



Investigation of Protected Natural Areas in Afyonkarahisar Region

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Abstract

Studies on protected areas date back to ancient times. However, serious and official conservation efforts started in 1872 when Yellowstone was declared the first National Park in the USA. Studies, which accelerated after the beginning of the last century, spread around the world. The first protected area in Turkey Yozgat Çamlığı declared in 1958. Later on, different studies on protected areas in Turkey as well as in the world. In Turkey, forest and protected areas are protected by the Ministry of Environment and Urbanization Ministry of Water Affairs. In the study, the analysis of the protected areas in Afyonkarahisar province was investigated. As a result of the study, protection areas with different statuses such as nature protection areas, natural monuments, nature purses, wetlands of national importance, wildlife development, seed stands, gene protection forests in Afyonkarahisar province were reached.

Keywords: Protected areas, Natural parks, Afyonkarahisar

Afyonkarahisar Yöresindeki Korunan Doğal Alanların İrdelenmesi

Öz

Korunan alanlar ile ilgili yapılan çalışmalar eski zamanlara kadar dayanmaktadır. Fakat ciddi anlamda ve resmi statüdeki koruma çalışmaları 1872 Yılında ABD’de Yellowstone’nun ilk Milli Park ilan edilmesi üzerine başlamıştır. Geçen yüzyılın başlarından sonra hızlanan çalışmalar dünya geneline yayılmıştır. Türkiye’de ise ilk koruma alanı 1958 yılında ilan edilen Yozgat Çamlığı’dır. Daha sonra dünyadaki gibi Türkiye’de de korunan alanları üzerine farklı çalışmalar yapılmıştır. Türkiye’de korunan alanlar Orman ve Su İşleri Bakanlığı ile Çevre ve Şehircilik Bakanlıkları tarafından korunmaktadır. Çalışma da Afyonkarahisar ilindeki korunan alanların analizleri araştırılmıştır. Çalışmanın sonucunda Afyonkarahisar ilinde tabiat koruma alanı, tabiat anıtı, tabiat pakları, ulusal öneme haiz sulak alanları, yaban hayatı geliştirme, tohum meşçereleri, gen koruma ormanları gibi farklı statülerde olan koruma alanlarına ulaşılmıştır.

Anahtar Kelimeler: Korunan alanlar, Tabiat parkları, Afyonkarahisar

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1. Introduction

Nature conservation is an area studied within environmental protection. Nature conservation is “the rational use of Earth's resources” according to Mac Kinnon (1986). Nature conservation is important for scientific and ethical, economic, health, educational and didactic aesthetics, recreational and touristic reasons (Demirel, 2005). According to IUCN; Nature conservation has three main purposes. These are the protection of biological diversity, the protection of natural resources according to the principle of continuity, and the harmony between other elements of the biosphere and human societies (Çolak, 2001).

Nature conservation is the work carried out to protect all living and non-living beings from all kinds of negative effects, pressures, and destructions of people and to secure them for the future, and to maintain ecosystem services such as ecological, environmental, socio-economic, and cultural of natural systems. Today, nature conservation efforts focus on the protection of the natural environment in which people live and interact and the cultural spaces they produce from their existence, that is, from the "human factor" (Gül and Kurdoğlu, 2021; Gül and Metin, 2021).

Although human beings have been using nature for their benefits since their existence, their conservation work goes back to ancient times. Some of the edicts of Emperor Osaka in India, King William in England and published in Rome are known. The main serious studies took place at the beginning of the last century (MacKinnon, 1986; Yücel, 1994). It is the industrial revolution and with it, great destructions and irreversible damages in nature. After these activities started to return to human beings as dangerous problems, nature conservation awareness began to mature. The world, especially the USA has come to the forefront in terms of firsts in conservation studies with official status. The US Congress declared Yellowstone the first national park in 1872 and the Antiquities Act in 1906 as the first natural monument. Many countries in Europe followed the USA. With the protection of more than 15% of its lands in Europe, Germany and Venezuela came to the fore in South America (Yücel, 1994). Due to the importance of protected areas, new areas have been identified and gained protection status in many countries (Emerton, Bishop & Thomas, 2006).

The spatial and numerical amounts of protected areas are increasing day by day by declaring many nature protection areas with different names or statuses in the world and our country. In the World Database of Protected Areas 2021 Report, jointly managed by UNEP-WCMC and IUCN; The number of protected areas in the world's terrestrial areas and inland waters is 248,797, which constitutes approximately 15,67% of the world's terrestrial surface area. Marine protected area, on the other hand, is 17,861 in total, making up 7.72% of it. (Protected Planet, 2021).

The most important organization related to nature conservation is IUCN (International Conservation of Nature and Natural Resources). Although its first establishment years were in 1948, it took its real name in 1958. The association, of which more than 1000 organizations are members in the world, held its first meeting in the USA in 1962. IUCN has divided the protected areas into different statuses and conducts pioneering studies on this subject in the world (Yücel, 1994).

Protected areas provide important ecological, social and economic services such as clean water, carbon storage, genetic reservoirs, disaster mitigation and soil stabilization, and important opportunities to protect our cultural heritage, beyond just preserving biodiversity. It is an operational tool that can provide an advantage in adapting to climate change with protected area networks that will be well managed and created in terms of quality and quantity of protected areas. It can function as an insurance for the future, especially by protecting the area as a whole (soil, water, air, species, etc.), allowing the movement of plants and animals, resisting all kinds of natural disasters and connections, increasing the capacity to capture and store carbon (Gül, Dinç & Gül, 2021).

2. Material and Method

In this study, a literature review on the protected areas of Afyonkarahisar province was made and evaluated with a general situation analysis. The city where the Battle of the Commander-in-Chief took place, the National Park of the Commander-in-Chief, which hosts dozens of striking monuments, including the Mustafa Kemal Atatürk Monument, has special importance. Located at the crossing

point of the Phrygian Valley, which stretches for 500 kilometers, Afyonkarahisar is also visited by tourists with its fascinating fairy chimneys and rock formations, similar to the examples in Cappadocia. The city, which is almost a paradise for those who love nature trips and sports, has many untouched nature protection areas such as Akdağ Nature Park, Eber Lake, and 26 August Nature Park. Many activities such as nature walks, camping, rock climbing, caving, and mountaineering can be done in these areas. Protected areas in the province are mainly located in forest areas.

3. Findings and Discussion

3.1. Afyonkarahisar Castle / Center

Afyonkarahisar Castle, located on a volcanic rock mass at an altitude of 226 meters, was built by the Hittite Emperor II in 1350 BC. It was used as a fortified place in the Arzava Campaign during the reign of Murshil and was named Hapanuva. The castle was also the scene of important battles during the Byzantine and Seljuk periods. At the summit of the castle, cultural traces belonging to the Phrygian Period, who lived in Anatolia between 1200-700 BC, were found. There are many places of worship and 4 large cisterns (water pits) dedicated to the Mother Goddess Kybele. Its walls were repaired in 1235 by Architect Bedrettin Gevhertaş, who was the foreman of the castle during the reign of Seljuk Sultan Alaaddin Keykubat. In addition, a small mosque and a palace were built next to the castle. In 1573, the Ottoman Sultan II. By the order of Selim, the bastions, cisterns and tower were repaired again by Mahmut Bey (Türkiye Kültür Portalı 2021)



Figure 1. Afyonkarahisar castle / center (Türkiye Kültür Portalı, 2021)

3.2. Commander-in-Chief Historical National Park / Center

It is within the borders of Afyon, Kütahya, and Uşak provinces in Inner West Anatolia. It was declared a national park in 1981. Its surface area is 348,340 decares, 17,120 decares are in Uşak, 151,720 decares are in Kütahya, 179,500 decares are within the borders of Afyon province (Figure 2). Commander-in-Chief Historical National Park is among the important milestones in the history of the Republic of Turkey. The areas within the Historical National Park are the most important part of our National Liberation War, which ended with the expulsion of the imperialist occupation forces from Anatolia; These are the regions where the Great Offensive began on August 26 and the Battle of the Commander-in-Chief took place on August 30. Mustafa Kemal Pasha, who played the first-degree role in the success of the Great Offensive with his military genius, gained strength in the country and the world after this War. Atatürk, with the power and authority he received from his nation, started modernization moves and implemented radical innovations to make the existence and independence of the Turkish society permanent. The Historical National Park area is not only a holy place where the turning point of our National War of Independence against imperialist countries was experienced, our struggle for independence and freedom became monumental and epic, but also a symbol of the determination, courage, and faith of the Turkish Nation in the defense of the homeland despite all adverse conditions. This is why; Commander-in-Chief Historical National Park cannot be seen as a national park or as an ordinary conservation area in terms of use in the conservation-use balance

approach. The areas around Afyon Kocatepe and Dumlupınar were declared as Historical National Parks, and the National Park, which was determined in two separate sections as Afyon Kocatepe and Dumlupınar by the course of the war, was connected by a hundred-meter lane in both directions of the Afyon-Uşak highway (Türkiye Kültür Portalı 2021).



Figure 2. Commander-in-Chief Historical National Park/center (Türkiye Kültür Portalı 2021).

3.3. 26 August Nature Park / Center

It is located within the borders of Sinanpaşa district of Afyonkarahisar province; The total area of the field is 64.83 ha. It was declared as a nature park with the consent of the Ministry of Environment and Forestry, dated 03.04.2008 and numbered B.18.ODMP.0.02.452-89. A Long Term Development Plan was prepared within the scope of Article 4 of the National Parks Law No. 2873 and it was approved by the Ministry of Environment and Forestry and entered into force on 03.04.2008 (Figure 3). Within the framework of the Long Term Development Plan, on 26 August Nature Park; 1 observation tower, 3 entrance and control buildings, 5 WCs, 4 parking lots, 1 children's playground, 1 country restaurant, 6 tennis courts, 2 carpet pitches, 3 tribunals, 1 sportsman's locker cabin. , 1 pony shelter (six units), 1 mosque, 1 waterfall, service buildings, 1 buffet, picnic units, and walking paths around the lake were built (Afyonkarahisar İl Kültür ve Turizm Müdürlüğü, 2020).



Figure 3. 26 August Nature Park / Center Afyonkarahisar İl Kültür ve Turizm Müdürlüğü, 2020)

3.4. Akdag Nature Park / Sandıklı

Akdağ Nature Park, which was announced on 29.06.2000 due to its recreational potential, wildlife richness, and interesting landscape expansions, is 14,692 ha. 5.463 hectares are in the Sandıklı district of Afyon province and 9.229 hectares are in the Çivril District of Denizli (Figure 4). In addition

to its geological, geomorphological, and hydrogeological character, the nature park is rich in species and ecosystem diversity as it is located on the transition zone of 3 phytogeographical regions in Turkey. In the southwest, south, and southeast parts of the nature park, which is defined as a sensitive protection area; Some of the Red Deer and Yılık horse habitats are old larch forests, Alpine areas, natural landscape areas, Badger stand and areas where endemic species are found. Except for the controlled use zone at the entrance of Kocayayla, Menteş, and Çivril, the entire area to the north of the sensitive protection zone is reserved as a sustainable use zone. The most important resource value of the area is its fauna. Especially the red deer; There are endangered bearded vultures and griffon vultures, wild horses, and many wild animal species. Another resource value of the area is Tokalı Canyon. Akdağ and its surroundings are a part of nature that has vegetation and wildlife features and is suitable for the rest and entertainment of the people in the integrity of the landscape (Tarım ve Orman Bakanlığı, 2021).



Figure 4. Akdağ Nature Park / Sandıklı (Tarım ve Orman Bakanlığı, 2021).

3.5. Erkmén Nature Park / Center

The area, which operates as a daily use area within the borders of the Commander-in-Chief Historical National Park, remained outside the borders of the historical national park after the border change of the historical national park in December 2016 (Figure 5). Considering the resource values and recreational potentials of the area, 51.7 ha area was declared as a nature park with the approval of the Ministry on 28.05.2018. It is 7.5 km from the center of Afyon Province, and transportation is provided by public buses from the city center (Tarım ve Orman Bakanlığı, 2021).



Figure 5. Erkmén Nature Park / Center (Tarım ve Orman Bakanlığı, 2021).

3.6. Dandindere Nature Reserve / Emirdağ

It is within the borders of Afyonkarahisar province- Emirdağ district and 30 km. distance and is 260 Ha size. The Taurus Cedar (*Cedrus libani*), which generally spreads in the south and south-west of our country, was able to enter the northernmost border of the steppe transition zone in Inner West Anatolia and was isolated in this region (Figure 6). Dandin Stream, which is located in the northernmost part of the cedar stand, has been taken into the status of Nature Conservation Area to protect the cedar forest, put it into the service of science and education studies, ensure that its natural features are preserved and that present and future generations benefit from this area. On the field; There are Taurus Cedar, Boylu juniper, Skunk juniper, Tar juniper and Hairy oak species. As animal species, fox, wolf, badger, pig, rabbit, partridge, and quail are encountered (Akçil, 2021).



Figure 6. Dandindere Nature Reserve / Emirdağ (Akçil, 2021).

3.7. Yedikapi Nature Park / Bolvadin

Yedikapi Nature Park is in the Bolvadin district of Afyonkarahisar province. The area is 9 km from Kemer kaya village, 27 km from Bolvadin town center, and 12 km from Emirdağ district (Figure 7). Transportation is provided by continuing to towns and towns via Afyonkarahisar- Bolvadin, and Eskişehir - Konya highways. Transportation is provided from the stabilized road 4 km inside the Eskişehir Konya highway. The property of the site is the state forest belonging to the treasury under the rule and disposal of the state. There is Yedikapi Pond, which was completed in 2015 and was completed in 2015. The area is 215.9 ha. Afyonkarahisar's 12th has been declared as the 139th Nature Park of our country. There are no Yaylaçayı Stream, Yedikapi Pond and Üçpınar Stream flowing near the site.



Figure 7. Yedikapi Nature Park / Bolvadin

3.8. Kocayayla / Sandıklı

Kocayayla, on the skirts of Akdağ, which is located within the borders of Sandıklı district of our province and some of which overflows to Hocalar and Kızılören districts, is at an average of 1,600 m and the summit of Akdağ is at an altitude of 2,500 m (Figure 8). Kocayayla and Akdağ vicinity are 35 km from our Sandıklı district. It is one of the rare places that are easy to reach with an asphalt road up to Sorkun town via Hocalar district on the right of Ankara-Antalya road. Starting from Sorkun, 1,600 m. from the winding roads that start with oak forests through the stabilized forest and where

the pine trees intensify as they rise. The high valley is reached. In addition to the bare mountains and deserted areas of Anatolia, lush forests, water resources, and meadows that will not match our Black Sea region; In short, the wildlife equivalent to its rich flora (horse horses, deer, pigs, foxes, wolves, etc.) instantly brings peace and vitality to our monotonous and concrete life. Without disturbing the natural landscape, footpaths, equestrian trails, bicycle tracks, wildlife watching points, small dams for trout production, ponds, social facilities for excursionists and campers, and pools will make these beauties even more attractive and unique. Around Kocayayla, many caves are waiting to be discovered. Estimated 20 km. long canyon and Akçay, which flows into Çivril Lake from the canyon. Along the canyon, there are caves where human beings have not stepped foot and routes that will attract the attention of trekkers. This unique place has been declared a "Nature Park" by the Ministry of Forestry, General Directorate of National Parks and Hunting-Wildlife, with the Approval dated 29.06.2000 and numbered 270 (Akçil, 2021).



Figure 8. Kocayayla / Sandıklı (Akçil, 2021).

3.9. Akşehir Lake / Sultandagi

A part of it is in Afyonkarahisar and a part of it is within the borders of Konya province. 211 km² of the lake, which has a surface area of 304 km², is within the borders of Afyonkarahisar province. The lake, which is 956 m above sea level, is surrounded by reeds and reeds. It is fed from Sultan Mountains and Eber Lake. Most of the lake, which is in the closed basin, is salty. Carp and pike live in the lake. It is also one of the places frequented by migratory birds.



Figure 9. Akşehir Lake / Sultandagi

3.10. Eber Lake / Bolvadin

It is one of the most interesting and largest lakes in Turkey. The endemic plant species Eber Yellow grows only in Eber Lake in the world. It is one of the most important wetlands around Bolvadin. It is a tectonic lake located in the closed basin of Akarçay-Eber, between the northwest slopes of the Sultan Mountains and the southern extensions of the Emir Mountains. Our province has an area of 150 km² within the borders of Çay and Bolvadin districts (Figure 10). Located on the migration route of migratory birds in Turkey, Lake Eber hosts many bird species as a breeding and living area with its

reeds. Reed production with the highest economic value is made in the lake and there are carp, pike, and mirror carp. Because the lake allows hunting tourism, it is seen that many people from outside the province build hunting houses on the lakeshore. Another striking feature of Lake Eber is the floating islets formed by reed roots on the water, which the locals call "Kopak". It has even been seen that fishermen and hunters set up shelters on these islets. The lake, which is a wonder of nature, consisting of reeds and reeds, takes its place at the top of the photoshoots of the couples to get married (Afyondayiz, 2021).



Figure 10. Eber Lake/ Bolvadin (Afyondayiz, 2021).

3.11. Emre Lake / İhsaniye

It is the smallest lake in the naturally formed area within the borders of Afyonkarahisar. It is between Döğer Town and Bayramaliler Village of İhsaniye District (Figure 11). Depending on the precipitation periods, its area narrows and expands. Its depth increases to over 3 millimeters in some places. Its waters are sweet. Emre Lake provides the opportunity to see many beauties of the Phrygian Valley. Many artifacts found in the Phrygian Valley can be seen during the excursion with canoes on the lake. The surface area of the pond is approximately 5 km² and its depth is over 3 millimeters in some regions. (Afyonkarahisar il Kültür ve Turizm Müdürlüğü, 2021).



Figure 11. Lake Emre / İhsaniye (Afyonkarahisar il Kültür ve Turizm Müdürlüğü, 2021).

3.12. Acı Lake / Basmakci

A part of it is within the borders of Afyonkarahisar and a part of it is within the borders of Denizli province. Its area is 41.5 square kilometers and 20 square kilometers is within the borders of Başmakçı and Dazkırı districts of Afyonkarahisar (Figure 12). It is 842 meters above sea level. Sodium sulfate and its derivatives are produced from the lake, which has soda water. The boiling waters from the skirts of Söğüt Mountain, located in the south-east of the lake, not only feed the lake but also create living environments. It is one of the special regions where flamingo herds can live in summer and winter. Toads and turtles and fish measuring 3-4 centimeters live in reeds and near water sources. Migratory birds such as flamingo, seagull, cormorant, wild duck, crane, wild goose, pelican,

and stork visit the Aşağı Akpınar village and its surroundings, where the food chain is rich. In the mountains to the southeast, eagles, hawks, and hawks, which are birds of prey, live. Acıgöl is one of the most important protected areas in Anatolia in terms of the bird population. It has important potential in terms of tourism. For those interested in nature sports, the mountains and plateaus in the southeast of the lake are very important. It is possible to reach the lake by going 4-5 kilometers from Başmakçı district towards Aşağı Akpınar Village (Afyonkarahisar il Kültür ve Turizm Müdürlüğü, 2021).



Figure 12. Acıgöl / Başmakçı (Afyonkarahisar il Kültür ve Turizm Müdürlüğü, 2021)

3.13. Karakuyu Lake / Dinar

Afyonkarahisar Province has many lakes and ponds that can attract the attention of tourism due to its location in the Lakes Region (Figure 13). In addition to natural lakes such as Akşehir, Eber, Karamık, Acıgöl, there are many ponds for irrigation purposes such as Karakuyu, Pınarbaşı, Bayat, Selevir, Örenler, Kırka, Emre, Taşoluk. Among them, Karakuyu is the most striking natural and touristic one. The lake area, which is fed by Kocapınar spring waters and is 13,741 hectares, is rich in organic matter (peat), but it was separated as a Wildlife Protection Area in 1994 and is also a first-degree natural protected area. Karakuyu Lake is a living environment and a safe shelter for various water birds (Dikkuyruk, Duck, Crane, etc.) that are under protection due to its location in the lakes region and on the migration routes of birds. During the migration season, birds such as storks, herons, willow warblers, and flamingos stay in this region. 173 bird species have been identified by bird experts. It also has rich water resources. Today, the entire lake is covered with reeds, straw grass, and water lilies. This feature of the site significantly contributes to the nesting and hiding of birds. Another feature of Karakuyu Lake and Kocapınar springs is that it does not "freeze" due to the formation of spring waters, thus creating a natural environment for birds in winter. The first to discover Karakuyu Lake were the vertical tails in the winter of 1991. That winter, large numbers of goose tails, ducks, and cranes came to Lake Karakuyu. Towards the summer months, birds such as storks and herons, and later kingfishers, cuckoos, stilts, reeds, scurvy, willow, nightingale, and flamingo began to settle in this region. Golden eagles were also seen in the mountains in the south (Afyonkarahisar il Kültür ve Turizm Müdürlüğü, 2021).



Figure 13. Lake Karakuyu / Dinar Afyonkarahisar İl Kültür ve Turizm Müdürlüğü, 2021).

3.14. Phrygian Valley / İhsaniye

B.C. Phrygians have a distinctive and unique place among the civilizations that have prevailed from the Old Bronze Age covering 3000-2000 years to the present day. Hittites BC. After their rule starting from 1700 and lasting 500 years, BC. At the time of their disintegration around 1200 BC, a tribe migrated to Anatolia from the west and was later called Phrygian. During these migrations, Anatolia, after a dark period of 400 years, BC. 8th century II. Half of the Phrygians became enlightened with the political dominance of the Phrygians in 750 BC, and the Phrygians became a powerful state during the reign of their legendary King Midas. Phrygians, who became Anatolian like the Hittites and formed a unique culture in the region where Afyonkarahisar-Eskişehir-Kütahya provinces merged, are the most famous in the world with their temple facades belonging to the cult of the Mother Goddess Kübele, carved on large rock blocks in the form of cult tombs and tomb monuments, and lion reliefs belonging to the cult of the Mother Goddess Kybele. They have enabled the creation of interesting and most valuable works of art. Phrygian Rock Monuments, which are unique in the world, such as Aslantaş, Yılantaş, Maltaş, Kapıkaya I and Kapıkaya II in the Göynüş Valley and Döğer Region, which are located in the north of Afyonkarahisar, are the main ones. Phrygians BC Although they lost their political superiority since the end of the 6th century, Phrygian culture, religion, and mythology continued for hundreds of years in Afyonkarahisar and its environs, and the Phrygian language was spoken in the region for a thousand years (Figure 14) (Afyonkarahisar İl Kültür ve Turizm Müdürlüğü, 2021).



Figure 14. Phrygian Valley / İhsaniye (Afyonkarahisar İl Kültür ve Turizm Müdürlüğü, 2021).

3.15. Aslantaş-Yılantaş / İhsaniye

Aslantaş: The burial chamber, which was carved by opening a doorway on the front face of a large piece of rock, has a triangular ceiling and there is a cedar on the left side to lay the dead. On both sides of the doorway, reliefs of two majestic lions roaring and a baby lion under their feet was carved. B.C. It is estimated that Aslantaş, which is thought to have been built in the 7th century, is the tomb of an important Phrygian King (Visitafyon, 2021). Yılantaş: It is located about 100 meters west of Aslantaş, where the same rocks are located. Since the monument was disintegrated in the past centuries, its beams can be seen, and only the head and a foot relief of a lion relief have survived to the present day. The snake relief is on the lower side of the front of the monument. There are reliefs of two snakes wrapped around each other on the door and two warriors attacking the snake with their spears on both sides of the door. It is not visible today because it is under the upturned rock. The way the palm-leaved column capital was built, the Phrygians descended to Çukurova, dating back to the 7th century BC. century (Visitafyon, 2021).



Figure 15. Aslantaş / İhsaniye (Visitafyon, 2021).

3.16. Karamık Reeds / Çay

It has been registered as "Karamık Reeds Natural Protected Area and Sustainable Conservation and Controlled Use Area" located within the borders of the Çay District of Afyonkarahisar Province. Eskişehir Natural Heritage Conservation Regional Commission's Decision dated 28/09/2017 and numbered 291 was approved by the Ministry of Environment and Urbanization by the Ministry's Approval dated 03/11/2017 and numbered 13108, and Article 13/A-2 of the Decree-Law No. 644 (Figure 16) (Çevre ve Şehircilik Bakanlığı, 2021).

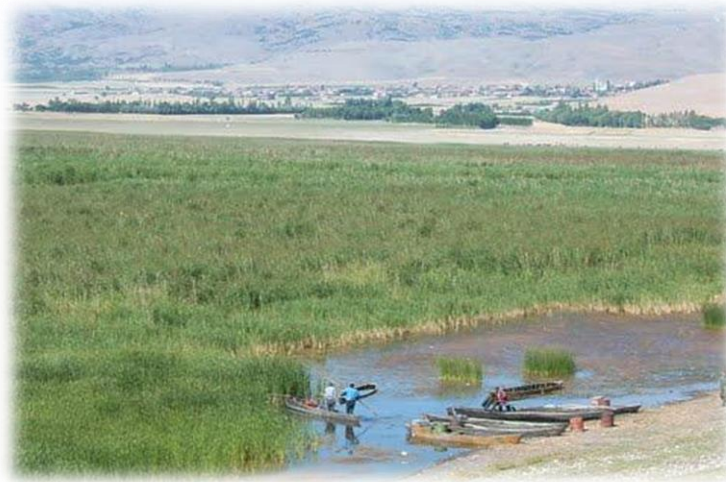


Figure 16. Karamık Reeds / Çay (Çevre ve Şehircilik Bakanlığı, 2021).

3.17. Koruluk Kermes Oak / Dazkırı

Koruluk Kermes Oak 1 is a Natural Monument located within the borders of Dazkırı district of Afyon province and Kızılören Village. It was registered on 06.09.2002. It is 1000 m² in total. The Kermes Oak (*Quercus coccifera* L.) monument tree has a diameter of 77 cm, a height of 11 m, and a circumference of 243 cm (GeziRehberim, 2021).



Figure 17. Kermes Oak 1 Natural Monument / Dazkırı (GeziRehberim, 2021).

Koruluk Kermes Oak 2 is a Natural Monument located within the borders of Dazkırı district of Afyon province and Kızılören Village. It was registered on 06.09.2002. It is 1000 m² in total. The Kermes Oak (*Quercus coccifera* L.) species has a height of 16,8 m, a diameter of 97-101-75, and a perimeter of 306-318-236 cm (GeziRehberim, 2021).

Koruluk Kermes Oak 3 is a Natural Monument located within the borders of Dazkırı district of Afyon province and Kızılören Village. It was registered on 06.09.2002. It is 1000 m² in total. Kermes Oak (*Quercus coccifera* L.) species has a height of 13 m, a diameter of 1,17m, and a circumference of 3.70m (GeziRehberim, 2021).



Figure 18. Koruluk Kermes Oak 3 Natural Monuments / Dazkırı (GeziRehberim, 2021).

4. Conclusion and Recommendations

Afyonkarahisar province has different natural riches due to the dynamism in its topographic structure. In this respect, it includes areas that are protected and need to be protected in many different statuses throughout the province. Some protected areas with different statuses;

- Nature Reserve; dandindere,
- Natural Monument; Grove Kermes Oak
- Nature Park; 26 August TP, Akdağ TP, Phrygian Valley TP, Erkmen TP, Yedikapı TP
- Wetlands of National Importance; Karakuyu Reeds, Karamık Reeds
- Wildlife Development; Karakuyu Lake
- Seed Stands; Örendere, Sincanlı (*Pinus nigra*), Sultandağı (*Cedrus libani*)
- Gene Conservation Forests;
 - ✓ Turkish pine (*Pinus brutia*) Afyonkarahisar-Örendere
 - ✓ Turkish Hazelnut (*Coryllus colurna*) Afyonkarahisar-Sultandagi
 - ✓ Chestnut (*Castanea sativa*) Afyonkarahisar-Sandıklı
 - ✓ Pulley Oak (*Quercus vulcanica*) Afyonkarahisar-Sultandagi

- ✓ Badger (*Taxus baccata*) was determined as Afyonkarahisar-Sultandagi.

To understand the value of biological richness and to protect these riches, it is tried to maintain the balance of protection and development. Increasing the number of protected areas and managing them effectively should be considered as one of the most effective methods in raising awareness of nature conservation and solving environmental problems.

- Tourism activities pose a threat in natural areas (natural red pine forests, maquis, etc.). Activities during daily visits to these areas should be limited by considering the carrying capacity.
- Mining activities should never be allowed in protected areas. These activities damage the natural structure of the habitat. Comprehensive biodiversity studies should also be carried out in the currently operated mining areas and the decisions to be taken for all flora and fauna species determined as a result of the study should be followed.
- Potential areas with natural and ecological importance should be determined by scientific studies, natural and cultural resource values and protected status should be given.
- Chemical pesticides for agricultural purposes should not be allowed around lakes and wetlands.
- The ecological character should be preserved in all kinds of land and water use planning, not to pollute wetlands, to protect their natural structures. Wetlands should never be dried and their functionality should be maintained.
- The works carried out to widen the road can greatly reduce the population of biological and endemic species in protected areas. All kinds of precautions should be taken against the possibility of fire in protected areas close to forest areas. In particular, stubble burning should not be allowed.
- Conversion of natural areas (frigana and maquis habitats) that can have high returns due to economic activities to agricultural areas should also be encouraged to carry out greenhouse activities on flatlands, and the destruction of natural habitats should not be allowed.

In the protection of the environment and ecology, the determination of common goals by all countries in the world and the implementation of various practices in this direction contribute to the development of environmental awareness. One of the most important steps taken in this area, the continuation of the protected areas and increasing their numbers will be one of the most basic ways to transfer the world we live in and live into future generations.

Increasing the understanding of the value of nature in terms of discourse and action in the climate change adaptation process, establishing a production and consumption relationship compatible with natural systems, and disseminating organized and conscious collective awareness in nature/environmental protection will play an important role. The future of humanity and nature will be possible if people value nature in terms of discourse and action, with an ecological perspective. (Gül, Türker, Anaç & Gül, 2021).

In order not to pollute, it should be aimed not to produce but not to pollute while producing, and the understanding of turning to controlled and clean production should be adopted.

It is necessary to realize that all living things have the right to continue their natural life healthily and to adopt a lifestyle in harmony with nature for the sustainability of their natural systems.

The management of the ecological environment should be ensured by establishing a conservation and conservation-oriented use relationship.

Water intake, sand intake, rubble, garbage, excavation spillage, collection of plant and animal species, wastewater discharge, cutting of reeds, poaching, etc. activities should not be allowed and all kinds of legal sanctions should be applied in activities related to this.

Provincial Directorate of Environment and Urbanization and Provincial Directorates of Agriculture and Forestry working on conservation should show more interest in this issue.

Protected areas should be purposefully planned and managed with the participation of all stakeholders.

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The article complies with national and international research and publication ethics. Ethics committee approval was not required for the study.

Author Contribution and Conflict of Interest Disclosure Information

The article was contributed as the sole author.

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