



Determination of ecotourism potential in national parks: Troy historical national park, Çanakkale-Turkey

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Abstract

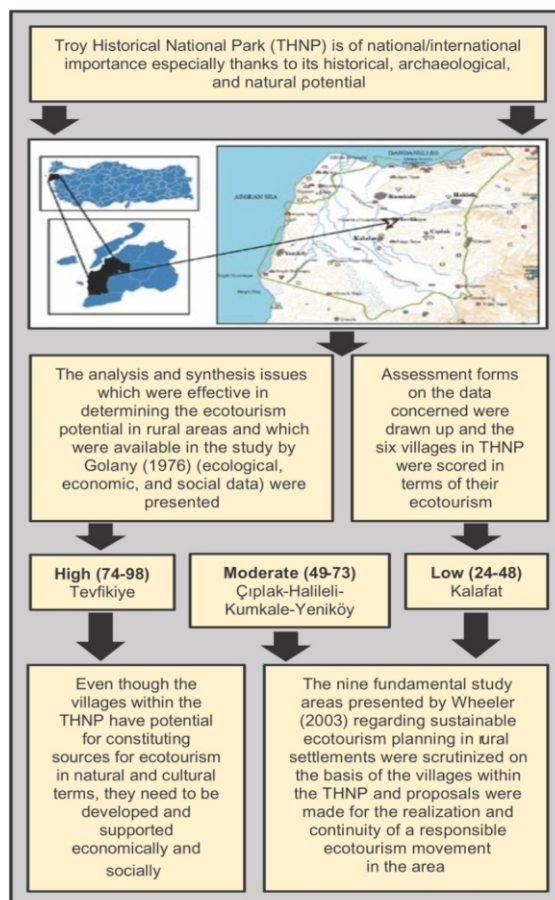
Aims: Troy Historical National Park (THNP) is of national/international importance especially thanks to its historical, archaeological, and natural potential. This research is generally intended to determine the ecological/economic/social capacity needed at the stage of sustaining ecotourism together with the natural and cultural potential required to develop ecotourism in the villages within the study area.

Methodology: For this purpose, a method based on inventory studies was employed in the research and the data were quantified. First of all, the analysis and synthesis issues which were effective in determining the ecotourism potential in rural areas and which were available in the study by Golany (1976) (ecological, economic, and social data) were presented. Assessment forms on the data concerned were drawn up and the six villages in THNP were scored in terms of their ecotourism potential. At the stage of scoring, they were assessed on the basis of the method employed, also considering the comprehensive literature studies and fieldwork as well as the notes taken during the face-to-face interviews with six village headmen and the notables of the village (about ten people per village).

Results: As a result of scoring, there was a village settlement (Tevfikiye) with "High" ecotourism potential in the THNP and its ecotourism score was 74. Of the villages, four (Çıplak, Halileli, Kumkale, and Yeniköy) were regarded as settlements with "Moderate" ecotourism potential. Although these settlements took values ranging from 49 to 73, the village settlement with the highest ecotourism potential among them was Kumkale with 72 points. On the other hand, the village settlements with "Low" ecotourism potential took values between 24 and 48; therefore, Kalafat with 44 points was determined as the village settlement with the lowest ecotourism potential. The nine fundamental study areas presented by Wheeler (2003) regarding sustainable ecotourism planning in rural settlements were scrutinized on the basis of the villages within the THNP and proposals were made for the realization and continuity of a responsible ecotourism movement in the area.

Interpretations: Even though the villages within the THNP have potential for constituting sources for ecotourism in natural and cultural terms, they need to be developed and supported economically and socially. Ecotourism is an essential source of tourism for the region; moreover, both the THNP and the villages located within its boundaries can become a region where ecotourism develops and also contributes to local economy upon the planning studies to be carried out in the following process.

Keywords: Çanakkale, ecotourism, natural-cultural landscape, Troy Historical National Park (THNP), village settlement.



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Introduction

Ecotourism, which particularly developed as a reaction to mass tourism and which spreads over the whole year, is regarded as the most important type of tourism which also involves rural and cultural tourism elements and which can be sustained in sensitive natural-cultural areas (Wall, 1997; Alkan, 2018). Ecotourism, which is among the types of conventional tourism, is one of the most effective instruments for ensuring the sustainability of natural-cultural resources as well as the prosperity of the people and rural development.

Ecotourism represents a subgroup of tourism whereby natural/cultural resources are offered under control for tourist use (Diamantis, 1999; Muller, 2000; Som and Baum, 2005; Sameer *et al.*, 2011). At the same time, it is a mildly influential and small-sized form of tourism whereby sensitivity to the conservation of natural-cultural areas increases in the region where it is carried out and it presents fundamental policies which contribute to the socio-economic development of the local people (Collins, 1998; Ross and Wall, 1999; Buckley, 2003). Diamantis (1999) and Björk (2000) underlined that ecotourism might be a good bridge between ecology and economy in natural-cultural areas. According to the definition by "The International Ecotourism Society" (TIES) (2015), ecotourism is "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education" (The International Ecotourism Society, 2019).

Ecotourism, the origin of which is advocated to date back to the papers on ecotourism by Hetzer (1965) (Kuter and Ünal, 2009), was first used as a concept in 1987 by Hector Ceballas-Lascurian (Öztürk, 2005). It was developed in the 1990s to control tourism and to reduce its negative impacts on natural areas (Kuter and Ünal, 2009) and it was defined within a broader framework by emphasizing "its feature of contributing to economic development" at "the World Ecotourism Summit" in 2002 (Altıparmak, 2002). The United Nations Economic and Social Council, which declared 2002 "the International Ecotourism Year", assigned the World Tourism Organization (WTO) on the matter (UNEP, 2002; WTO, 2003; Erdoğan, 2005; Kısa Ovalı, 2007).

The first official reference to the concept of ecotourism in Turkey was in the Eighth Five-Year Development Plan (2001- 2005). The concept of ecotourism was also one of the primary items of the agenda in Tourism Council's Commission for Environmental Planning and Infrastructure, which met on April 12-14, 2002, and various decisions on the development of ecotourism were taken at this meeting (Açıksöz *et al.*, 2010). In this context, objectives to use natural, cultural, and geographical assets in the conservation-use balance and to increase the share the country would get from tourism by developing sustainable tourism alternatives were also set in Action Plan 2023 of the Turkish Tourism Strategy, which was prepared by the Ministry of Culture and

Tourism (Ministry of Culture and Tourism, 2007; Güneş, 2008). As seen, ecotourism is a growing industry in developing countries (Boo, 1990; Björk, 2000) and has been defined as an essential and sustainable development initiative both worldwide and in Turkey for about 30 years (Güneş, 2008; Tosun, 2001). The importance of sustainable tourism for Turkey – an extremely valuable country with its natural and cultural resource assets in terms of tourism – is an indisputable fact.

Apart from the conservation of the types within the current conservation statuses, the basis for, or the first of, areal conservation is "National Parks" (Yücel, 1999). According to Law No. 2873 on National Parks, National Parks are defined as "areas which can be used for touristic-recreational purposes and in which partial building can be allowed for this purpose besides being areas which must be conserved and protected in the conservation use balance" (Official Gazette, 1983). National parks are aimed at allowing those uses and developments whereby the conservation-use balance is attained (Demir, 2002; Erol *et al.*, 2011).

The tourism and recreational activities, which are inconvenient for the ecological structure of national parks, are the most important factors, which lead to the destruction of the natural structure of these areas (Demir, 2002). Especially a poorly managed tourism activity in nature conservation areas may cause the destruction of the natural-cultural environment as well as air, water, and soil pollution and have negative environmental impacts on flora, fauna, and coasts (Lindsay, 1986; Olalı and Timur, 1988; Demir, 2002). Unless even ecologically sustainable activities like ecotourism are managed carefully, they will probably have negative environmental impacts (Panizzon and Boulton, 2000). Thus, the ecotourism activities in these areas should also be planned, managed, and monitored carefully and with long-term and sustainable approaches. Otherwise, these areas will further degrade instead of being conserved due to the negative impacts of these activities (Güneş, 2008).

In this context, so as to develop ecotourism as an important opportunity for both the conservation of nature and rural development, research should be made firstly to determine the potential which nourishes ecotourism; the potential concerned should be conserved and developed; and solutions to the rural poverty problems of the region should also be produced (Görmüş *et al.*, 2017).

Turkey houses a total of 44 national parks as of 2019 (Directorate General for Nature Conservation and National Parks, 2019). Of these national parks, Troy Historical National Park (THNP) is one of the internationally most known natural-cultural geographical areas in Turkey (Cook, 1973). It was the scene of many skirmishes of the Trojan War and Çanakkale Front of World War I and contains traces of many civilizations inhabiting this region in the historical process. These features determine the historical and cultural identities of the THNP. In addition, the numerous examples

of natural heritage located in the region and taken under conservation contribute to the cultural identity of the THNP (Salcan and Tokay, 2017).

With extremely valuable natural and cultural landscape potential, the THNP has a structure which can constitute a source for both mass tourism and the types of conventional tourism. Nevertheless, various tourism activities likely to be performed in such areas with so valuable natural and cultural potential as well as with nationally and internationally important assets may have various negative impacts on the natural and cultural landscapes of the area. Therefore, the type of tourism selected should have characteristics which will have a minimum impact on the natural and cultural structures.

In the present research, it was aimed to determine the natural and cultural potential required for the development of ecotourism that provided an opportunity for conserving and developing the natural and cultural landscapes in the THNP, which was of strategic importance thanks to its coasts in both the Dardanelles and the Aegean Sea, within the framework of a method. In this context and within the framework of the selected method, this research, carried out to determine and assess the potential likely to form the basis for the ecotourism activities likely to be performed in the

area, will also contribute to the available relevant literature.

Material and Method

The THNP, the study area, covers 136 km² on the north- western end of the Biga Peninsula and within the boundaries of Ezine district of Çanakkale province. The National Park area houses the settlements of Kumkale, Halileli, Tevfikiye, Çıplak, and Kalafat, affiliated to Merkez (Central) district, and the settlement of Yeniköy, affiliated to Ezine district, in whole as well as the settlements of İntepe and Gökçalı, affiliated to Merkez (Central) district, and the settlements of Mahmudiye, Üvecik, Pınarbaşı, and Taştepe, affiliated to Ezine district, in part. The main material of the study is composed of six village settlements (Çıplak, Halileli, Kalafat, Kumkale, Tevfikiye, and Yeniköy) that are entirely located within the boundaries of the THNP (Directorate General for Nature Conservation and National Parks, 2002; Özkan *et al.*, 2007; Atlas Journal, 2014) (Fig. 1). The supplementary materials used in the study are the literature and maps about the study area and subject; the information obtained in the oral interviews with the relevant institutions, the village headmen, and the local people; and the notes taken during the field observations.

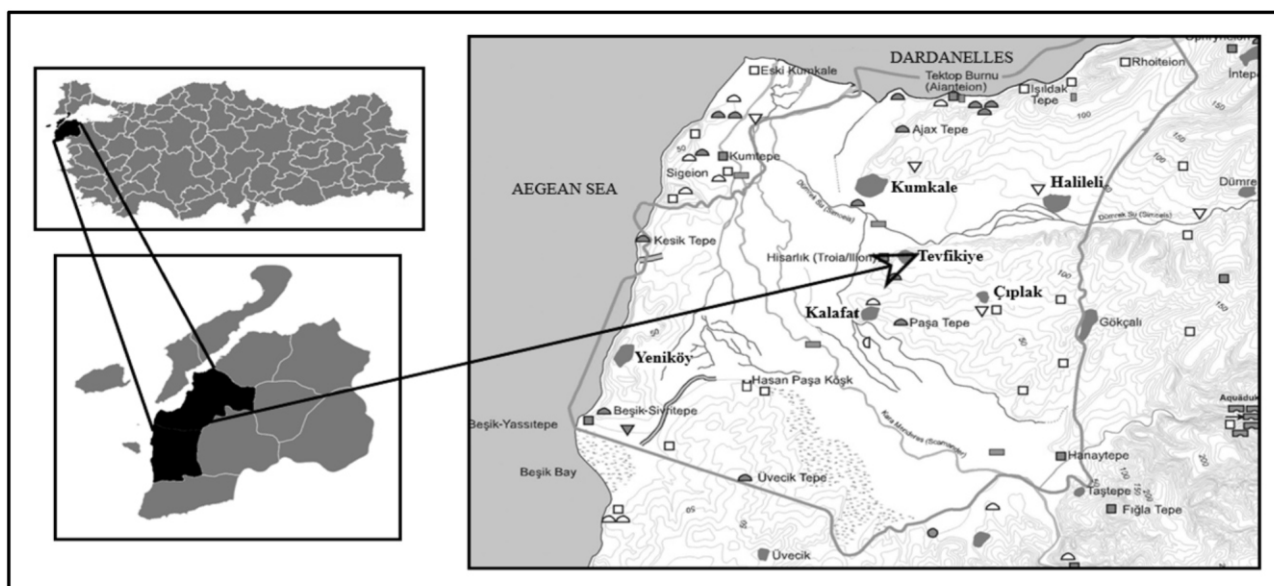


Fig. 1: The location of the study area in Turkey and Çanakkale as well as the village settlements located in the study area (created by making use of Turkey Shape File, 2019 and Ministry of Culture and Tourism, 2018)

The method of the research includes a series of stages and is composed of the analyses and assessments made within the framework of Golany's method (1976) following the stage of data collection. The fundamental stages concerning the method of the research are described at five stages on the basis of Golany (1976), Boyd and Butler (1996), Açiksöz *et al.* (2010), Aklanoğlu and Erdoğan (2011), and Tuğun and Karaman (2014):

Determining the boundaries of the study area as well as the aim and scope of the study: Besides THNP's national and international value, the fact that the selected village settlements were important sources for ecotourism thanks to their both natural and cultural landscapes was considered when determining the study area. The villages concerned have qualities which support ecotourism in the region in terms of social and economic potential as well. In the study, it was aimed to determine the ecotourism potential of

the six village settlements within the boundaries of the THNP and to make proposals for the development of ecotourism.

Literature review and collection of natural and cultural data for the study area: By reviewing the literature on the THNP –the study area – and the six village settlements within its boundaries, books, theses, articles, papers, maps and reports were evaluated and fieldwork was carried out. Furthermore, the written and visual materials about the area were obtained from the Provincial Directorate for Agriculture and Forestry in Çanakkale, the Provincial Directorate for Culture and Tourism in Çanakkale, the Branch Directorate for Nature Conservation and National Parks in Çanakkale, and the Turkish Statistical Institute.

Examining the potential of the village settlements in the study area for ecotourism: The determination and assessment of such components as abiotic (climate, hydrology, topographical structure, soil properties, and geology) and biotic (flora and fauna) characteristics, urban characteristics (settlement characteristics, transportation, infrastructure, and green areas), social-

cultural- economic characteristics, and conservation decisions form the basis for the studies of determining the potential for ecotourism. In this context, the current states of the six villages in the study area were determined.

Application of the method to the study area and evaluation: To determine the possibility of developing ecotourism in the rural settlements at this stage, the data on the basis of Golany (1976) were first of all organized and presented according to the scope of the research. The ecological, economic and social data mentioned in Table 1 were individually assessed and analyzed for each village settlement together with their subcriteria.

Proposed model: Regarding the sustainability of the village settlements that constituted sources for ecotourism, proposals were developed by using the conceptual frameworks which were the nine fundamental study areas that Wheeler (2003) suggested with respect to sustainable planning.

Table 1: Analysis and synthesis issues, components, subcomponents, and criteria for ecotourism planning (developed from Golany, 1976)

Analysis and Synthesis Issues for Ecotourism Planning	
Components and Subcomponents	Criteria
Ecological Data	Topography Soil structure Water basins and groundwater Protection and reserve areas Natural landscape (e.g. plain and sea) scenery Coastal structure connected with the village Flora Fauna
Economic Data	Agricultural lands and their varieties Agricultural production Economic structure and its development Labor force presentation Investment, production, and creation of value added Tourism-recreation and services
Social Data	History of the locality, folklore, and craft Local building and settlement pattern Archaeological, historic, and monumental assets Basic furniture, infrastructure, and spheres of influence Quality of transportation Distance from the ancient city of Troy Distance from the city center Population, settlement, and all human activities Education, culture, and social and environmental health Political organization and efficiency

Results and Discussion

Examining the potential of the village settlements in the study area for ecotourism: Within the framework of the method employed in the research, the ecological, economic and social data about the six villages were compiled by making use of the literature on the study area in order to determine the potential of the six village settlements in the study area for ecotourism.

The ancient city was considered the center in the THNP, which is under the supervision of the Directorate General for Nature Conservation and National Parks that is affiliated to the Ministry of Agriculture and Forestry. The Ancient City of Troy is the main resource asset of the National Park and at the same time crucial historically and archaeologically (Directorate General for Nature Conservation and National Parks, 2002). It is at a distance of 4.8 km from the southern entrance of the Dardanelles on

Hisarlık Höyük, which faces the plain on the coast of the Aegean Sea. The early excavations in the area – also one of the most famous archaeological sites of the world with its history of 8,000 years – were carried out in 1870 by famous Archaeologist Heinrich Schliemann. The excavations at Troy are acknowledged as the place where prehistoric archaeology commenced (Cook, 1973; UNESCO World Heritage Convention, 1998; Aslan, 2006). The archaeological excavations carried out in the area revealed seven main settlement layers from Troy I to Troy VII and it was discovered that three distinct settlement layers of the Greek (Troy VIII), Roman (Troy IX), and Byzantine (Troy X) Periods were found over these layers (Korfmann, 2002).

Located at a historic intersection point, the THNP can be accessed by sea and air via Çanakkale. It is located about 5 km inland from the 30th kilometer of Çanakkale-Izmir highway (Özkan *et al.*, 2007). The distances of the villages from the city center of Çanakkale are as follows: Çıplak, 33 km; Halileli, 27 km; Kalafat, 33 km; Kumkale, 29 km; Tevfiye, 30 km; and Yeniköy, 59 km (Erduran Nemutlu, 2017; Atak Çobanoğlu and Erdoğan, 2018). There is no transportation problem in the villages other than Yeniköy.

The THNP and its vicinity are made up of low plateau ridges and the alluvial valley floor plains extending on the depressions between them (Kayan, 1996). The Karamenderes (Scamander), which was once a piece of land, was then submerged by the sea, and later turned into an alluvial plain again, undoubtedly had the most significant share in this formation. The whole space took form around this plain and the geomorphological units and soil structure of the THNP and its vicinity also formed in this context. Within the geomorphological structure of the THNP, the alluvial plain generated by the Kemer and Dümrek Streams and the ridges (low plateaus) extending parallel to this plain in the west but perpendicularly to it in the east make up the landforms of the area (Özkan *et al.*, 2007). Troy was established and developed on the western end of the southern ridge among the ridges in the east. This ridge is 20-30 m high in the west, reaches 100-120 m by gradually ascending eastwards, and joins the higher relief. The northern slopes of the ridge of Troy are faulted and steep, whereas its southern slopes are less steep (Kayan, 2005). The stream system generated by the Karamenderes River, into which first the Kemer Tributary and then the Dümrek Tributary are included after crossing the Araplar Strait, also makes up the hydrogeological structure of the locality (Özkan *et al.*, 2007; Akbulak, 2010). Being important for endemic plants and wildlife, the Kumkale Reed Bed, entirely located within the THNP, and the Karamenderes River Delta, partly located within the THNP, are among the important water bodies of the THNP.

The intersection of the climates of the Marmara and Aegean Regions is effective in all villages within the THNP. The area receives very strong winds depending on its location. Thus, rainfall is less than that in the Aegean and Marmara Regions. The results of this at the locality manifest

themselves with an arid region and the existence of sparse and easily affected vegetation accordingly (Özkan *et al.*, 2007).

The villages within the THNP are made up of Alluvial, Colluvial, and Rendzina soil groups and the soils of Classes I (more than 50%), II, III, IV, V, VI, and VIII in terms of the land capability classes (Genç and Bostancı, 2007; Özkan *et al.*, 2007). When the types of land use are considered, it is seen that they include irrigated agriculture in particular as well as small quantities of rainfed agriculture, pastures, heath lands, forests, and olive groves (Özkan *et al.*, 2007; Ministry of Agriculture and Forestry, 2017).

THNP which is located in Mediterranean phyto-geographical region is considerably rich in flora and fauna (Öztura, 2010). Some 318 main species, 312 species, 3 subspecies and 3 minor species were determined in the area. However, 7 of them (2%) are endemic species (Directorate General for Nature Conservation and National Parks, 2002). The endemic species concerned are *Centaurea polyclada*, *Campanula lyrata* Lam. subsp. *lyrata*, *Dianthus lydius*, *Beta trojana* var. *trojana*, *Crocus candidus*, *Lamium moschatum* var. *rhodium*, and *Verbascum parviflorum* (Directorate General for Nature Conservation and National Parks, 2002; Kelkit and Durukan, 2006). Regarded as the lifeblood of the THNP, the Karamenderes River and Delta are an essential part of the system that comprises the breeding, accommodation, and wintering activities of migratory birds and that is of international quality (Kelkit and Durukan, 2006). A total of 192 bird species, 58% of which were endangered, were recorded in the region (Gerner and Serez, 2006). *Aquila heliaca*, *Aquila clanga* and *Falco naumanni* are in the 1st danger category of Red Data Book (cited from Gerner and Serez, 2006 by Kelkit and Durukan, 2006).

The coast of the THNP is about 23 km long. However, since the area with a coastline of about 7 km in the north-west of the area remains within the boundaries of the military zone, the THNP has a coastline of about 16 km. On the approximately 3- kilometer-long coastline of Yeniköy – the only settlement in the region where the daylong beach activity can be performed – are Yeniköy and Papaz beaches. The place with the most intensive daylong use is Papaz Beach, which qualifies as coastal sand dune vegetation (Öztura, 2010). The scenery viewing spot of Çamlık in Yeniköy is also one of the important tourism points in the area.

It is seen that the populations of the rural settlements in the THNP and in its close vicinity have been fixed around 12,000 people (Özkan *et al.*, 2007). The population increase rates in the villages are not high due to the low fertility rate; furthermore, the young population emigrates owing to the inadequacy of educational, job, and social opportunities. Nevertheless, as also stated by Akbulak (2010), there is immigration into the villages in May-October as a result of the movement of the population due to the high agricultural production. According to the data by the TurkStat (2018), the

current populations of the villages are as follows: Çıplak, 284; Halileli, 433; Kalafat, 207; Kumkale, 1,100; Tefikiye, 439; and Yeniköy, 383.

The THNP was determined in the 1970s, which saved the area from the second house pressure. Apart from the limited number of second houses in Yeniköy, the rural population maintained its existence in the rural settlements in the area and the limited tourism activity only took place in Tefikiye (Özkan *et al.*, 2007). Agricultural production forms the basis for the economic structure in the THNP and in its close vicinity (Everest *et al.*, 2017). The main source of livelihood is primarily agriculture and scarcely animal husbandry and apiculture in all villages, with fishing in Yeniköy and Kumkale in addition to them. Especially Kumkale is a fertile region on which agriculture in Çanakkale has focused and which is referred to as "Batakova". Wheat, tomato,

maize, rice, pepper, melon and sunflower in particular as well as barley, cotton, watermelon, peach, cherry and olive have a significant place in agricultural production in all villages. The tomato grown in the Kumkale, Tefikiye, and Halileli Villages is a brand worldwide and throughout Turkey. The irrigation canals constructed by the DSI (the State Hydraulic Works) are available in all villages and irrigation is performed so in agriculture. Not all villages have a cooperative. The Agricultural Credit Cooperative, the Agricultural Sales Cooperative for Oil Seeds and TARIŞ operate only in Kumkale; the Cooperative of Carriers operates in Tefikiye and Halileli; and the Irrigation Association operates in Tefikiye and Çıplak. The potential of the villages for tourism is high; however, when their sources of livelihood are considered, it is seen that tourism does not play a determining role in the economy of the villages.

Table 2: Analysis and synthesis issues for ecotourism planning

		Çıplak	Halileli	Kalafat	Kumkale	Tefikiye	Yeniköy
Ecological Data	Topography ¹	3	2	2	4	3	4
	Soil structure ¹	2	2	2	2	2	2
	Water basins and groundwater ²	3	4	4	4	2	2
	Protection and reserve areas ¹	3	2	4	3	4	2
	Natural landscape (e.g. plain and sea) scenery ¹	2	1	3	4	3	4
	Coastal structure connected with the village ³	1	1	1	4	1	4
	Flora ¹	2	2	2	3	3	3
	Fauna ¹	2	2	2	2	2	2
Economic Data	Agricultural lands and their varieties ¹	2	3	2	3	2	3
	Agricultural production ¹	3	3	2	4	3	3
	Economic structure and its development ¹	2	2	1	3	3	2
	Labor force presentation ³	2	1	1	3	4	2
	Investment, production, and creation of value added ¹	3	1	1	3	3	2
	Tourism-recreation and services ¹	2	1	1	1	3	2
Social Data	History of the locality, folklore, and craft ¹	4	3	1	3	4	1
	Local building and settlement pattern ³	1	4	1	1	4	1
	Archaeological, historic, and monumental assets ¹	2	2	1	3	4	3
	Basic furniture, infrastructure and spheres of influence ¹	2	1	1	2	3	1
	Quality of transportation ¹	4	3	2	2	4	1
	Distance from the ancient city of Troy ²	4	3	4	3	4	2
	Distance from the city center ²	3	3	3	3	3	2
	Population, settlement, and all human activities ¹	2	3	1	4	3	2
	Education, culture, and social and environmental health ¹	1	1	1	4	3	1
	Political organization and efficiency ³	4	4	1	4	4	1
TOTAL		60	54	44	72	74	52

¹Very High: 4 High: 3 Moderate: 2 Low: 1, ²Very close: 4 Close: 3 Distant: 2 Very distant: 1, ³Available: 4 Unavailable: 1

A school building is available in all villages. However, the educational activity (primary school and secondary school) is only available in Kumkale and all villages other than Yeniköy send their students to the Kumkale Village with the mobile system. There is no health center in the villages other than Kumkale and Yeniköy. On the other hand, a private health cabinet is available in the Tefikiye Village. In line with the LTDP for the THNP, the Special Provincial Administration of Çanakkale completed the technical infrastructural and road (electricity, water, sewerage, and the Internet) activities in

all villages other than Kalafat and Kumkale. Besides, there is no solid waste storage area in the villages either. Food & beverage possibilities are limited in all villages. Nevertheless, the Tefikiye Village became an archaeo village upon the studies that a private firm carried out within the scope of a "Respect History Project", which provided the village with some possibilities in this sense. Although there is no accommodation possibility for touristic purposes in the villages, all villages are willing to perform home pension operating. Home pension operating is performed

predominantly in Tevfikiye only besides a small number of home pensions in Yeniköy. Moreover, the old school building in the Tevfikiye Village was converted into a pension within the scope of the archaeo village studies. Furthermore, the Tevfikiye, Çıplak and Halileli Villages also present some products concerning local products and handicrafts and individually sell these products.

Moreover, many archaeological and historic structures extending from the Neolithic Period to Çanakkale Wars of 1915 are available in the park concerned (Atlas Journal, 2014). There are 16 archaeological sites and 3 natural sites which are entirely located within the THNP in the areal terms, whereas there are 3 archaeological sites, 3 natural sites and a historic-archaeological site partially located within the THNP. There are 6 immovable cultural properties required to be conserved within the THNP. A total of 19 buildings, 4 in the Halileli Village and 15 in the Tevfikiye Village and all qualifying as houses, have been taken under conservation as "examples of civil architecture". The elements taken under conservation as monumental works are Cezayirli Hasan Paşa Mansion, Çamaşırcı Bridge, Taş (Stone) Bridge, and the Tevfikiye Village Mosque (Ministry of Culture and Tourism, 2015; Salcan and Tokay, 2017). The important structures with historic-archaeological qualities include the Ancient City of Troy (Tevfikiye), the Tumulus of Achilles (Yeniköy), the Ancient City of Achilleion (Yeniköy), the Tumulus of Paşa Tepe (Kalafat), the Kumkale Fortress (Kumkale), the Topçamlar Battery (Halileli), the Tektop Battery in Kumkale and the Orhaniye Redoubt in Kumkale (Kumkale), the Halileli Village Cemetery (Halileli), the Old Ottoman Cemetery of Kumkale (Kumkale), and the Old Cemetery of Kumköy (Tevfikiye) (Ministry of Culture and Tourism, 2015). Besides, Hatice Sultan Valonia Oak Grove is one of the natural sites entirely remaining within the THNP. The Karamenderes Delta and Marsh, Kırkgözler Spring and Karanlık Harbor are the other natural sites which partially remain within the THNP (Salcan and Tokay, 2017). The KTVKK (the Council for the Conservation of Cultural and Natural Properties) resolutions and site laws are implemented in the villages; therefore, building and unauthorized intervention are prohibited.

The conservation of natural heritage is as crucial as the conservation of cultural heritage, for the negative impacts of modern agriculture are gradually increasing. The last areas, which are of profound ecological importance, are therefore threatened (Ministry of Culture and Tourism, 2018). In this context, to leave the Ancient City of Troy and its vicinity within the THNP to future generations, studies were carried out regarding the identification of the boundaries of the area and the conservation of the area. In this context, the boundaries of the area called the THNP today were determined by the Long-Term Development Plan (LTDP) of 1971 for the THNP, which was prepared by the Turkish and American experts within the Department of National Parks in the Ministry of Forestry of the Republic of Turkey (Özkan *et al.*, 2007). Nevertheless, since the locality

remained outside the forest regime, it could not be declared a "National Park". After the adoption of Law No. 2873 on National Parks, which entered into force in 1983, an area of 13,350 ha in and around the Ancient City of Troy was declared the THNP on 30.09.1996 with Resolution No. 96/8676 of the Council of Ministers. Prepared within the scope of the Law on National Parks, the LTDP study was completed in 2002, approved on 08.06.2004, and revised on 02.03.2009, 14.07.2010, and 09.09.2015 (Directorate General for Nature Conservation and National Parks, 2002; 2010; Salcan and Tokay, 2017). Another important development within the scope of the conservation of the area is that the Ruins of Troy were included in UNESCO's World Heritage List with the resolution of the World Heritage Commission, dated 02.12.1998, and with Sequence No. 849 (UNESCO World Heritage Convention, 1998).

Moreover, within the framework of the protocol signed on November 21, 2017 by and between a private firm and the Governorship of Çanakkale, the Tevfikiye village was converted into an archaeo village which qualified as an open-air museum with its atmosphere, buildings, figures, and historic and mythological assets that maintained the Trojan period. In this context, physical and social improvement studies on various scales were carried out in the Tevfikiye Village. First of all, the entrance road of the village and its surroundings were arranged by the firm concerned. Architectural renovations were carried out at the village square, in the village coffee house, at the village school, at the village mosque, at the wedding hall, and in the health house according to Trojan Period VI (Ministry of Forestry and Water Affairs, 2016). Following the Tevfikiye Village, similar renovations and arrangements will also be performed in the Çıplak and Halileli Villages, respectively. Moreover, discussions have recently begun to be made for the renovations and arrangements in the Çıplak Village in which the same firm works. In line with the obtained information, the Tevfikiye Village will be taken as an example for the studies to be carried out in these villages too. In this context, it is considered to carry out activities which support ecotourism in the village such as home pension operating, various courses, sales places concerning souvenirs and local products, food & beverage areas, and exhibition areas.

Application of the method to the study area and evaluation: Within the framework of the method, the criteria provided in Table 1 and determined in agreement with the area are gathered under the headings of ecological, economic, and social data. To determine the potential for ecotourism, the six village settlements in the study area were assessed according to the 24 criteria determined according to Golany's method. By collectively assessing all the data obtained within the scope of the research, the villages were scored for the criteria in Table 2. The sum of the points given for each criterion represents the numerical total of the potential of the villages for ecotourism.

The total points to occur when the 24 criteria in Table 2 took the highest and lowest values were calculated in the

process of determining the value range concerning the potential for ecotourism. By determining the minimum value of 24 and the maximum value of 98 according to a total of 24 criteria, the potential of the settlements for ecotourism was

determined as “high”, “moderate”, and “low” according to the assessment range given in Table 3 and the six village settlements in the area were grouped according to their potential for ecotourism within this scope (Table 3).

Table 3: The value range concerning the potential for ecotourism and the grouping of the six village settlements in the area according to their ecotourism opportunities

Value range concerning the potential for ecotourism	Settlements	Result
74-83	Tevfikiye	High
49-73	Çıplak-Halileli-Kumkale-Yeniköy	Moderate
24-48	Kalafat	Low

According to the criteria determined with Golany's method, there is a village settlement (Tevfikiye) with “High” ecotourism potential in the THNP and its ecotourism score is 74. Of the villages, four (Çıplak, Halileli, Kumkale, and Yeniköy) are regarded as settlements with “Moderate” ecotourism potential. Although these settlements took values ranging from 49 to 73, the village settlement with the highest ecotourism potential among them is Kumkale with 72 points. On the other hand, the village settlements with “Low” ecotourism potential took values between 24 and 48. In this case, Kalafat, which took 44 points, was determined as the village settlement with the lowest ecotourism potential.

Proposed model: The interest in the tourism activities in natural and cultural areas is increasing with every passing day. This increased interest may lead to incorrect use of resources by increasing the pressure in the areas where touristic activities are carried out. On the one hand, tourism activities use natural and cultural landscape elements, but on the other, they must conserve the elements concerned. The areas where natural and cultural landscape elements are concentrated the most are nature conservation areas. Therefore, nature conservation areas continue to be conserved in various ways and with increased conservation measures in many countries today.

Regarding national park areas as potential for economic and social activities leads to landscape and habitat disintegration, a change in the landscape composition, and an increase in the intensity of land use in these areas (Görmüş, 2012). On the other hand, Turkey is also undergoing an unignorable change in the approaches of management and planning of protected areas in particular (Güneş, 2011). The planning of the Tevfikiye Village, located within the boundaries of the THNP today, as an archaeo village can be given as an example of this.

Ecotourism is among the most rapidly developing sectors in the world industry. In the ecotourism policy, particular importance is attached to such principles as the ethical values of the management and the protection of the local people and the natural landscape (Fennell, 2008). Thus, in order to use the potential of the THNP in line with the sustainability approach, it is essential to develop appropriate ecotourism strategies (Kabaş, 2007; Akbulak and Cengiz,

2014). As also stated in Directorate General for Nature Conservation and National Parks (2010), the most important way of protection and conservation of the National Park by the local people is through the park area's providing of the local people with an opportunity for income generating activities. In this context, the THNP has significant potential for ecotourism with its intact natural-cultural landscape. Thus, as also stated by Görmüş *et al.* (2017), the basic goal concerning the study area should be to extend those ecotourism studies, which are useful for protecting the environment and the natural resources and for increasing employment.

What is necessary to carry out ecotourism in the rural village settlements and for its sustainability is firstly to conserve the natural and cultural heritage and hand it down to future generations. Besides, ecotourism is also necessary to make rural settlements more livable for the present society and for future generations, to provide social equity, to develop the economic growth models in such a way that will not lead to environmental and social problems, and to enhance the quality of life (Tuğun and Karaman, 2014).

In this context, regarding the sustainability of the village settlements constituting sources for ecotourism, the nine basic study areas that Wheeler (2003) presented for sustainable ecotourism planning in rural settlements were scrutinized on the basis of the villages within the THNP by developing them from Tuğun and Karaman (2014) and the following proposals were made:

Compact and balanced land use: Agriculture is carried out in the overwhelming majority of the areas within the scope of the THNP. As also stated before, the fact that the THNP was determined in the 1970s saved the area from the second house pressure (Özkan *et al.*, 2007). Agriculture is an essential use for local and regional economy; therefore, it should be protected and its sustainability should be ensured. Tourism is a potential use; however, its development for ecotourism should be provided. Thus, it is important to determine those areas within the THNP which are likely to be developed in this line. It should also be ensured that the disorganized fishing ports in Yeniköy are controlled. Instead, as also stated by Cengiz *et al.* (2016), arrangements which are in harmony with nature, which are

based on sustainable use, and which will provide an opportunity for water and coastal recreational activities (e.g. sporting fishing with fishing lines, diving, and surfing) should be made. Especially given that the wind is an important climatic factor in the study area and effective almost throughout the year, windsurfing should absolutely be supported as an important ecotourism activity.

Vehicle use and easy access: There is no problem of accessing the villages within the THNP except for Yeniköy. On the other hand, Yeniköy is accessed via the bad asphalt road and Geyikli road. Nevertheless, an approximately 14 kilometer-long road to Yeniköy is available via the Kalafat Village; however, it is not used at the present. Opening this road to transportation will both facilitate transportation to Yeniköy and ensure the revival of both villages in the sense of ecotourism since the tourists to go to the village will use the Kalafat Village route. Besides, building accommodation spaces (e.g. cafés and markets) and filling stations on all village routes and designing more organized link roads (vehicles-pedestrians-bicycles) among and within the villages are absolutely necessary for sustainable villages and, in this context, for sound development of ecotourism. Additionally, creating entrance checkpoints, informative units, tour routes and cultural-natural trekking routes at convenient places in the area and placing informative and directive boards convenient for the fabric of the area will be the activities which will support easy access within the area and hence the development of ecotourism.

Rationalistic use of resources, reduction of wastes, and prevention of environmental pollution: The THNP has rich potential for groundwater and aboveground water resources. In the context of protection and sustainable use of these resources, it is of extreme importance to eliminate the elements which pollute the water resources by controlling the furniture and activities polluting or likely to pollute the groundwater and aboveground water resources. Besides, there are problems about wastewater treatment in the THNP and in some villages within it and none of the villages have a solid waste storage area. This is an extremely serious problem for such a valuable area of national and international importance. As stated by Özkan *et al.* (2007), the wastes are disposed of at the disorganized storage areas of Ezine and Mahmudiye Municipalities, which causes visual and sanitary inconvenience in the environment. Especially Yeniköy experiences a profound problem in this sense upon the marine tourism that commences in summer months. At this point, the use of unrenovable resources should be minimized in all villages and projects should be developed for the decomposing/recycling of wastes and garbage, wastewater collection, etc. Moreover, the Special Provincial Administration of Çanakkale should urgently complete the technical infrastructural (wastewater treatment and sewerage) and super structural (e.g. road) activities in the Kalafat and Kumkale Villages.

Restoration of natural systems: The rural

settlements/villages may be utilized within the scope of ecotourism by creating a village use together with the climatic characteristics, flora & fauna characteristics, land structure, and natural and architectural environments of the region (Asimgil, 2017). The THNP also has an extremely interesting structure topographically. Especially the coexistence of plain and marine landscapes adds distinct value to the Yeniköy and Kumkale Villages. Besides, the scenery viewing spot and Papaz Beach, which qualifies as coastal sand dune vegetation, in Yeniköy are uncommonly beautiful areas for that locality. Unfortunately, the areas concerned are rather distant from constituting sources for ecotourism concerning use and maintenance. In this context, it is extremely important to make the necessary planning in the conservation-use balance in order to introduce the topographical characteristics in the THNP into the villages and ecotourism as well as to restore the use-induced degradation of the environment. In this context, the low plateaus and valley floors within the THNP can also be organized as routes for trekking, which is an important ecotourism activity, horse trekking, and camping/RV tourism by maintaining their current features and may provide an opportunity for flora/botanical tourism. The Karamenderes Delta and the Kumkale Reed Bed, two important water bodies in the THNP, also house important water birds from time to time and create an environment where these birds can be watched. However, it is extremely important to conserve, and provide the sustainability of, these areas, which are confronted with the environmental pressure that has increased in the recent years and which provide an opportunity for such ecotourism activities as bird watching and nature photography.

A good housing and living environment: In accordance with the KTVKK resolutions and Law No. 2873 on National Parks, building and any intervention without an administrative permission are prohibited in all villages located within the THNP. Especially the fact that the Kalafat Village remains within the site area has caused this village to be unable to develop socially and physically, although it is one of the villages closest to the ancient city. The quality of the buildings in all villages other than Tevfikiye is rather low too. Even though the villages other than Yeniköy and Kalafat date back to very ancient times, there are hardly any buildings of historic value. In this context, carrying out studies on the local history of the villages, determining the functions of the historic buildings in the villages and providing their reuse or adaptive reuse will contribute to the development of ecotourism in the villages. As in the example of Tevfikiye, house improvement studies should firstly be carried out for the quality of ecotourism to be developed in the area as well as for a prosperous life. In the restorations to be made and the new buildings to be constructed within the LTDP for the THNP, it should be ensured that production with qualities adding value to the current fabric is carried out and that the villages are provided with authentic fabric. Besides, the social areas in the villages (e.g. the village coffee house, the wedding hall, and the mosque) should be made more functional and the function of those which have lost their function should be

reintroduced. The villages other than Tefikiye are deprived of social furniture and only cemeteries are available as green areas in the villages. Nevertheless, it is of extreme importance to introduce social furniture of good quality which supports ecotourism (restaurant, cafeteria, market, cooperative sales shops, playgrounds for children, toilet, bank, and parking lot) into the villages and to develop the green areas in the villages in terms of quality and quantity. Placing the power lines in all villages, underground, as in the Tefikiye Village, will be a good approach so as to create a good living environment and to prevent visual pollution. It is also extremely important to construct food & beverage facilities, toilets, playgrounds for children, and parking lots at the excursion sites and tented campsites to be established within the THNP and to provide the efficient control and maintenance of these areas because, as also stated by Erdoğan and Tosun (2009), the accommodation services particularly including recreational areas and campsites continue to be the most criticized tourism components owing to their negative impacts on nature.

Sound social ecology: The failure of tourism activities to find the necessary place for themselves in the economy of the villages is also reflected in the social infrastructure of the locality, as also stated in the LTDP for the THNP, and Çanakkale is used for both health and secondary education services (Özkan *et al.*, 2007). The educational activity is only available in Kumkale out of the villages in the THNP, whereas the other villages make use of the mobile system in education. The villages again other than Kumkale, Yeniköy, and Tefikiye also have limited services with respect to health possibilities. As also stated by Tuğun and Karaman (2014), first of all, social equity should be provided and studies should be carried out for the equal distribution of prosperity to all sections in order to develop ecotourism in an area. At this point, it should be ensured that the problems about education and health are urgently eliminated in all villages.

Sustainable economy: The most important reason for the change in the rural areas also in Turkey in the recent years is the agricultural policies implemented by the state. The agricultural subsidies by the state have decreased; agriculture has been opened to international competition; and the institutional changes experienced have brought about the changes in social and cultural conditions (Çörek Öztaş and Karaaslan, 2017). There is a wide variety of problems about the development of the economic structure and the labor force presentation owing to the reliance of economy on agriculture in all villages and the developments experienced in the agricultural sector in the recent years. The reliance of economy merely on agriculture and the failure to develop a line of work other than agriculture are among the most fundamental reasons for the migration of the young population from the village to the city today.

Agriculture is one of the most important cultural landscape assets for the THNP (Erduran Nemutlu, 2017) and always significant appeal for the agricultural activities

that maintain their traditionality/agritourism and ecotourism (Cengiz *et al.*, 2016). In this context, for sustainable agriculture, it should first of all be ensured that “good agricultural practices” and “organic agriculture” are supported instead of the intensive agriculture carried out in the area, that institutionalization such as production association or a cooperative is realized for this purpose, and that products like tomato become a brand at the national and international markets.

Furthermore, wild boars, which are discovered to do significant damage to the agricultural lands, are a serious problem encountered in all villages. As also stated by Cengiz *et al.* (2016), it should be considered to allow controlled hunting in the area both in this respect and in terms of ecotourism activities. Besides, the existence of wild animals (hare, boar, jackal, marten, fox, partridge, and quail) in the villages may also provide an opportunity for wildlife watching and photo safari, which are ecotourism activities.

Nevertheless, the agricultural fields and the tourism possibilities created by Troy fail to ensure the development of the settlements at the locality. Since there is even no little accumulation of capital, it is clear that especially tourism is unable to compete with Çanakkale, which is located very close (Özkan *et al.*, 2007). Thus, the necessary studies should be carried out to shift the economy of the village to ecotourism – a sector other than agriculture – and to restore the bad economy. As also stated in Directorate General for Nature Conservation and National Parks (2010), first of all, the local people, interest groups, administrators and students should be provided with training on ecotourism. Besides, in several-day tour programs to be performed and after excursion tours in the THNP, accommodation (home pension operating) activities should also be provided and stimulated in the villages other than Tefikiye and Yeniköy; the food and beverage and service sectors should be encouraged; and educative courses on such issues should be organized. The products and subjects to be subject to ecotourism should be determined by making market research concerning the assets and traditional products of the area. Through various village festivals and village charities to be organized in this context, it should be ensured that the products produced by the village people (e.g. local products and handicrafts) are sold and that they come into contact with incoming guests. Finally, the local people should be used as the potential labor force when selecting guides for the THNP and the local people should be trained on this matter.

Public participation: The greatest problem in the THNP, as in all protected areas, is the inability of the local people to have a say in the decision support mechanisms on the development of the villages. Upon the declaration of the area a national park, the process in which the Tefikiye Village became an archaeo village also proceeded as being deprived of these decision support mechanisms. However, the actual party having a say in all plans that aim at village improvement and development should be the local people

living there. At this point, the participation of the local people in the process in person and their support should be provided in the planning processes of the remaining villages like the Tefikiye Village.

With "the village design guide", included in Article 8/ğ of Development Law No. 3194, regarding public participation, it is aimed to preserve, develop, and maintain these characteristics in the places whose population remains below 5,000 people and whose rural settlement quality continues (Official Gazette, 1985). Design guides can find different implementation areas in urban and rural areas in drawing up, developing, and updating laws as a common design language (Eminağaoğlu and Çevik, 2007). "Village design guides", which make proposals on the spatial organization and development of rural settlements in agreement with the original pattern in the world (Kut Görgün and Yörür, 2018), are used as important physical plan bases in order to conserve and develop rural landscapes in many countries today (Eminağaoğlu and Çevik, 2007). On the other hand, "the Village Design Guide" as a new instrument with an article included in 2013 in Development Law No. 3194 (Kut Görgün and Yörür, 2018) is one of the most important and updated instruments which entered the legislation by taking the rural landscape characters as the basis and by defining the building and physical plan developments in villages (Balta and Atik, 2019) and which place the rural areas directly at their center (Öğdül *et al.*, 2018). In this context, as also stated by Görmüş *et al.* (2017), it may be aimed to develop village design guides and generally encourage ecotourism with the participation and contribution of the local people initially in the villages with higher potential for ecotourism.

Conservation of the local culture and social assets: The THNP, which is also included in UNESCO's World Heritage List, and the majority of the villages within it have very rich potential for cultural heritage. Nevertheless, Salcan and Tokay (2017) stated that the majority of the examples of cultural elements within the THNP and in its close vicinity were endangered by being deprived of the necessary interest in terms of conservation and planning and that the most important reason for this was that the THNP was addressed as a buffer zone which surrounded the Ancient City of Troy. For instance, the Çıplak Village houses tombstones and a historic fountain of the Ottoman Period which await registration and restoration.

There is intensive use pressure on the Ancient City of Troy—the main resource asset of the THNP—and this pressure should be shifted to the buffer zone (Cengiz and Kaptan Ayhan, 2008). Therefore, to introduce such areas at the national and international levels, the natural-cultural diversity should be determined, taken under conservation, and sustained for the buffer zones as well and different attractions should be planned.

This research is generally intended to determine the ecological/economic/social capacity needed at the stage

of sustaining ecotourism together with the natural and cultural potential required to develop ecotourism in the villages within the study area. Nevertheless, even though the villages within the THNP have potential for constituting sources for ecotourism in natural and cultural terms, they need to be developed and supported economically and socially. As Directorate General for Nature Conservation and National Parks (2010) also emphasizes that ecotourism is an essential source of tourism for the region, both the THNP and the villages located within its boundaries can become a region where ecotourism develops and also contributes to local economy upon the planning studies to be carried out in the following process. In this context, the studies a private firm conducts particularly in the Tefikiye Village and the Çıplak Village as well as in the other villages are extremely important for the development of the ecotourism activities in the region in the following process.

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