8 mosques as well as shops, grocery stores, butchers, furniture and white goods shops that serve especially in the summer months. In addition, a market area is established on Tuesdays on the shores of the lake called Büyük Göl and the inhabitants of the plateau may provide their weekly needs.

The research area consists of Göller settlements located on the altitude of 1400 m at the foot of the Taurus Mountains (Figure 2). Therefore, the climatic characteristics of the plateau show significant differences compared to the urban settlements in Çukurova. The high mountain masses (Dibek Mountains), which are the extension of Taurus mountain range, extend like a wall to the south of the temporary settlement in the northeast southwest direction. For this reason, climate elements such as temperature, precipitation, pressure and wind can vary in a short distance (Üçeçam Karagel and Karagel 2010). The temperature difference observed between the urban settlements established in Çukurova and the temporary settlements established in foothills of Taurus Mountains was effective in the initiation and development of the recreational activities in the research area (Sandal 2008). The research area, where the slope

values are high and the altitude exceeds 2000 m, is located in the Mediterranean mountain belt and different tree species are found in this region. Tree species such as Pinus Brutia and Quercus Cerris are found in the lower parts of the Taurus Mountains, whereas Pinus Nigra, Cedrus Libani, Abies Cilicica and Juniperus Excelsa species are found in the areas where the elevation increases (Ege 2016, 260; Gürbüz 1999).

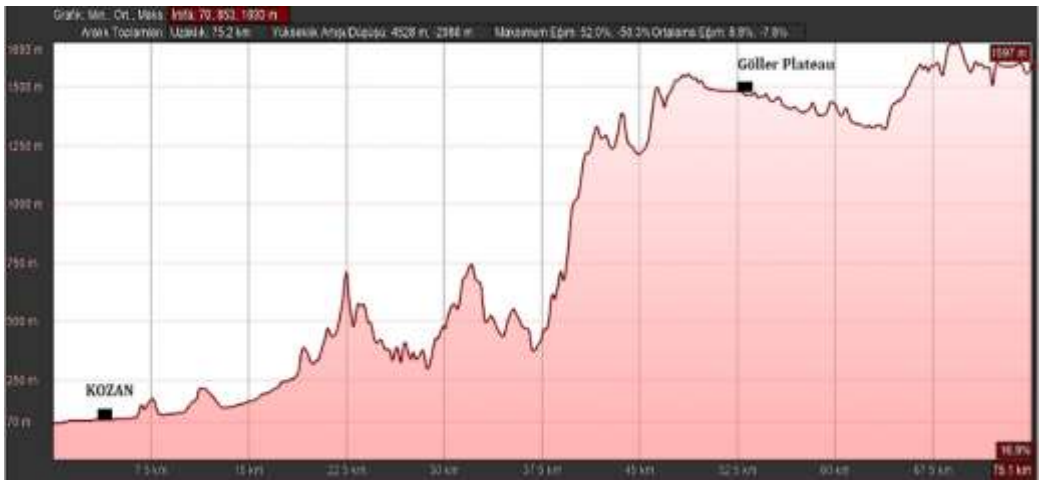


Figure 2. The Elevation Profile of Study Region from South to North

With the increasing number of highland activities in the settlement unit and its surrounding, new sporting activities are organized and mountaineering and nature sports clubs perform activities. Wrestling competitions are one of the important sports activities in the highland. In 2018, Karakucak Oil Wrestling competition which organized by the Wrestling Federation of Turkey was held in Göller highland settlement (Figure 3). In addition, free public concerts are organized by Adana Metropolitan Municipality in summer months. The foothills of Gezit Mountain become one of the favourite places of photography enthusiasts in spring and summer season due to its rich plant species, diversity of flower species and natural features. In addition, due to heavy snowfall in the Göller plateau area during the winter months, many people go to the highland to watch the snowy landscape, especially during the weekends or semester break. Therefore, Göller plateau becomes a centre of attraction for individuals living in Çukurova and not seeing snow scenery in any season of the year.

Figure 3. A View from Oil Wrestling Competition Held in Göller Highland
*Kaynak: Festival.com.tr*

## 3. Method

As stated earlier, current developments in the Göller Highland seems to confirm critics of rapid developments (e.g. Özden et al. 2004, Tosun 2001) in developing countries. However, to better understand the current situation, analysis of changes in a relatively short period of time seems to be essential. While conducting change analysis the quality and selection of datasets are vitally important to detect the changes in land surface (Lillesand, Kiefer & Chipman 2008). The results are directly affected by ancillary datasets and classification approaches. Since 1980s, Landsat Images have been used as supplementary datasets and control variables to observe land pattern changes all over the world. This study aimed to use Landsat imagery data to provide land cover classes for landscape change detection of study area. Imagery datasets obtained in raster format and they were convenient to analysis in GIS spatial analyst software and digital image processing software. This research aimed to generate land use and land cover maps in order to detect land surface change by constructing tourism activities related second homes. The satellite images obtained land cover classes were used as ancillary datasets to observe 30-year changes in the study area. Due to the overlapping the classified images with each other the boundary of Göller Plateau and its surrounding was used as source zone.

Landsat images (30m spatial resolution) were obtained from United State Geological Survey (USGS), dated 22$^{nd}$ August 1987 and 30$^{th}$ September 2019. The image bands were composited and extracted by using Göller Plateau to create satellite imagery of whole study region. In order to better analyse the change in land cover/use, both satellite images obtained from Landsat Data Collection were chosen from summer months. The satellite images were used to derive land cover data for Göller Plateau at 30m spatial resolution that were used as the

auxiliary data input for the temporal change detection of study area. The supervised classification approach was employed to process Landsat images and detect the extent of discontinuous built-up areas so that it can be used as supplementary data for identify the construction of tourism activities related second homes. The process of supervised classification categorises the image data based on the user defined training sample of similar land use/cover (Köse 2015). Therefore, it is common practise to apply this classifier for change detection. The classification processes were done in Erdas Imagine 2014. Four land cover types were identified for the each of 30m spatial images (mixed forest, cultivation area, bare rocks and discontinuous built-up area). Then, the maximum likelihood classification algorithm was applied to define land cover classes based on the training samples of types of land covers. Maximum likelihood classification approach may produce acceptable land use/cover classification results from Landsat image datasets (Blaschke 2010; Jega Mohamed, 2015; Lu et al. 2012). The procedure of supervised classification was repeated severally to produce the best possible classification results. Finally, the accuracy assessments of the classified images were assessed by comparing 256 randomly assigned points. An overall accuracy of 89 % was gathered for the image of the satellite image dated 1987, and 85 % was also obtained for the image dated 2019.

## 4. Results

According to the results of land cover and land use classification changes in landscape patterns have been observed from 1987 to 2019 (Figure 4-5). Approximately in 30 years, tourism-based second home construction has led to the emergence of a new land use in Göller Plateau. While changes in forests seem to be negligible, changes in agricultural areas are dramatic. While plateau of Göller was utilized for the purpose of agriculture in the late 1980s, recent observations highlight the dramatic shrinkage of the land for agriculture. Without closer examination of these facts, it is possible to assume that there is a benign development process undertaking. However, closer examination reveals significant changes in rocky areas, too. This might shed lights onto the environmental degradation. Since expansion of settlements do not seem to be slowing, in the future not only agricultural areas but also forests might face negative consequences of this rapid expansion.

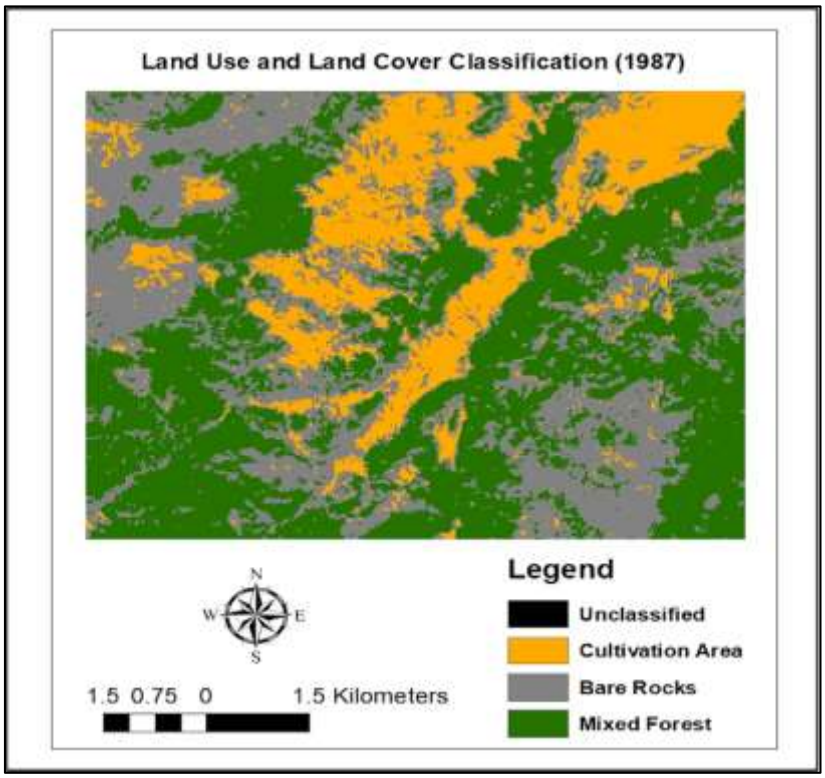


Figure 4. Land Use and Land Cover Classification of Study Area (1987)

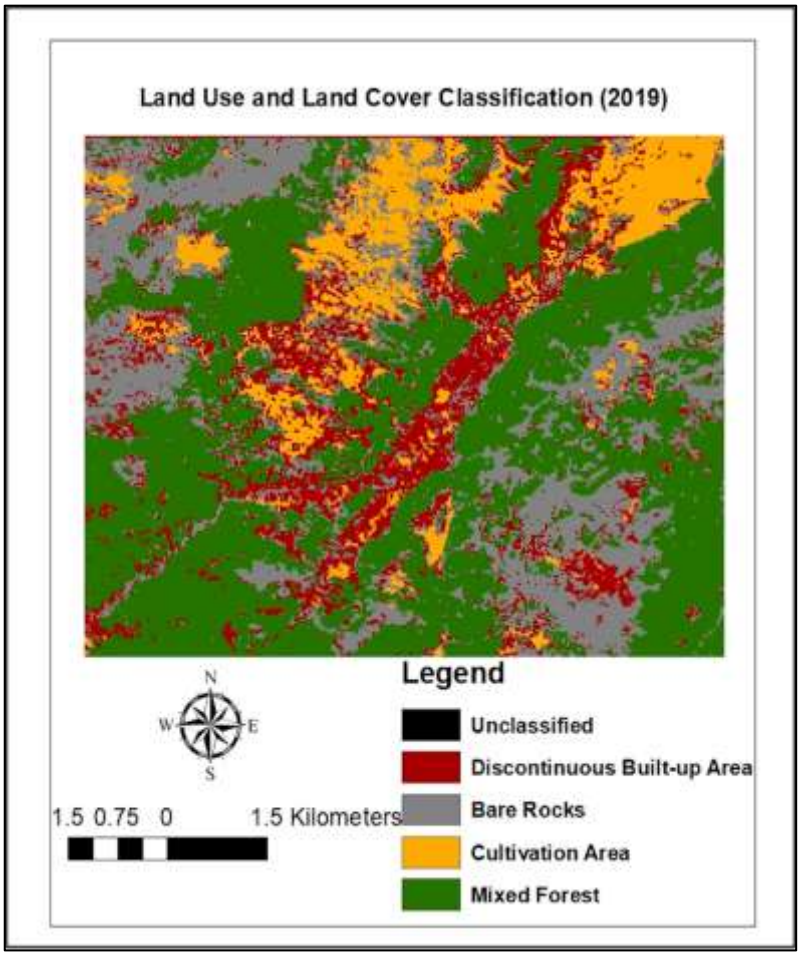


Figure 5. Land Use and Land Cover Classification of Study Area (2019)

The population of the Göller settlement is increasing and it is estimated that it reaches 30,000 in the summer months. With a growing population, the need for land to build new accommodation is increasing. Therefore, reinforced concrete dwellings have been built and the land pattern has been constantly changing around rural settlements (Figure 6 and 7).

Figure 6. Göller Plateau and Settlement Area
*Source: Mapio.net*

Figure 7. Concrete housing units that exemplify new dwellings in Göller Highland
*Source: facebook.com/golleryaylasi*

The change in land cover was revealed by the satellite image classification results. According to supervised classification results, the mixed forest area was 31.700 hectares in 1987 and 31.570 hectares in 2019. Bare rock area was calculated 25.800 hectares in 1987 and 20.250 hectares in 2019. Cultivation area was calculated 13.470 hectares in 1987 and 7.740

hectares in 2019. However, in Göller plateau, where second home construction increased from the early 2000s, the area of residential uses reached 11,500 hectares by 2019 (Figure 8). The classification results show that bare rock area and agricultural lands decreased and that residential areas expanded in the 30-year period. From these analyses, it can be envisaged that expansion of residential areas will keep the growing pace as a by-product of increased highland activities.

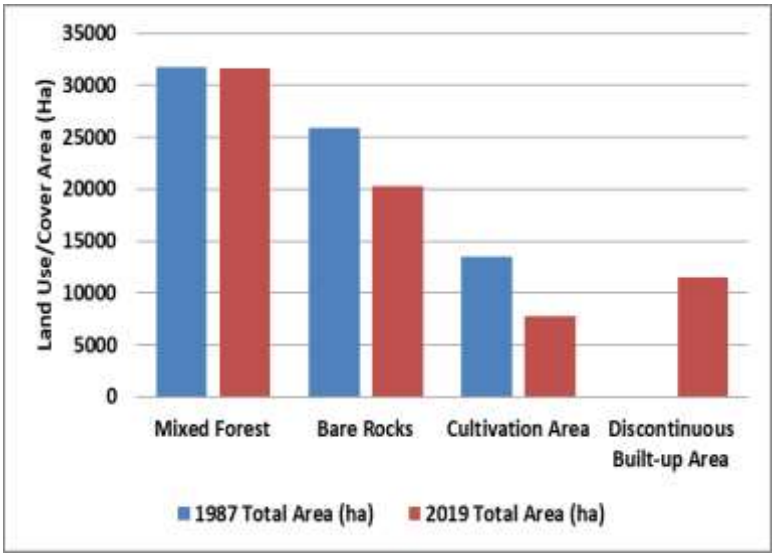


Figure 8. Statistical values for land use/cover maps of 1987 and 2019

## 5. Discussion

In Turkey's each geographic region, there can be transhumance activities and temporary highland settlements where their functions and shapes may differ (Sandal 2008). With the improvement of living standards and the spread of urbanization in the last half century, the concept of holiday has entered into individuals' lives. In this time period, the importance of temporary highland settlements has increased. As a result of the functional change of the highlands, the activities of recreation and tourism have intensified in addition to the continuation of agriculture and animal husbandry activities in the temporary settlements in Turkey as well as in other countries (Toroğlu, Adıgüzel & Kaya 2014). For this reason, some of the highlands, which were used for livestock purposes depending on the geographical characteristics of the place where they were located and which are connected to the rural settlements in administrative and socio-economic terms, are turned into temporary summer settlements (Sandal 2008). There are also summer settlements that are only used for recreational activities in the summer months since its establishment due to the differentiation of climate and vegetation of the temporary settlements from settlement units of Çukurova region (Koca, 2011). In the Adana sub-region of the Mediterranean region, where summer temperature averages are high and nomadic animal husbandry activities continue intensively, there are independent

highland settlements for both livestock and recreation purposes. Göller temporary settlement, located in the Adana Section, is one of the summer settlement units where recreation and highland activities continue. As it can be understood from the findings, recreational activities are intensified due to the climate comfort and accessibility of the Göller highland and the land pattern changes with the increase of secondary housing units. The existence of bare lands for the purpose of building a secondary residence unit is important for the planned development of recreational activities. With the increasing popularity of the Göller temporary settlement, the possibility of destruction of forests and agricultural areas reveals the significant need for a sustainable tourism development plan of the summer settlement.

## 6. Conclusion

In this paper, we highlighted that highland related recreational activities are on the rise thanks to the changes in socio-economic changes in the society. Since recreational seekers need accommodation, temporary settlements emerge and expand. Depending on the changes in economic activities and lifestyles, summer holidays have become part of the routines for a significant stratum of the society. In the Çukurova region, holiday resorts or highland settlements are preferred for recreational activities during the holiday period. Due to the fact that summers are very hot and sweaty, the highland areas where climate comfort is high are hosting increasing number of visitors each year (Sandal 2008; Toroğlu, Adıgüzel & Kaya 2014). There has been an increase in the number of secondary residence units with the increasing importance of recreational activities. Therefore, the constructions of second homes have altered the landscape patters in rural settlements. Analysis of landscape changes in the last three decades revealed that, prior to 1990s; there was hardly any settlement in Göller Highlands. However, in the current situation, land for agriculture is facing non-existence. Considering these rapid changes in land use, the area faces serious threats from rapid expansion. As seen on various figures in this study, rather than a recreational highland settlement, area seem to evolve into a gigantic settlement without necessary guidance and planning.

## REFERENCES


Alaeddinoğlu, F., & Şeremet, M. 2016. "Nature-based Tourism in Turkey: The Yayla in Turkey's Eastern Black Sea Region". In *Alternative Tourism in Turkey: Role, Potential Development and Sustainability* edited by Istvan Egresi, 71-86. Cham, Switzerland: Springer International Publishing.

Blaschke,T. 2010."Object Based Image Analysis For Remote Sensing." *ISPRS Journal of Photogrammetry and Remote Sensing* 65(1):2-16.

Bramwell, B., Higham, J., Lane, B., & Miller, G. 2017. "Twenty-Five Years of Sustainable Tourism and The Journal of Sustainable Tourism: Looking Back and Moving Forward." *Journal of Sustainable Tourism 25*(1): 1-9.

Butler, R. W. 1999. "Sustainable Tourism: A State- Of- The- Art Review." *Tourism Geographies 1*(1): 7-25.

Clarke, J. 1997. "A Framework Of Approaches To Sustainable Tourism." *Journal of Sustainable Tourism, 5*(3): 224-233.

Ege, İ. 2016. "Konglomerlar Üzerinde Karstlaşma: Göller Yaylası ve Yakın Çevresi (Kozan/Adana)." *The Journal of Academic Social Science Studies* 51,no.3(Autumn): 237-263.

Gürbüz, M. 1999. "Dibek Dağları'nda (Göksun) Kar Suyuna Bağlı Olarak Yapılan Yaylacılık." *Türk Coğrafya Dergisi*, 34(1): 661-677.

Hoehfeld, V. V. 1989. "Beach Holidays—An Innovation in Turkish Tourism." *Tourism Recreation Research, 14*(2): 17-21.

Hunter, C. 1997. "Sustainable Tourism As an Adaptive Paradigm." *Annals of Tourism Research, 24*(4): 850-867.

Jega Mohammed, I. 2015. "Estimating Population Surfaces in Areas Where Actual Distributions are Unknown: Dasymetric Mapping and Pycnophylactic Interpolation Across Different Spatial Scales." PhD diss., University of Leicester. UK.

Koca, N. 2011. *Doğal ve Sosyo-Ekonomik Özellikleri Açısından Osmaniye Yaylaları*. Ankara: Pegem Yayınları.

Kose, M. 2015. "Improving Population Estimation Models Using Remotely Sensed and Ordnance Survey Datasets", PhD Thesis, University of Leicester, UK.

Lillesand T.M., Kiefer R. W. and Chipman J. W. 2008. *Remote Sensing and Image Interpretation.* 6th ed. USA: John Wiley & Sons. Inc.

Liu, Z. 2003. "Sustainable Tourism Development: A critique." *Journal of Sustainable Tourism 11*(6): 459-475.

Lu, D., Li, G., Moran, E., Freitas, C. C., Dutra, L. and Anna, S. J. S., 2012. "A comparison of Maximum Likelihood Classifier and Object-Based Method Based on Multiple Sensor Datasets for Land-Use/Cover Classification in the Brazilian Amazon." *Proceedings of the 4th GEOBIA*, May 7-9, Rio de Janero, Brazil: 20-24.

Özden, S., Atmis, E., & Menemencioglu, K. 2004. "Negative Effects of Recent Unplanned Expansion on Highland Ecosystems in Turkey." *Mountain Research and Development, 24*(4): 303-306.

Sandal, E. K. 2008. "Çukurova'nın Kuzeyinde Sayfiye Yaylacılığı: Analitik bir Yaklaşım." *Doa Dergisi* 14(1):89-118.

Somuncu, M. 2016. "Tourism and The Commodification of Cultural Heritage in The Eastern Black Sea Mountains, Turkey." In *Sustainable Mountain Regions: Challenges and Perspectives in Southeastern Europe* edited by B. Koulov, & G. Zhelezov, 243-255. Cham: Springer International Publishing.

Torres-Delgado, A., & Palomeque, F. L. 2014. "Measuring Sustainable Tourism at the Municipal Level." *Annals of Tourism Research* 49(1), 122 -137.

Toroğlu E,. Adıgüzel, F. & Kaya, Ö. 2014. "Kızıldağ Yaylası." Presented at *Yayla Kültürü ve Yaylacılık Sempozyumu,* 6-7 Kasım, Bilecik.

Tosun, C. 2001. "Challenges of Sustainable Tourism Development in The Developing World: The Case of Turkey." *Tourism Management* 22(3):289-303.

Üçeçam Karagel, D. & Karagel, H. 2010."Kadirli İlçesinde Yaylacılık Faaliyetleri." *Fırat Üniversitesi Sosyal Bilimler Dergisi* 20 (1): 29-54.

Weaver, D. 2012. "Towards Sustainable Mass Tourism: Paradigm Shift or Paradigm Nudge?" In *Critical Debates in Tourism* Edited by V. Singh :28-33. Bristol: Channel View Publications.

World Tourism Organization 2015.*Tourism and the Sustainable Development Goals*. Madrid, Spain: UNWTO.