

Example of an ecotourism farm in the context of sustainability: Pastoral valley ecological life farm



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ABSTRACT

In the world and in Turkey, tourists sensitive to nature are becoming more conscious about healthy life and are turning towards alternative tourism products. These changes are increasing the importance of concepts such as ecotourism and sustainable tourism, which envisages the use of the natural, cultural environment in the balance of conservation and use. Application areas of ecotourism, developing in line with sustainable principles in Turkey, are expanding. Farm tourism in ecotourism activities is gaining more attention. Due to the absence of a national and legal ecotourism certification program, the precise characteristics of ecological farms cannot be determined. The settlement subject to the study operates under the name of "Pastoral Valley Organic Agriculture and Ecological Life Farm," located in Yanıklar Village of Fethiye district of Muğla Province. It is the pioneering organization for the adoption and dissemination of "sustainable living" throughout the region. By participating in the «TaTuTa» program organized by the Bugday Association for Supporting Ecological Living and hosting volunteers makes significant contributions to alternative tourism activities in the region. The aim of this study is to examine the ecological and sustainable principles of this farm and to serve as an example for the farms that will be built in an ecological approach. The subject farm was investigated by using a case study, one of the qualitative research methods. The findings were grouped under the environmental, social, and economic dimensions of the concept of sustainability. The farm operator defines the settlement as a holiday farm with the taste of returning to the village towards a sustainable life for those who want to forget the stresses and difficulties of urban life and technology in a natural, calm, and peaceful environment.

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1. Introduction

The concept of sustainability has been discussed since the 1970s, and its definition has been tried to be clarified. How to achieve a sustainable life, architecture, settlement, business is frequently discussed in these discussions and definitions. The breadth of the subject causes confusion. In recent years, a tendency has emerged from the trilogy of sea, sand, and sun, which is called the classic tourism product, to products where individual experiences are at the forefront and requiring special attention. Tourists, who are sensitive to the environment and

nature, become more conscious about healthy living and food consumption, and have higher education levels, turn towards rural areas away from noise and chaos of city life. These changes in both the tourist profile and consumption patterns cause the increase of the importance of concepts such as ecotourism and sustainable tourism, which envisages the use of the natural, cultural environment in the balance of conservation and use (Kaypak, 2012; Akten and Tanrıbir, 2014). Continuous protection of natural resources and their use without exceeding the limits of self-renewal constitutes the basic philosophy of sustainability (Alkan et al., 2010). Sustainable tourism means sustainability without losing the quality and quantity of the factors and assets that make up the tourism event. It is a form of policy that protects natural, cultural, and social resources in the long run and supports economic development in a positive manner for all types of tourism.

The principles of sustainable tourism were determined by UNWTO (2005) as tourism that takes

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full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities. According to Aksit (2007), sustainable tourism aims at sustainable use of resources and prevention of environmental destruction sorted as; to be based on nature, to contribute to the protection of biodiversity, to support the well-being of local communities, to organize activities under the responsibility of both tourists and local people to minimize negative environmental and socio-cultural impacts, to require minimum use of non-renewable resources, and to produce the local property and employment opportunities for the local community. Sustainable tourism requires environmental protection, strengthening of natural resources, and sustaining economic and ecological development in harmony. When the world and in Turkey's tourism trends are analyzed, in recent years, it has been observed that people's educational and cultural levels have increased, and their expectations have been changing along with changes in social and demographic structure. Farm tourism in ecotourism activities is getting more and more attention and demand with increasing environmental awareness in people. Unlike mass tourism that causes irreversible damage to the environment, application areas of farm tourism in Turkey are expanding, developing in line with sustainable principles. These farms are planned as low-density settlements in rural areas. The main sources of income are ecological agriculture, educational activities, and eco-agro tourism. In addition, respect to local culture and the traditional architectural features of the region come to the fore in ecovillages and farms. In contrast to contemporary building materials and systems, the use of local, natural, and recyclable materials such as wood, stone, mudbrick, and ecological designs are preferred in these buildings.

Sustainability criteria should be taken into consideration in all processes, from the design and material selection of the enterprises to the construction phase and the execution of the operation activities with a holistic approach. When ecological and sustainable design examples are examined, it is seen that the projects are based on many different design parameters. These differences that make the architecture unique are due to the semantic connection that the structure establishes with its place. Local and regional priorities increase the richness and diversity of architectural design. In addition to the ecological dimension of sustainability, it has been mentioned in many studies that cultural, social, and economic aspects of sustainability should be handled differently from the ecological dimension (Reboratti, 1999; Munasinghe, 1993).

The settlement subject to the study operates under the name of "Pastoral Valley Organic Agriculture and Ecological Life Farm." It is located on a 42-acre land on the side of the Kargi River in the Yaniklar Village of Fethiye. In 2010, a project entitled "Sustainable Living in Yaniklar Village" was initiated

in cooperation with the South Aegean Development Agency (GEKA) in this region. South Aegean Development Agency, with the mission of mobilizing local potential, carries out its activities to contribute to regional development within the framework of transparency, innovation, equality, and efficiency awareness in the Southern Aegean Region, which includes Aydın, Denizli, and Muğla Provinces. The Ministry of Industry and Technology is responsible for the coordination of the agencies at the national level (GEKA, 2014). GEKA guided its activities with the mission of producing qualified information in the region; continues its activities to become an institution that directs regional development. In the light of the planning and analyzing studies carried out with the development axes in the regional plan, the agency identifies the needs of the region in order to increase the competitiveness level of the region and manages these programs by designing appropriate support programs. South Aegean Development Agency conducts its activities in line with the vision of "South Aegean, a global tourism center with high quality of life, innovation-based production and preserving nature." In this context, increasing the diversity in tourism in four seasons, high value-added and innovation-oriented transformation in production, sustainable environment, and social development are the priority development areas for the agency.

With this project, it is aimed to direct the alternative tourism types that protect and use the natural resources within the framework of ecological and economic sustainability principles, maintaining the social life and cultural richness of the region, preserving the biodiversity and educating the local people in this direction without constructing cooperatives, villas or sites in the region. Alternative tourism types that will enable the existing facilities to operate for 12 months without turning into seasonal mass tourism consisting of sea-sand-sun in the coastal parts of Fethiye (GEKA, 2014). The settlement subject to the study takes on the role of leading an organization for the adoption and spread of this understanding of alternative tourism and sustainable living throughout the region.

Pastoral Valley, by participating in the «TaTuTa» program organized by "Bugday Association for Supporting Ecological Living"; supported by UNDP (United Nations Development Program) and GEF (Global Environment Fund)-SGP (Small Support Program) and hosting volunteers in the region, make significant contributions to alternative tourism activities. TaTuTa, the name of the project on "Eco-Agro Tourism and Voluntary Knowledge and Skills Exchange on Organic Farms," was established in order to incite ecological agriculture by providing information support or volunteer labor to family farmers in Turkey. The purpose of the Bugday Association is defined as to create the awareness and sensitivity of ecological life in individuals and society, and to support lifestyles compatible with nature in order not to disturb the ecological balances. In order to fulfill this aim, the Bugday

Association is trying to contribute to the continuation of agricultural production as in traditional villages, to the spreading of sustainable agricultural methods that do not harm the environment and human health, and to redefine human needs in harmony with ecosystem cycles. In addition to supporting ecological settlements, the Bugday Association actively plays an important role in raising awareness of eco-village entrepreneurs on organic farming activities (Bugday, 2019).

With TaTuTa, Bugday Association is the official member of the ECEAT-European Centre for Ecological and Agricultural Tourism-for Turkey, the national WWOOF organization of Turkey. WWOOF is a worldwide movement linking volunteers with organic farmers and growers to promote cultural and educational experiences based on trust and nonmonetary exchanges, helping to build a sustainable global community. TaTuTa allows people who are interested in ecological agriculture or who want to learn about such issues, individual farms or eco-village formations established in many different regions, to gain experience for a fee (Bugday, 2019).

In this "Pastoral Valley" settlement, ecological and sustainable design and approaches have been adopted. Aiming to implement the agricultural tourism model based on ecological principles, the farm opens its doors to everyone who wants to experience rural life, and brings together individuals and groups from different countries and cultures in line with these goals and directs them to cooperation. The aim of this study is the examination of "Pastoral Valley Organic Agriculture and Ecological Life Farm" in the context of ecological and sustainable approaches and to set an example for settlements and farms that serve in the field of agricultural tourism, which take local architectural and cultural values into consideration and built-in an ecological approach. It can also be said that the settlement operates as an ecotourism enterprise. The findings of the study support this.

Within the scope of work, related literature was searched about ecotourism, farm tourism, ecology, sustainability, ecological structures, and settlements concepts, sustainable and natural materials. The findings were grouped under the environmental, social, and economic dimensions of the concept of sustainability.

2. Ecotourism and agriculture/farm tourism concepts

The devastating negative effects of mass tourism, the sensitivity of the tourists towards the protection of the natural environment, and the changing motivation and expectations of the tourists have changed and diversified the tourism market. Alternative tourism types such as ecotourism, rural tourism, agriculture/farm tourism, community-based tourism, and nature tourism have developed since the 1990s. Ecotourism includes elements of rural and cultural tourism and is expressed as the most suitable type of tourism that can be developed

in sensitive natural and cultural areas. In the face of the negative effects of uncontrolled mass tourism movement on the environment and society, ecotourism is seen as an important tool in ensuring sustainable development (Kuter and Unal, 2009).

Culture and Tourism Ministry and the tourism sector non-governmental organizations in Turkey make a series of studies in order to achieve sustainability in tourism and to follow new alternative trends in the world tourism sector. Turkey has a remarkable sensitivity to the diversification of tourism products in the works foreseen at first Action Plan 2013 than in the Tourism Strategy 2023 prepared by the Ministry of Culture and Tourism. Ecotourism is among the priorities of the tourism types that are determined as targets in the 2023 Tourism Strategy. In this context, it is understood that in addition to the classic tourism product, alternative products will take an important place in the market in the future (RTMCT, 2007). This situation reveals that investments in alternative tourism products will increase gradually in the future.

According to UNWTO, the objectives of ecotourism are; to minimize the destruction of tourism to the natural and traditional environment; training tourists and local people about the protection of nature and the traditional socio-cultural environment; to promote tourism as a responsible trade that meets the needs of local people and develops in cooperation with local government and the public; allocating resources for the management of protected (natural and socio-cultural) areas; to support long-term monitoring and evaluation programs for the socio-cultural and natural environment in order to minimize the negative impact of tourism; ensuring that tourism is developing in a way that contributes to the livelihood of local people, increasing the social and environmental capacity of the region; is the realization of the infrastructure investments of tourism, which is compatible with the environment, intertwined with natural and traditional socio-cultural life, preserving the local vegetation and wildlife (UNWTO, 2009).

In some studies, ecological tourism, which is developed as a reaction to mass tourism, is considered as the whole of environmental, social, and economic relations. It aims to make the interactions between nature-human-environment and tourism activities beneficial in order to preserve the ecological system balances. It is characterized as a small scale tourism type that supports moderate economic development, is predominantly local entrepreneur, sensitive to the environment and socio-cultural structure, which can be realized gradually in the long term.

The development of ecotourism has led to the popularity of farm tourism as part of a meaningful journey to natural areas that understand the natural and cultural environment, preserve the integrity of the ecosystem and at the same time protect natural resources that are beneficial to the local community,

creating economic opportunities for the local community. Farm tourism, as one of the types of alternative tourism, is a growing type of tourism (Oppermann, 1995). Farm tourism is also seen as a complementary tool for agricultural diversification and local development (Gössling and Mattsson, 2002). Farm tourism is a form of tourism that is handled with a strong environmental element within the framework of rural tourism. There are many definitions of farm tourism, but it is generally based on touristic activities on farms where the farmer is able to do farm work with the farmer. Farm tourism is a kind of tourism that enables visitors to experience both agriculture and animal husbandry and various ecotourism activities, provides additional income to the local people in rural areas in economic terms, and contributes to the promotion and maintenance of the culture in the region. Farm tourism is an important tool in the development of rural areas, particularly those with favorable conditions for tourism activities throughout the year. Farm tourism needs to meet some basic requirements:

- Providing additional income to the local people in order to counter the problems that arise in agricultural systems and the crises faced by rural areas,
- Providing diversification of economic activities by increasing tourist attraction products and local service supply,
- To establish a balance between ecological systems, socio-economic and socio-cultural developments and to support the development process and thus change,
- To support cultural exchange as a factor of solidarity and social cohesion, to assist in the implementation of regional policies designed to improve living conditions for local people and visitors, to increase the competitiveness of economic activities in less developed regions, and to provide the necessary equipment and infrastructure (Cut-Lupulescu, 2014).

The supply of farm tourism varies according to policies, tourist supply, geographical characteristics of the region where the touristic activities take place, and the creativity of the farm owner. The basis of the touristic product is the traditional lifestyle such as agricultural production/eco-agro tourism, educational activities, food, health, handicrafts. It is aimed to have an economically self-sufficient loop system. The main sources of income are ecological agriculture and educational activities. The eco-village and farm venture in Turkey was seen as more concentrated in the southern and western regions. In addition, respect to local culture and the traditional architectural features of the region come to the fore in ecovillages and farms. In this context, unlike contemporary building materials and systems, local, natural, and recyclable materials such as wood, stone, and mudbrick are preferred in the buildings.

Ecotourism farms are those farms whose main job is agriculture and animal husbandry, in addition to accommodation and eating and drinking opportunities for their guests who want to share the farm life by living there for a while and only making daily visits. The fact that tourism services are provided in addition to agricultural production in the farms enables farmers to create economic alternatives by supporting their income.

Qualifications related to farm and village houses are included under the heading "Rural Tourism Facilities" in the sixth section of the "Regulation on Certification and Qualifications of Tourism Facilities" of the Ministry of Culture and Tourism. Accordingly, farm-village houses should meet the following criteria; considering that agricultural activities have important contributions to the preservation of the natural and cultural heritage of rural areas, the aim is to improve existing buildings or to make new buildings based on the internal arrangement of the existing texture, thereby establishing a bed capacity and to secure the environment in which tourism can develop and expand; these are at least five-room accommodation facilities established in rural areas for the purpose of farm organization and providing tourism accommodation with farm production, where incoming customers can participate in work programs if they wish, allowing the rural life to be staged. Instead of the traditional accommodation types, it is necessary to provide the customers with accommodation in a farmhouse-village house, to use the local consumer goods they want to try, such as local food and drink, to provide these opportunities within the framework of the family business approach, the furnishings and decoration should be as well as the materials of the original. These facilities, which are not required to have a central heating system, also have the following qualities: providing local and home-made food and beverage types to customers, arrangements such as balconies, patios, and terraces that provide visual use of natural environments, reading and resting in the living room. They need to provide general information about natural and cultural values around the facility and environmental protection (RTMCT, 2005).

3. Ecology, sustainability, ecological building, and settlement concepts

Ecology is a science that examines the relationships between human beings and other living things with each other and their environment. In the concept of ecology, the relationships and influences between living organisms and the environment take place in their versatile and direct and indirect forms. Ecological processes are defined as a dynamic, continuous sequence of interrelations. Ecology is also looking for ways to scientifically research and implement systems that minimize the negative impact of environmental systems in the process, from production to destruction (production, use, waste).

Unlike functional planning, ecological planning offers the orientation of the design philosophy of post-industrial society, a new understanding of design, the unity and indivisibility of human and environment to the planning process. Ecological planning puts the limits of functional planning underlining that the man-made environment should be a product of the ecosystem, not only as a result of personal, social, and cultural differences. Ecological planning foresees future generations and low resource consumption. It aims to ensure that all designs and plans are recyclable, to take measures to prevent waste and pollution, and to teach each other useful work.

Sustainability is not an "after all," but an effort to sustain life, taking into account everything. Sustainability is defined not only in terms of architecture but in general, meeting today's needs by considering the needs of future generations, using our resources responsibly, not harming the environment, creating resources from waste, leaving a livable world for future generations. Starting from the concept of sustainability, the design and production methods of buildings have been questioned again. At this point, it is thought that the most accurate start should be to capture clues from local architectural data and evaluate them in line with contemporary user expectations. From an analytical point of view, the idea of sustainability basically belongs to ecology, which means that an ecosystem can survive unchanged over time (Reboratti, 1999). In many studies, it is stated that sustainable development has three main dimensions; economic, social, and environmental (Sev, 2009; Hurol, 2014; Castanheira and Bragança, 2014; Munasinghe, 1993). Sustainable development has been the keyword of the 21st century and has directly affected the architectural environment by affecting many areas. The efficient use of energy and harmony with the natural environment in the sustainable development model is among the most important factors that determine design decisions in architecture. According to Sev (2009), design principles that ensure sustainable environmental development:

- Production of products from recycled materials and renewable sources,
- Less waste generation,
- Reuse of wastes, less negative impacts on human health or complete removal of these negative effects,
- More widespread use of renewable resources,
- Conservation and storage of energy,
- Not using toxin substances in production and not creating environmental pollution (Sev, 2009).

Ecological design or eco-design is simply the design of the built environment to integrate it with the natural environment. Ecological structures are included in the sustainable building class when they respond to economic, social, and environmental factors. In other words, they are architectural

designs and applications that aim to fulfill the space needs of people without endangering the existence and future of natural systems (Sev, 2009). Ecological structures, which minimize environmental pollution and have positive effects on local life, preservation of building culture and architecture, provide users with healthier and more reliable original building services. In view of all these useful aspects of ecological structures, there are important points to emphasize in design principles. These are:

- To minimize damage to natural resources in the design and use of the artificial environment,
- Positioning of buildings in accordance with the existing topography (soil, water, air, green space),
- Design in harmony with nature, design in harmony with climate conditions and topographic features,
- Use of recycled materials,
- Providing flexibility and variability criteria of design and spaces being multifunctional,
- Designs for using solar energy.

All these design principles should be realized by considering together the building form-shell, building physics elements, materials, and construction systems (Tonuk, 2001).

In the study, as a result of the analysis of the literature reviews, it is seen that 8 main topics come to the forefront in ecological and sustainable building design:

1. Sustainable thought and design principles
2. Economic architectural built environment design
3. Building shell
4. Building geometry
5. Space organization
6. Building material selection
7. Air conditioning systems
8. Waste management

Built environments formed by buildings designed with an ecological approach are called ecological settlements. In another study, the elements required for the planning of a settlement as ecological and sustainable are discussed with their physical and environmental dimensions.

- Physical Issues: Appropriate land selection, simple plan type of structures, small scale, compact, appropriate volume organization, the optimal orientation of the structure, high thermal performance building shell, durable building products, use of local materials.
- Environmental Issues: Energy-efficient land use and material selection, landscape design, the use of renewable energy sources, the use of recycled materials obtained from rapidly renewable sources, the effective use and design of water, the protection of natural contours, flora, and fauna, ensuring the comfort conditions in the building (Tonuk, 2001).

- Requirements for an ecological and sustainable settlement is defined as Growing food using the bio-areas of the region, supporting organic food production, creating settlements using local materials, using renewable energy, adhere to ecological business principles, preserving biodiversity, being aware of a life cycle, applying waste energy management for clean air, water and soil, to protect the nature, taking control ecological footprint.

In this study, the subject farm serves in ecotourism. According to Ovalı (2009), ecological tourism, which developed as a reaction to mass tourism, is considered as the whole of environmental, social, and economic relations. Ecological tourism construction should develop in accordance with the land-use decisions to be determined within the scope of ecological planning. In contrast to intensive settlement and new settlements, because it is a small-scale tourism movement, there is a strategy of re-evaluating the existing idle structures and not creating new settlements unless necessary. In the new settlements to be established, it also foresees the implementation of applications based on the design criteria of sustainable ecological architecture, which will also solve the future problems of 3E (ecology, energy, environment) and 3R (reduce, recycle, reuse-recover) (Alampay and Libosada, 2003). These assumptions will not only protect the existing traditional architectural understanding with the cultural richness but also prevent the pollution of the resources by the touristic building activities and contribute to the development of sustainable ecological architecture.

In many studies on sustainable architecture and settlements, ecovillages and farms constitute one of the main groups. The qualities that make building structures sustainable/ecological are diverse, and each sample to Turkey is a local-specific solution. Instead of comparing the examples with their foreign counterparts in terms of structural success, it's a correct attitude to keep in mind Turkey's urban and rural development policies, economic and environmental problems, and more popular environmentally friendly approaches.

4. The use of sustainable and natural materials

Due to the nature of the materials, the building structures that are in harmony or incompatible relationship with the people living in it, and which can be seen as organisms in this context, are gradually getting away from nature. The development of technology creates positive effects in the building material market but causes pollution of the environment we live in. The production of high-tech contemporary building materials plays a major role in the emergence of environmental problems. They have an impact on the environment at every stage of their life cycle, not only during production but also during usage and consumption of buildings.

In this case, it is inevitable to take measures to prevent environmental pollution in order to leave habitable environments for future generations. While the abandonment of traditional materials and the use of modern materials is becoming widespread, their impact on the environment and human health should not be ignored. About two-thirds of the world's population live in buildings made of non-industrial materials such as soil and bamboo. Some examples of natural materials used in the building structures are straw bales, bamboo, stone, and soil using various techniques. Earthen plasters, tree house designs, and thatched roofs are likewise related. A wooden structure is also considered as a natural building material (Dhillon and Aschheim, 2010). In contrast to contemporary building materials and systems, local, natural, and recyclable materials such as wood, stone, and mudbrick are used in traditional buildings (Aydın and Lakot Alemdağ, 2014).

Sustainable building materials are materials that consume the least amount of energy during their use and do not harm the environment and human health during the production, use, maintenance, repair, and waste generation of raw materials. Sustainable building materials, which are described as green, are materials that use raw materials that are not harmful to the environment and sensitive to the limits of consumable resources in production.

Sustainable materials are not harmful to human health as they do not contain toxic components. They can be recycled or reused. They do not have any harmful effects on the natural environment after their functions are completed. They are obtained from local sources and producers.

The life cycle of the structure includes the time from the removal of the raw materials to be used for construction to its destruction. The life cycle of a structure can be classified into three stages. This cycle is classified as the pre-construction period, construction period, and post-construction period. Especially when choosing construction materials, aesthetics, cost, and performance characteristics should be taken into consideration, while life cycle criteria should be taken into consideration (Umar et al., 2012).

4.1. Sustainability of wood and stone

Wood and stone, which are very old building materials in the history of humanity, have been used as carrier elements, flooring, roofing elements, and facade cladding in the buildings for thousands of years, and they continue to be used. In spite of the materials, construction systems, and technologies that have changed from past to present, these materials have always existed in the field of architecture and design. Among the building materials, wood has always been among the preferred materials due to its advantages. Lightweight, resistant to different climatic conditions, increased fire resistance with special paints, protection against decay and insect damage

by impregnation, re-installation when the structure is dismantled, easy to repair and plan change, energy-friendly and earthquake resistant, ability to be used in perfect harmony with steel, concrete, stone and adobe properties indicate that the wood material meets all ecological design criteria. Wood does not cause adverse environmental impacts throughout its life cycle. Wood is a flexible and sustainable building material and is among the environmentally friendly and recyclable materials obtained from renewable sources. Considering the relationship between ecology and materials, wood material is undoubtedly one of the leading materials that meet the ecological design criteria. Wood is the only building material that can renew itself. It is the only resource that is able to provide forests and building materials by growing and cutting trees individually. At the same time, wood is the only building material that can clean the air.

Besides the wood, stone, which is one of the oldest known building materials, has been used as a building material by shaping or carving it throughout human history. Stone materials are durable due to their structures, they do not harm the environment during production and usage stages, recycling is possible, and they can be considered as sustainable building materials. Wood and stone are the most common materials used in the traditional Turkish house. The stone material is generally used in foundation and ground floor walls, and wood is used in the formation of upper floor walls, in places such as doors, windows, ceilings, and roofs (Aydın and Lakot Alemdağ, 2014).

4.2. Earthen structures

Earth has been the most common material used by people since ancient times in the buildings they have built for shelter. People felt the need to shelter themselves in order to protect their existence and to sustain their generation. For this, they used natural materials such as stone, earth, and wood around them. In spite of all the advances in technology, in the 21st century, the vast majority of people live in earthen structures. Today, at the stage of civilization, earthen structures provide shelter for low-income people on the one hand, and on the other hand, it is preferred as a priority type of structure by high-income groups who prioritize living in a healthy and comfortable environment. As the concepts such as environmental protection, energy-saving, and sustainability are updated and gained importance, as the problems in these areas grow, solution opportunities are seen in earthen structures, and interest in these structures increases. Earthen structures contribute to the solution of the current problems of societies.

There are various types of earthen building structures. Structures produced by adobe blocks with various systems, structures formed by bags filled with earth, in-situ cast earthen structures with various molds are the main ones). In developed countries with advanced technology, the

abandonment of the mudbrick structure to a large extent is due to its inability to keep up with the production technology. This situation can be attributed to the fact that the use of earth material is based on more manpower and takes more time.

Adobe, in Turkey, not only in homes where people live but is also used in buildings used in agriculture and animal husbandry enterprises. 25-29% of the houses built in the villages used mudbrick material. Nowadays, the reasons for its spreading and researches by using advanced technology are explained as follows:

- a. The adobe structure is a type of structure that is in harmony with today's standard of living, based on widespread and deep-rooted traditions on the earth, capable of balancing the necessary level with nature and having flexibility in formal arrangements,
- b. adobe is a material that provides the most rational solution to the energy problem and does not create environmental pollution (Tülbentçi, 1998).

Earthen materials have many environmental advantages. The interior quality of earthen structures is quite good and healthy. Earthen structures create a natural, non-toxic, enclosed environment. Very little energy is usually required for the preparation, processing, and manufacturing of earthen material. The greatest energy input is usually human labor. The use of natural materials prevents negative living conditions. Because of their large mass, earthen structures are beneficial for passive solar design, and sound transmission is low. They also naturally regulate indoor humidity and comfort. Typically, earthen construction materials are supplied locally, which means low transport energy (Bjorn, 2001). Adobe is a material obtained by drying straw or other herbal fibers into clay and suitable earth, kneading with water and pouring into molds and shaping and drying in the open air (Tülbentçi, 1998).

Thermal insulation of an earthen (adobe) wall with a thickness of about 70 cm. is equivalent to the thermal insulation of 100 cm. stone wall, 130 cm. press brick wall and 250 cm. reinforced concrete wall. Earthen building structures, regardless of their thickness, do not lose their breathing properties and do not condense within the space. Therefore, there are no problems, such as humidity and moisture. It is one of the ideal materials for human life.

Adobe provides protection due to its high thermal capacity and insulation values in hot and cold weather conditions. It is a building material with sufficient qualities for rural areas. The adobe is superior to other building materials such as bricks, concrete, briquettes in terms of saving energy lost from the outer walls, both in the production phase and in the use phase after the completion of the structure.

4.3. Effects of natural building materials on the environment and human health

Energy-saving ecological structures, due to their qualifications, create spaces of high quality of life. Building materials compatible with nature, environmentally friendly, non-polluting, recyclable, and non-destructive to human health are complementary elements of ecological designs. The benefits of using natural building materials can be summarized as providing natural control of indoor humidity, filtration and neutralization of harmful substances in the air, providing ideal surface and air temperatures in the interior, being odor neutral environment, the formation of natural light, lighting and color environment, building materials radioactivity lower than natural environment, protection of natural electrical field in the air and physiological suitability of ionization in the space, protection of natural magnetic field, non-propagation of technical electromagnetic fields. They do not cause environmental problems and high energy consumption in the formation, use, and destruction of the building. Although the products of today's technology provide heating-cooling requirements in buildings, the use of these technologies from a biological perspective adversely affects human health and the environment. It is also explained with the examples of traditional architecture that the solutions provided by natural methods are healthier. If the materials used in a building come out or grow in the region where the building is located, they are healthier in creating natural climates as the natural building materials determined by the climate of that region. In the past, 30-40% of the buildings used wood, straw, organic materials such as straw, and 60-70% of mudbrick, stone, tile, lime, inorganic materials such as lime, 90-100% artificial materials are used today, environmentally and humanly healthy spaces can not be created.

5. Method

In the literature part of the study, a literature review related to ecotourism, farm tourism, ecological architecture, ecological structure, ecological and sustainable settlements, natural and sustainable building materials were done. Pastoral Valley Organic Agriculture and Ecological Life Farm in Yanıklar Village of Fethiye was examined with a case study method, which is one of the qualitative research methods. Qualitative studies provide in-depth and comprehensive information on the topic being studied. Qualitative research is research that uses qualitative information gathering methods such as observation, interview, and document analysis, and follows a qualitative process to present perceptions and events in a natural and realistic way. The data needed for the research were obtained by interviewing with the farm owner, making observations on-site, and reviewing the web page and documents of the farm. The findings were

grouped under the environmental, social, and economic dimensions of the concept of sustainability.

6. Findings

Pastoral Valley farm is located in the Kocabuk area within the borders of Yanıklar Village in the Fethiye District of Mugla Province. It is 18 km. far from Fethiye, 40 km from Dalaman Airport. It started its activities in 2006 with the concept of ecological living farm. It is located in the same geography with the old city settlements that witnessed Lycia, Roman, Byzantine, and Ottoman civilizations that have been affected by each other for thousands of years. Kaya Village, Oludeniz, Katranci, Gunluklu Natural Parks, Saklikent Canyon, Butterfly Valley, Gocek, bays, and islands of Fethiye are some of the beauties that decorate the geography. Next to the Pastoral Valley is the Kargi River. Born from the foothills of the Western Toros Mountains, it passes through the trees and citrus groves to reach the Mediterranean Sea on the Yanıklar Coast. Karaot, the shore of Yanıklar village, which is the breeding ground for Caretta Caretta turtles, is 5 km away from Pastoral Valley Ecological Life Farm. Right next to the Karaot coast, there is Akgol, where migratory birds live. Fig. 1 shows the entrance of the farm and Fig. 2, an overview.



Fig. 1: Pastoral valley ecological life farm entrance



Fig. 2: General view

6.1. Findings within the ecological and environmental dimensions

Pastoral Valley is a low density, ecological settlement consisting of simple plan type and small

scale buildings constructed with completely natural materials hidden within nature, as shown at the Pastoral Valley site plan Fig. 3. Also expressed in Tonuk's (2001) studies, sensitive to environmental issues, protect the natural contours, flora, and fauna, protects and reproduces the olive, willow, log, plane, laurel, hayıt, myrtle, oleander, irises, eucalyptus and pine trees located near the river. It is possible to swim in the Kargı River, which flows right next to Pastoral Valley and gives life to it (Fig. 4). After being born from the foothills of the Western Toros Mountains, Kargı River reaches the Mediterranean Sea through the sigla trees and citrus groves.

Pastoral Valley site plan (Fig. 3) includes the following spaces:

1. Multifunctional office building; office and house together, made of stone and wood, renovated and used (Fig. 5 and Fig. 6).
2. Stone guest houses (Fig. 7 and Fig. 8).
3. Wooden houses with two rooms (Fig. 9 and Fig. 10).
4. Wooden houses with 1 room (Fig. 11 and Fig. 12).
5. Adobe Guest Houses (with mud-brick walls, earthen plaster, wooden furniture, and organic textiles) (Fig. 13 and Fig. 14).
6. Turkish Bath,
7. Goat, sheep pen,
8. Horse barn,
9. Cold storage,
10. Multifunctional wooden lounge (Fig. 15).
11. Carp pond,
12. Regenerated pool (Fig. 17),
13. Chicken coop,

14. Duck pool,
15. Citrus trees,
16. Fruit trees,
17. Planting area
18. Water arc,
19. Natural spring water,
20. Common kitchen,
21. Eating and drinking area near the natural pool,
22. Showground,
23. Workshops,
24. Pergolas,
25. Children's play area,
26. Rest area,
27. Volleyball court.
28. Vineyards,
29. Multifunctional adobe lounge (Fig. 16),
30. Adobe volunteer houses,
31. Children play pool,
32. Glass greenhouse.

In the sustainable development model, harmony with the natural environment is one of the most important factors determining the design decisions in architecture. In the design of the built environment in Pastoral Valley, the structures were positioned with a suitable approach to the existing topography, the use of local, natural and sustainable materials such as wood, mudbrick, and a stone was preferred and taken as a basis. Natural resources were not damaged, as mentioned in the physical issues that ecological and sustainable settlements should carry. Rural, traditional architecture is modeled in today's conditions.

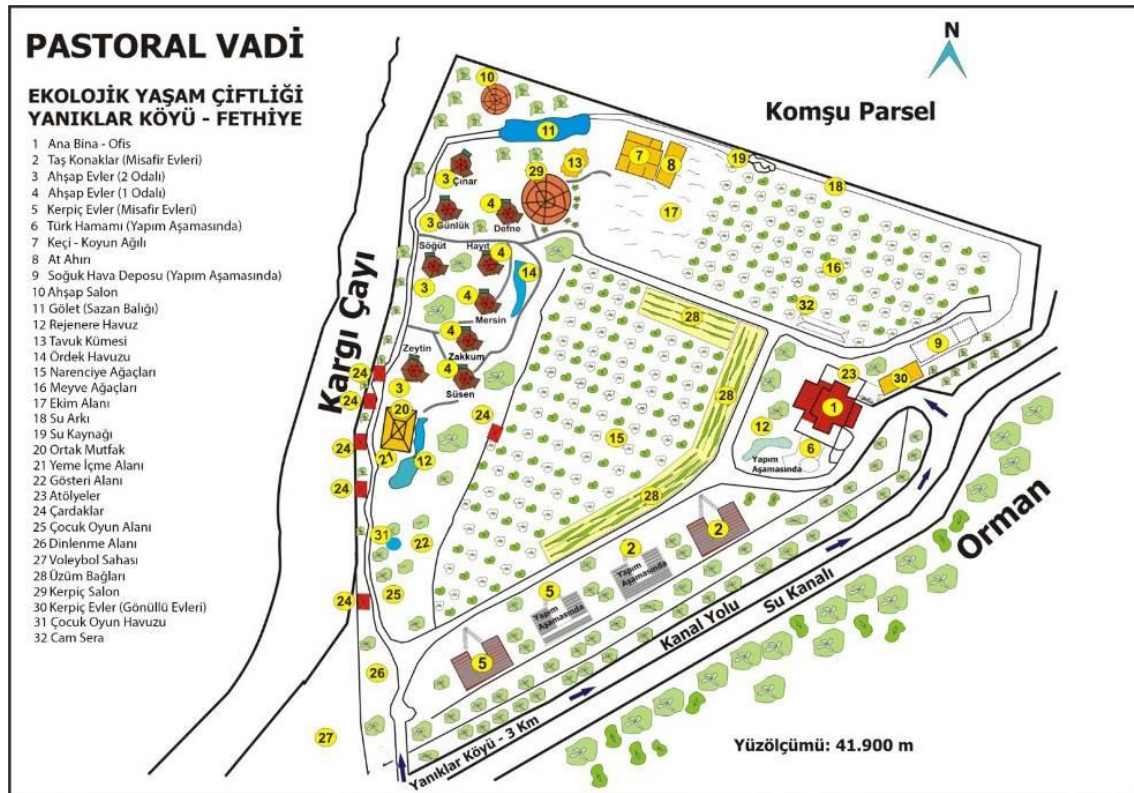


Fig. 3: Pastoral valley site plan



Fig. 4: Kargı river



Fig. 5: Multifunctional office building



Fig. 6: Stonewall

Pastoral Valley, which is aware of the volatile chemicals contained in paints and varnishes, slowly enters the air in their environment and stored in the lungs and other internal organs when they are inhaled, has used the stone in its ecological architectural approach.



Fig. 7: Stone guest houses facades



Fig. 8: Stone guest houses facades



Fig. 9: Wooden accommodation unit exterior



Fig. 10: Wood accommodation unit interior

Pastoral Valley, which does not forget that it is impossible to live stress-free due to a magnetic field which is formed between columns, beams, and iron used in slabs in high-rise concrete buildings of cities, which doesn't forget that the synthetic materials used in the concrete are insufficient against heat and moisture and that they cause harm to health in a long time, uses wood in its ecological architectural approach shown in Figs. 9-12. Organic textile products are preferred in the furnishing of the accommodation units in Fig. 10.



Fig. 11: Wooden bungalows in Pastoral valley



Fig. 12: Wooden bungalows interior design with organic textiles



Fig. 13: Adobe guest houses



Fig. 14: Organic textiles used

Earthen material and adobe have become the most common material used by people since ancient times in the buildings they have built for shelter. Aware of the fact that the elderly in the countryside do not complain about diseases such as rheumatism and sciatica, Pastoral Valley has used mudbrick in its meeting rooms and houses in its ecological architectural approach. Two multipurpose halls in wood and mudbrick in Pastoral Valley are home to different pieces of training, camps, and seminars. Adobe, wood, natural reed, and sackcloth were used as building elements.



Fig. 15: Lounge with wood, natural reed, and sackcloth



Fig. 16: Multifunctional lounge with mud-brick wall and wooden ceiling

In the Pastoral Valley, guests can cool down in the natural stone pool, where no chemicals are used and cleaned by precipitation and filtration (Fig. 17). The water discharged from the pool is used to irrigate the fields. Guests can read, meditate, and relax in the old wooden timber gazebos near the river shown in Fig. 18. Under the shade of natural eucalyptus trees and natural air conditioning, inspired by past wire cabinets, the open kitchen storage area designed as a wire room is an example of ecological design that provides economic and energy conservation in its simplest form shown in Fig. 19.



Fig. 17: Natural pool in a Pastoral valley



Fig. 18: Wooden gazebo



Fig. 19: Open kitchen storage area in the wire room

In Pastoral Vadi, dry leaves accumulated on the ground are not cleaned in order to show to the guests that it is possible to live with nature in a respectful way. There are no lawns. It is thought that dry leaves remain suitable for the ecological system (Fig. 20). There is no understanding in the Pastoral Valley that the idea of gathering it just for eye pleasure.

During the development of the Pastoral Valley, around 1000 trees were planted; Valencia orange, lemon, tangerine, grapefruit, olive, pomegranate, plum, peach, apricot, persimmon, quince, fig, mulberry and grape (Fig. 21). Among these fruit trees in the gardens, vegetables are produced by ecological methods to meet the needs of the inhabitants and guests of the farm, and fodder plants are produced for animals (Fig. 21).



Fig. 20: Natural environment



Fig. 21: Trees planted

Preserving the nutritional values of vegetables and fruits and consuming them with natural flavors is one of the ecological life principles of Pastoral Valley. In the glass greenhouse, which is financially supported by the South Aegean Development Agency (GEKA), the production of vegetable and fruit and

seed sowing is carried out by ecological methods (Fig. 22).

Pastoral Valley products, which are not consumed immediately, are processed to be eaten in winter and pickles, tomato paste, jams, dried products are converted into tarhana and pasta and removed to the cellar. By ecological farming methods applied in Pastoral Valley, earth, water, and air are not polluted with harmful substances in accordance with ecological and sustainable settlement criteria (Fig. 23).



Fig. 22: Glass greenhouse in Pastoral valley



Fig. 23: Ecological farming

In order to meet the needs of milk and dairy products, wool and fertilizer, goats, and sheep are fed in the corral by natural foods. In order to meet the requirements of eggs and fertilizers, and to combat weeds and pests, chickens fed with natural foods are housed in fixed and mobile poultry houses. In order to meet the requirements of eggs and fertilizers, ducks fed with natural foods are housed in their own poultry house (Fig. 24).



Fig. 24: Goats and sheep, chickens, and ducks

As stated by [Sev \(2009\)](#), Pastoral Valley wastes are collected separately in accordance with the principles of sustainable environmental development, while organic wastes are first given to animals, and then the rest is composted. The farm distinguishes between gray water and black water. In Pastoral Valley, renewable energy sources are used as much as possible in accordance with ecological and sustainable settlement criteria. Instead of chemical cleaning materials, cleaning with natural materials such as vinegar is considered as important as possible. The food is cooked in a wood-fired and tandoor. Also, hot water is obtained with the help of 50 m. copper pipes inside the tandoori and a water tank. Some hot water needs of the houses are met with this water. This system supports solar panels and provides energy conservation.

In terms of the built environment, it is seen that the business owner has taken all the initiatives by taking everything into consideration, but in terms of the use of renewable energy, there are some targets that he/she has not yet achieved due to the country's economic situation.

Surrounded by mountains both east and west, the Pastoral Valley does not receive enough sunlight during winter and therefore requires more energy in lighting and warming. Therefore, the implementation of a Micro HES application by taking advantage of the 7 m. The elevation difference between the canal just passing and Pastoral Valley is among the future plans of the owner. Installing a Francis Turbine and generating its own energy up to 20 kWh will be of great benefit in terms of energy efficiency. It is thought that if such micro-energy applications are performed correctly, it does not cause any harm to the environment. Building an underground cold store and keeping the grown fruit and vegetables here are among the future plans of the owner.

6.2. Findings within the social and cultural dimensions

Aiming to implement the agricultural tourism model based on ecological principles, the farm opens its doors to everyone who wants to experience rural life, and brings together individuals and groups from different countries and cultures in line with these goals and directs them to cooperation. In Pastoral Valley, the holiday can be made in 12 months of the year. Guests can enjoy rural life, meet nature and naturalness, and improve their handicrafts in local culture and craft workshops. The activities organized in wood and adobe halls in Pastoral Valley include personal development programs, yoga and meditation camps, children's camps, and permaculture practices. All work areas of the farm are planned and prepared as a workshop for the guests. There are many workspaces and activities according to guests' special interests. The contents of

these fields and activities are briefly explained below:

- **Agricultural workshop;** guests can participate in activities such as sowing, planting, hoeing, harvesting, and exchange information related to the various stages of ecological agriculture production and even have the opportunity to carry out these activities in the garden of the house they have stayed.
- **Agricultural production workshops;** according to the season, guests can observe pickling, jam making, olive oil extraction, wine production, and increase their knowledge, skills, and experiences with their own participation, and they also have the opportunity to share their own information.
- **Local cultural workshops;** guests are given opportunities to make earthenware, weave rugs, wood carving, basket-knitting, and learning to make local dishes. Since the food preparation process is also a workshop, guests participate in the food preparation activities and share their knowledge and skills. Guests are served healthy dishes prepared with local and traditional methods, usually featuring Mediterranean cuisine, in a wood-fired and tandoor.
- **Art workshops;** Guests are offered the opportunity to take part in activities with artistic content such as photography school, painting courses, yoga courses, opened seasonally.
- **Environmental activities;** In this context, walks to the surrounding environment, walking in the old mining roads, exploring the canyons, swimming in cold waters in the highest level of temperature in the summer season at the basin where the Kargı River was born are included. According to the season, it is possible to examine the fauna and flora of the region and to collect from the many edible plants grown in the region in spring and autumn seasons, and to catch mushroom varieties belonging to the region.

In addition to the above activities, guests who want to be a part of ecological life are offered the opportunity to become a shareholder. Share participants are required to make a certain monthly fee contribution. In addition to a peaceful holiday in an ecological environment, these participants have contributed to the development of ecological life and organic agriculture both in terms of individual-level and national agriculture at the macro level. Pay participants are offered an all-inclusive holiday package for ten days free of charge at any time of the year. In addition, each month, a bulletin is sent to the participants via e-mail, and the opportunity to select and purchase organic products is provided.

6.3. Findings within the economic dimensions

The employees of Pastoral Valley are local people, and people moved to rural areas from cities that live side by side and in harmony with the local neighbors

and help each other. Pastoral Valley, as one of the first examples of the Ecological Life Project, contributes to the alternative tourism activities in the region by participating in the TaTuTa program of the Bugday Association for Supporting Ecological Living. The main activity of the TaTuTa project is to design long-term or short-term visits to the farm. In the context of visits, people are called "volunteers" and "guests." Volunteer visitors are people working on the farm, providing labor, information, and/or experience support. The volunteer's accommodation and food needs are met by the owners. Guests are required to provide financial support to stay on the farm and do not have to work on the farm. Meals are primarily made from ecologically produced products on the farm. The products that cannot be grown on the farm are obtained from the gardens and fields of the members of the "association of organic agricultural producers" formed under the leadership of Pastoral Valley. In contrast to seasonal tourism, Pastoral Valley supports regional economic development by serving in ecotourism for 12 months of the year.

7. Conclusions and recommendations

Continuous protection of natural resources and their use without exceeding the limits of self-renewal constitutes the basic philosophy of sustainability (Alkan et al., 2010). Sustainable tourism means sustainability without losing the quality and quantity of the factors and assets that make up the tourism event. The new trends that emerged as a result of the philosophy of sustainability in tourism have features that prevent damage to natural and cultural values and encourage production, nature, and natural orientation rather than consumption. Sustainable tourism requires environmental protection, strengthening of natural resources, and sustaining economic and ecological development in harmony. It is a form of policy that protects natural, cultural, and social resources in the long run and supports economic development in a positive manner for all types of tourism.

Sustainability criteria should be taken into consideration in all processes, from the design and material selection of the enterprises to the construction phase and the execution of the operation activities with a holistic approach. When ecological and sustainable design examples are examined, it is seen that the projects are based on many different design parameters. These differences that make the architecture unique are due to the semantic connection that the structure establishes with its place. Local and regional priorities increase the richness and diversity of architectural design. In addition to the ecological dimension of sustainability, it has been mentioned in many studies that cultural, social, and economic aspects of sustainability should be handled differently from the ecological dimension. (Reboratti, 1999; Munasinghe, 1993).

Following the contraction of the traditional rural agricultural economy in Turkey, tourism has started to be considered as an alternative source of economic income and came up as a solution to the socio-economic problems of rural areas. Due to its contribution to rural economy and development, both state and non-governmental organizations are increasingly interested in ecotourism. On the other hand, factors such as the craving for rural life as a result of the pressures created by increasing urbanization, the growing organic food market, and the desire to protect traditional rural life caused the demand for ecotourism.

Prepared by the Ministry of Culture and Tourism of Turkey's Tourism Strategy 2023, it has been referred to ecotourism title. Planning of some regions in Turkey as an ecotourism field causes the ecotourism market to grow. Among the models of entrepreneurship in ecotourism, ecological hotel and farm entrepreneurship is gaining interest and an increase in number. Farm tourism in alternative tourism is an ideal tool for sustainable development. Farm tourism has many socio-cultural, ecological, environmental, and economic effects on the region. It is an undeniable fact that, with proper planning and implementation, these impacts will have positive results firstly in local and regional and then nationally.

Respect for the environment is the main foundation of ecotourism. An ecological hotel or farm should include all or some of these issues such as; separating and disposing of solid and liquid wastes, organic production of agricultural products and presentation to customers, organic materials used in the enterprise (towels, sheets, bed linen, etc.) being ecological, the ratio of buildings is less than one-third of to the land used by the enterprise and usage of natural materials such as stone, wood, mudbrick, and finally the energy to be used from sustainable energy sources.

Within the scope of sustainable tourism, "Environment-Friendly Establishment Certificate," which has a pine symbol is given by the Ministry of Culture and Tourism, for the accommodation facilities that demanded and sought after 1993 in order to protect the environment, develop environmental awareness and to encourage the positive contributions of touristic facilities to the environment. By measures for the protection of the environment increasingly gaining more importance in Turkey, the regulation regarding the awarding of the "Environment-Friendly Accommodation Facility Certificate," which has a green star symbol to the accommodation facilities certified by tourism business, came into force in 2008 (RTMCT, 2008). But unlike Tourism Management Certified Accommodation Facilities, farm tourism should not exceed a certain carrying capacity since it is carried out in rural areas and villages. Observations show that the farms where agricultural activities are dominant do not have the capacity, equipment, and features to meet the accommodation criteria of the Ministry of Tourism. It is a predictable fact that the

local people who own the farm will have difficulty meeting these criteria.

One of the problems faced by ecotourism entrepreneurs in Turkey is the lack of laws and regulations for ecotourism. If the ecological farm is to be built on agricultural land, there are agricultural buildings included in the regulation on the protection, use, and planning of the agricultural land of the Ministry of Agriculture and Forestry. It has been mentioned very superficially, and it is not capable of paving the way for entrepreneurs who want to operate in this regard. Within the framework of the Soil Conservation and Land Evaluation Law No. 5403, it is seen that there is no flexible definition between the agricultural area and non-agricultural use.

There are many permits and legal procedures to be taken before farmer families who want to host guests on their farm. As a result of the diverse characteristics of the lands in rural areas and the confusion of the legislation, farmers who want to provide additional income to their farms with tourism-based activities, withdraw from this idea and turn to other searches.

Pastoral Valley Operator, which is the subject of the study, operates its farm not with a license from the Ministry of Tourism but with a municipal approved Camping license. Many farm owners can not find a solution in the rural area and operate with a hostel or camping license. Although some farms tried to be built ecologically by personal efforts, it was observed that they were built unlicensed due to difficulties or impossibilities in obtaining construction permits.

Tourism/accommodation facilities need to be built in a tourism zoned area. The ecotourism approach envisages the integration of the rural area to tourism. As such, it focuses mostly on unplanned zoning areas. The ecotourism framework, which combines agricultural production and accommodation activities, and determines the rural area as an investment place for tourism/accommodation activities, has found an exact response within the scope of the regulation dated 01.06.2019 about the qualifications of tourism facilities (RTMCT, 2019). It is determined by the incidents that the cost of opening a tourism facility with a building license and a building permit and the preparation of a zoning plan does not coincide with the boutique, small-scale concept of ecotourism in terms of financial feasibility. It is expected that ecotourism investments will be accelerated through the studies regarding the sub-scale planning studies regarding the ecotourism areas included in the upper scale plans and strategy documents, and the efforts to define legislative changes and/or administrative practices that will open the way for investors. With innovative legal regulations on eco-agro tourism, if the local people both want to implement agricultural practices and want to carry out small-scale tourism activities, this should be facilitated by the state by the law. The peasant or farmer who wants to make a farm with natural

materials in the countryside will be provided with the laws, and the villagers will be self-sustained, and to continue the activities in the local area and to protect the rural areas will be possible.

In order to create environmental awareness and attitude in future generations, in Turkey with unique nature, ecotourism should be considered, and the number of ecological farms should be increased in proportion with the ecotourism-specific legislation to be prepared. Ecological farms respecting nature will create a new economic resource for the local people, apart from farming and livestock. Ecological hotels and farms are also seen as enterprises for regional development. Apart from the complexity of laws and regulations, the conversion of farms whose main production area is agriculture to an ecological hotel is an activity that can be easily realized. Construction of accommodation buildings with natural materials such as adobe or wood and stone will not require much cost in the countryside. The fact that tourism is carried out besides agriculture and animal husbandry will create an additional income for the families affected by the negativities in the agricultural sector and contribute to the spread of economic welfare.

Ecological hotels and farms are of great importance in terms of social interaction between ecotourism and rural people. People from different parts of the world will experience village life in rural areas and learn about the socio-cultural values of the local people, which will create a positive approach and sympathy. However, in ecological hotels and farms, the participation of women in meeting some of the needs of the guests, such as food preparation and crafts workshops, will increase the employment and entrepreneurship of women and contribute to their social and cultural development.

With the development of ecological hotels and farms in Turkey, communication between rural areas and cities will be increased. Urban people will be able to see the needs, problems, possibilities, and impossibilities of people living in rural areas, and rural people will be able to establish their connection with the city without having to leave their natural, social and cultural environment. Due to the lack of a national ecotourism certification program, the characteristics of ecological hotels and farms cannot be determined. "Pastoral Valley Ecological Life Farm" entrepreneur, the chairman of the board of "Fethiye Ecotourism Development Association," which we interviewed in our study, emphasized that ecotourism farm entrepreneurs need to establish organizational associations and ecotourism education. It is thought that the determination of ecotourism standards in Turkey by the Ministry of Culture and Tourism and the state institutions directing tourism with clear criteria will help in answering the question of how ecotourism farms are ecological. Determining some criteria and grading accordingly will benefit the sustainability of the sector.

As a result of all the findings, "Pastoral Valley Ecological Life Farm" can be said to be a small scale

tourism enterprise which is based on local entrepreneurship, sensitive to the environment, socio-cultural structure, aims to protect the balance of ecological system, aims to make the interactions between the nature-human environment and tourism activities beneficial, supports moderate economic development. In the settlement, ecological and sustainable designs and approaches have been adopted in all built environments with their physical and environmental dimensions. Rural, traditional architecture is modeled in today's conditions. Local, natural, and sustainable materials such as wood, mudbrick, and stone were preferred. Aiming to implement the agricultural tourism model based on ecological principles, the farm opens its doors to everyone who wants to experience rural life, and brings together individuals and groups from different countries and cultures in line with these goals and directs them to cooperation. Pastoral Valley is a unique local solution to Fethiye, which struggles under the economic conditions of the country as an ecological settlement initiative serving in eco-agro tourism. It is one of the enterprises and settlements to be taken as an example in the context of ecotourism and sustainability, the concept of sustainable social and ecological life and cultural richness in the whole region, without turning into mass tourism of the region, without the construction of cooperatives, villas or suites, and preserving the biodiversity, educating the local people accordingly.

Compliance with ethical standards

Conflict of interest

The authors declare that they have no conflict of interest.

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