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Full Length Research Paper

A review of the cultural heritage of Anatolian civilizations for the purpose of nature conservation

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This study focused on opportunities in cultural heritage related to the promotion of nature protection. People currently living in Anatolia are the inheritors of the many civilizations that lived there before them, traces and effects of these former civilizations may be observed in the present Turkish society. Turkey's long history and rich cultural heritage cause conflicts and generate opportunities for present conservation activities related to natural and cultural values. Some places or trees in forests are accepted as holy, so no one desires to destroy them. Because traditional medicine uses plants from the forest, people are more sensitive to conserving them. In addition, places, monuments and festivals of cultural heritage can also represent opportunities for nature conservation planning. For this reason, opportunities hidden in places, monuments and festivals were sought in this study through searching the literature. Another dimension of this paper deals with traditional construction in the Anatolian culture. Protection of ancient buildings means the protection of knowledge. These opportunities discovered from Anatolian cultural heritage can be used to promote the option, bequest and existing values of natural resources. Explaining the theoretical context of natural values is simplified by giving examples from cultural values.

Key words: Anatolian civilizations, conservation, cultural values, natural values, traditional knowledge.

INTRODUCTION

Humankind has made contact with nature, has affected it or has been affected by it since beginning of time. These effects and interactions of are easily seen in the Hittites, who were one of the first civilizations of Anatolia. For example, uppiluliuma, who was the most famous king and commander of the Hittites, means "clean spring, clean pool or holy lake" (Akurgal, 1997; Çığ, 2000). It is known that when kings ascended to the throne in this culture, they took a specific name of their choosing. uppiluliuma, who was a strong commander, preferred a name that means clear water. From the prayer tablets of Muwatalli, it can be seen that he commemorated all of the gods individually, and he referred to the city's mountains and rivers after the names of the gods (Alp, 2000).

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It is possible to see in the Anatolia's long history that traditional knowledge, societal beliefs and values could be used as an effective instrument to occupy land, to involve former societies. Because the Hittite civilization was located in the country of Hattie, that country gained cultural inheritance associated with the civilization. Eight of thirty-seven Hittite kings who are known in history have names such as Ammuna, Arnuvanda, Tuthaliya that represent mountains that were accepted by Hattie as holy mountains (Akurgal, 1997; Alp, 2000). It is clear that Hittites used the holy mountains of Hattie as a political integration tool by accepting them as a traditional value.

Today's nature conservationists need to learn from traditional knowledge and social values that were successfully used thousands of years ago by Hittite kings. However, focussing only on natural values for planning or management of a protected area is not enough, cultural values of related societies must also be investigated in the first step of planning.

The first aim of this study is to investigate the hidden

opportunities in the Anatolian cultural heritage concerning nature conservation. The second objective of the paper is to discuss using these opportunities discovered in cultural heritage to design nature conservation activities, strategies or plans.

METHODS

According to Güvenç (1997), culture, or civilization, is a complex system including knowledge, art, tradition, expert accomplishments and practices learned or gained by members of the society. Present societies are the inheritors of the former civilizations, and traces and effects of former civilizations may be observed in the present Turkish society. Thus in this paper, the term of Anatolian cultural heritage is used to define the common heritage resulting from the many Turkish and other civilizations that have lived in Anatolia.

The literature on Anatolian culture was reviewed from the point of view of wildlife, traditional medicine and non-wood forest products, cultural sites, monuments, festivals and architecture by focusing on indicators of cultural characteristics. Then findings of the review were evaluated concerning nature conservation activities and targets.

WILDLIFE IN ANATOLIAN CULTURE

When historic ruins are examined, it is seen that Anatolian civilizations existed in a close relationship with wildlife. Although it was previously thought that the first settlements began only after the initiation of agricultural activities, excavations at Çatalhöyük indicate that there was a settlement of a hunter community there before the agricultural revolution.

Historic remains and drawings at the site include lion, deer, fallow deer, wild ox, tiger and leopard figures. Today, it is not possible to see such animals in Anatolian forests. It is known that there were animal parks in what is today known as Kültepe (Kayseri, Turkey) between the 1800s and 1700s B.C. In Hittite culture, lions were accepted as a city protector and were kept in front of the city gates. In the Dionysus cult, the goat symbolises God (Yavuz, 2002). When the Turks came to Anatolia from central Asia, they brought with them their experiences with Asian wildlife.

While Anatolian civilizations were hunting and domesticating wild animals, they did not treat all of them equally. They accepted some animals as a symbol of their own beliefs, while identifying others as evil. For example, the Hittites equated bulls with a mountain god and blessed them. The Turkish people accepted the wolf *(Canis lupus)* as the guide of their migration from Middle Asia to Anatolia. On the other hand, there are some contradictory issues related to wolves in Anatolian thinking. While the wolf is known to be a “brute, bogey” in rural areas, there are many people who called the wolf the prophet dog and accepted it as a symbol of political preferences or believed in the good luck of its bones (Arslanoğlu, 2001).

In Turkish folk epics, there are many other clues to cultural interactions with the natural world that are worth mentioning here. One of these is found in the epic Begil Ogul Emre. In this epic, Begil Ogul, the head of his tribe, does not hunt weak animals. He catches and marks them with an earring, so that nobody else will catch or harm them (Bora, 2001).

Fallow deer (*Cervus dama* L.) and deer (*Cervus elaphus* L.) are animals that are frequently found in folk stories. In a folk story written by Ya ar Kemal, who is a famous writer in Turkey and throughout the world; the hero of the story, Halil is a deer hunter, and his mother does not approve of her son hunting fallow deer, especially pregnant or mother deer. According to his mother, their ancestors do not approve of the hunting of fallow deer because separating young individuals from their mother is an evil thing and will cause bad luck in the future for hunters. Although his mother does not approve, Halil hunts a young fallow deer. On Halil’s wedding night, he hears a voice from a mother fallow deer and goes to hunt it, leading to his death from falling from a precipice (Kemal, 2004).

The word for fallow deer is *Alageyik* in Turkish, and this story associated with this name has been published, turned into song and adapted to film many times. However, none of this prevented hunters from killing these animals. As a result, there are no fallow deer in the mountains of Turkey. They are only found at the Düzlerçamı (Antalya) wildlife breeding station.

Similar to deer, the Anatolian people have sympathy for the gazelle (*Gazella* spp.) and the roe (*Capreolus capreolus*). The Anatolian people give the names of *Ceren*, *Ceylan*, and *Ahu*, which have meanings similar to gazelle in Turkish, to their daughters as proof of their love for these animals. In particular, the innocence of these animals is often mentioned in Turkish folk poems.

In Turkish folk culture, people believe in metamorphosis, that is, that one can transform his/her body. This transformation usually occurs into an animal shape. In some instances, a girl is described as transforming into a wolf, or a spirit transforms into a deer (Arslanoğlu, 2001). There are also stories in which the transformation occurs into horse, wolf, deer, crane (*Antropoides virgo, Grus grus*), pigeon (*Streptopelia decaocto*) and geese shapes (*Anser* spp.). These animals are accepted as holy in Turkish culture.

Some animals are defined as propitious species. In particular in *Alevi* communities, crane, goose, pigeon and cock are accepted as propitious, while mule, rabbit (*lepus capensis*) and partridge (*Alectoris chukar*) are defined as unlucky or unfaithful animals (Arslanoğlu, 2001). The historical Ida mountain took the name *Kazdağı* (Goose mountain) after Turkish settlement in Anatolia. According to Shamanism, creative female spirits, called *Ayısıt* in Turkish that were symbolised by the swan (*Cygnus* spp), could provide abundance and welfare. For this reason, the swan was classified in the rank of holy species (Kudar, 2004).

However, there is an exception regarding partridges and rabbits. In the southeast part of Anatolia, breeding partridges is an important local vocation. It is believed that owning a partridge provides honour and prestige to owners. Thought regarding whether rabbits are unlucky varies among individuals. While the rabbit was one of the first totems of the Turks in Asia, it had become an unlucky animal by the time there were Turks in Anatolia. According to Öktem, some Anatolian people influenced by the Christians were applying the rule of the fourth council at this time, which prohibited Christian people from eating rabbit for the purpose of stopping pagan applications of this species (Öktem, 2002).

Similar to pigeons, turtledoves (*Streptopelia decaocto*) are believed to bring good luck, and it is believed that hunting these birds brings bad luck. Therefore in big cities, it is possible to observe turtledoves and pigeons in close proximity to people. In some old buildings, there are holes that were made specifically for bird nests. There are still pigeon markets in many cities in Anatolia that facilitate barter and beauty exhibitions of pigeons. In addition to pigeons, nightingales (*Luscinia spp, Cercotricas galactotes, Erithacus rubecula*) and goldfinches (*Carduelis carduelis*) are also often seen being bartered in these markets.

The stork (*Ciconia ciconia*) is another bird that draws the attention of the Turkish people. Storks nest on chimneys of high buildings and posts in the middle of cities and people take care so that these nests are not damaged. Anyone who sees a stork flying is believed to travel a lot that year. Swallows (*Delichon urbica*) are allowed to nest into the eaves of buildings, and to damage these nests is considered to bring bad luck. The shelduck (*Tadarno tadarno*) and the mallard (*Anas platyrhynchos*) are the birds most often mentioned in Turkish people's daily lives. *Suna* is a name used very often in Turkish, and it means shelduck. The mallard has been used to symbolise lovers in many folk poems.

Predator birds have a specific importance with regard to hunting ability and power in Turkish culture. Especially in East Blacksea, female sparrow hawks (*Accipiter nisus*) are obtained and trained so that they can hunt other birds. In this region, having a good predator bird is regarded as prestigious among men. According to the literature, this tradition originates from the Ottoman Era (Çanakçıoğlu and Mol, 1996). Likewise today, Turkish people name their sons after falcons or eagles, among other predator birds.

The Turkish community has interesting ideas about boars, (*Sus scrofa*) owls (*Otus* spp., *Asio* spp*., Bubo bubo*) and crows (*Corvus* spp.). Because the Islamic religion prohibits eating pork, people hunt them only because they damage the agricultural products.

Therefore, it is possible to see large boars in fields far from agricultural areas. It is believed that the owl brings calamity to people's homes. If an owl sings on the roof of a house, people believe that there will be problems in this house. For this reason, while many people arrange their roofs by setting wooden wheels to facilitate stork nests, some of the people also chase away owls standing on their roofs or waiting on a chimney. Crows are thought of as greedy and useless animals. They are accepted as a destroyer of agricultural products, and people do not have sympathy for them.

TRADITIONAL MEDICINE AND NON-WOOD FOREST PRODUCTS IN ANATOLIA

Non-wood forest products (NWFP) have specific importance concerning both their use and non-use values for nature conservation. NWFP that can be used as a raw material for food, spices, paint, spells, poison, ornaments or medicine may also have additional value concerning their potential types of usage.

Increases in agricultural production and development of the chemical industry have decreased the demand area of NWFP in recent decades. However, the importance of NWFP for medical treatments is still increasing. While there were approximately 250 plant drugs used in the era of the Mesopotamian Civilization, it is known that in Ancient Greece period, there were around 600 medical plants in use. In the Arabic and Persian periods, the number of known medicinal plants increased to 4,000 and reached 13,000 in the nineteenth century (Baytop, 1984).

Because Anatolia has a long history, there have been many civilizations and many interactions among those civilizations conducted in Anatolia. According to Ba gelen (2002), workers in excavations in the Sagalassos ruins (Isparta, Turkey) share the same DNA sequence as found in samples taken from tombs there. In other words, the grandchildren of people of antiquity have been living in Anatolia for thousands years. Consequently, it is possible that traces of the knowledge learned in the past several thousand years can be found through cultural studies. Thus, Anatolia has rich cultural heritage with respect to using NWFP for medical or other purposes, and this provides a remarkable opportunity for ethno-botanic researchers.

In fact, in a study conducted in Trabzon, Eğridir, ile and Gönen, 666 different usages were found for 184 plants in the context of traditional medicine (Tuzlacı at al., 2001). In another study conducted in a large area of Turkey, it was found that people make use of 247 plants from 32 families for different purposes (im ek at al., 2004).

Cultural diversity and the flora are indicators that there is a rich traditional medicine history and practice in Anatolia (Ye ilada, 2002). In a research project conducted to protect this diversity, all relevant literature about Turkey was scanned, and a database (TUHIB)[1] was created.

[1]The **TUHIB** is acronym name of data bank as "**TÜ**rk **H**alk **Đ**laçları **B**ilgi Bankası", which means "Data Bank of Turkish Folk Medicine".

Through the evaluation of 6,644 records in TUHIB, the rank order of the most common 20 ailments that folk remedies are employed to treat were found to be haemorrhoids (451), rheumatism (376), abscess (for maturation) (374), stomach ache/peptic ulcer (310), abdominal pain (288), wounds (for healing) (249), cold, flu (192), renal calculus (191), diabetes (164), cough (144), various gastric complaints (141), pain (to stop) (126), eczema (112), diarrhoea (109), bronchitis (108), jaundice (76), cuts (as haemostatic) (70), worms in teeth/eyes (69), dermatological affections (66) and inflammation (63) (Ye ilada, 2002).

The number of plant species employed as folk remedies was roughly estimated at about 500. However, through evaluation of the data accumulated in TUHIB, the number of wild/cultivated plant species employed as folk medicine in Turkey was found to be 1,011. It should be taken into consideration that this number was obtained only from the available scientific studies that have been published so far and entered into TUHIB. The rank order of plants that are employed most frequently in traditional medicine in Turkey is listed in Table 1 (Ye ilada, 2002).

Approximately 9,000 plant species have been identified in Turkey, and 3,625 of these species are endemic species. The portion of endemic species in the total species is very high in Turkey. However, this portion is 20% in Greece and Iran, 8% in Spain and 21% across all of Europe (I ık, 1998). Rich biodiversity and endemism represent both an opportunity and a threat for protecting NWFP in Turkey.

By examining traditional knowledge, it is possible to determine whether endemic species in protected areas have an option value or not. For example as shown in Table 1, it is known that *Sideritis arguta, Sideritis congesta* and *Sideritis psidica* are endemic species, so it is possible that the ways of benefiting from these species may be known only in Anatolian cultures. Therefore, while their endemic characteristic generates existing values, their traditional uses produce usage values for local people and option values for other people in the world. Additionally, protection of these plants and traditional knowledge about ways of using them create bequest value for future generations.

The plants in Table 1 are the most demanded plants for medical treatments and other reasons. It is possible that these plants may be more threatened than the others in Anatolia or the world. However, the list of strictly protected species in the Bern convention does not include the species in Table 1. While sub-species of *Sideritis, Teucrium, Juniperus, Salvia, Thymus* and *Hypericum* can be found in the list, species with benefits for traditional purposes cannot be observed in the list. On the other hand, it is known that *Sideritis arguta*, which is listed in Table 1, has only LR cd (lower risk, conservation dependent) status concerning the classification of the IUCN (the international union for conservation of nature) in 1994, while *Sideritis congesta* and *Sideritis psidica* are classified as LR nt (lower risk, near threatened) according to same classification for nature conservation. These results may be indicators of the sensitivity of people to the sustainability of species used traditionally.

CULTURAL PLACES, MONUMENTS AND FESTIVALS FOR NATURE CONSERVATION

In Anatolia, some places are more important than others. Mountains are interesting places in this context. According to mythology, the great mother of the gods, known as Kubaba, Hepat, Kybele, Artimu, Artemis, Rhea in Anatolian civilizations and Isthar and Isis in Mesopotomia and Egypt, was accepted as mother of the gods and the people. The mother goddess feeds all living things, forgives all sins, and all winds and seas belong to her. The snow-covered summits of holy Olympus mountain were defined by the Anatolian people as her thrones (Yavuz, 2002). Today, Çanakkale Kazdağı (İda), Bursa-Uludağ and Antalya Çıralı are the known thrones of the mother goddess and are being conserved as national parks in Anatolia.

Turks also accepted the mountains as divine places before they migrated from middle Asia. In the old Oğuz tribes, each clan or each tribe had a holy mountain, and every year they visited it (Arslanoğlu, 2001). This tradition and belief continued after they came to Anatolia. Turkey's map is filled with holy names such as Eren hill, Hıdırlık hill, and Ziyaret hill.

Yatır and *Türbe* mean tomb in Turkish. People believe that there is an important spirit in the *Yatır*. Some researchers say that the Turkish people's belief in the god of the sky while they were in Middle Asia, changed into the *Yatır* tradition when they moved to Anatolia. *Yatırs* are usually located on mountains and hills. According to Duymaz, there are fifty-five *Yatırs* in Balıkesir province alone (Duymaz, 1993).

Beliefs about *Yatırs* deal with the tree cult of old shaman Turks and create an opportunity for nature conservation. According to Duymaz's (1993) findings, the number of the *Yatırs* that have a tree, woodland or bush nearby is 11 in Balıkesir province. Additionally, there are also *Yatırs* that are symbolised only by a tree. There is a nettle tree nearby the Yusuf Dede Yatır in Edremit and a pine tree nearby Gürepa a *Yatır*, and there are plane trees near the Erdek and Süt Dede Yatırs in İvrindi. In early Turkish beliefs, single trees, especially beech and black pine, were accepted as holy trees. In addition to these examples, there are other examples pertinent to *Yatırs*, according to Ergun (2004), such trees include Uyu uk Türbe in Amasya, Garip Dede Yatırı in Aydın, and Çam Yatır in Çay Village. Trees near Yatırs have a specific function: people use them as wishtrees, tying clothes and ribbons to them.

The tree cult in Anatolia is also an interesting subject and provides opportunities for nature conservation. For

Table 1. Rank-order list of plant species according to their citation frequencies for the treatment of any ailment (Ye ilada, 2002).

Genus name	Total use	Main species
Plantago sp.	371	*lanceolata, major*
Rosa sp.	354	*canina*, *montana*
Urtica sp.	327	*dioica*, *urens*
Sideritis sp.	194	*arguta, congesta, libanotica, perfoliata, psidica*
Malva sp.	188	*neglecta*, *nicaensis, slyvestris*
Ecbalium sp.	176	*elaterium*
Rubus sp.	175	*canascens*, *discolor*, *hirtus*, *sanctus*
Pinus sp.	173	*brutia, nigra*, *sylvestris*
Teucrium sp.	158	*chamaedrys, polium*
Sambucus sp.	147	*ebulus*, *nigra*
Juniperus sp.	146	*drupacea, foetidissima, oxycedrus, sabina*
Salvia sp.	145	*fruticosa*, *tomentosa, triloba*, *verticillata*
Allium sp.	140	*cepa, sativum*
Thymus sp.	121	*atticus*, *longicaulis*, *praecox*, *pseudopulegioides*, *zygioides*
Hypericum sp.	118	*atomarium*, *lydium*, *olympicum*, *orientale*, *perforatum*, *scabrum*, *triquetifolium*

example, single trees were accepted as “life trees” in shamanism, which was a former belief of Turks. According to shamanism, a life tree can connect the three dimensions of the world, consisting of place, sky and underground. In addition to shamanism, the Islamic religion also includes beliefs about trees. According to the Islamic religion, olive, (*Olea* L. spp.), fig (*Ficus* L. spp.), pomegranate (*Punica granatum* L.), and cypress (*Cupresus sempenvirens* L.) are holy trees (Ergun, 2004).

As a result of these beliefs, where there is a *Yatır* or *Türbe*, people do not cut the trees around it. Similarly, people do not cut trees that have a special story attached to them. There is an example of this situation in Adana province. There are a number of huge oak trees in the cemetery of the Demirta village. People believe that a man called Demirta Dede planted these oaks. According to the story, while he was working as a shepherd, he plunged his cudgel into the soil, and the next day, he saw that his cudgel had transformed into an oak seedling. Demirta Dede planted 13 oak trees using same method. People believe that anyone who tries to cut these trees loses his sight. In recent years, one of these trees was uprooted and nobody wanted to use timber materials from it (enesen, 1998). It is believed in Anatolia today that where there is a single tree or small woodland different from others around it, there may be a *Yatır* nearby.

Yatırs and other holy places are visited on specific days of the year. One of the important festivals associated with *Yatırs* is Cılbak, in which many places in Turkey in the Sarıkız, Karata and Baba hills in Kazdağı national park are visited (Kudar, 1999). It is celebrated every year in August, and it continues for a week. Many people participate and celebrate Cılbak. These kinds of activities help people not to forget such holy places. Furthermore, while these holy places support the protection of nature they also provide conservation of cultural values.

There are two more important celebrations related to nature in Anatolia: Nevruz and Hıdrellez. The first is celebrated on the 21st of March, and it welcomes the spring. The second is celebrated on the 6th of May to celebrate summer every year. Hıdrellez is a word derived from Hizir (Hızır) and the prophet Elijah (İlyas). While Hızır is a strong person helping people on land and symbolises heat, İlyas is a symbol of the seas and symbolise water**.** On Hıdrellez, people wear white and go to natural areas such as parks and sit by watersprings and eat traditional foods. Both on Nevruz and Hıdrellez, people make fires and jump over them to be purified from their sins and make wishes (Yücel, 2002).

ARCHITECTURE IN ANATOLIA AND TURKISH CULTURE

In Byzantium, although houses generally included stones or bricks, most of the buildings were constructed using wood. The spreading of the tradition of the wooden house among Ottomans may be related to the influence of the Balcanic culture (Batur, 2002). The basic system of construction in traditional Turkish houses is the timber frame with infilling material or plaster. These characteristics are the same for all houses, regardless of the social class of their owner. Wealth is only reflected in the number of rooms and the mode of decoration. This house type is like a seal that the Turkish culture has stamped wherever it has set foot (Günay, 1998).

Nevertheless, it is worthy to note that this type of building is also an inheritance specific to time periods that cover thousands of years. Indeed, the Anatolia was not used only by Turks, and it has been affected by all of the

characteristics that were brought from all of its inhabitants from the places where they lived before.

Timber, which is the main load-bearing material of Turkish houses, also defines their geographic boundaries. Timber building materials are prepared from trees varying from one region to another, with different sizes and sections and using different techniques. The chestnut is the most dependable tree for timber construction along the Black sea coast. Oak and yellow firs are preferred in western and northern Anatolia, while in the Mediterranean and on the Tauros mountains, cedars, cypresses and junipers are generally used. Different types of pine have been preferred for the interiors. Generally along humid and windy coasts, the exterior is clad with wood, whereas in other cases, it is lime plastered. In forested areas, the roof is usually clad with wooden slats, while in most of the other regions, cylindrical clay tiles have been used (Günay, 1998).

The main building material of the Turkish house is wood, and consequently, the building method is generally in the timber frame mode. Timber frame construction is preferable because the Anatolian region is within seismic zones. For the same reason, the details of wood construction are very simple; simple joints and nailed bindings have been preferred to complicated joint details. Broad sectioned timber elements do not exist in the Turkish house. This construction method also facilitates reconstruction within a short time when an entire house is destroyed by fire. The way in which people view life also plays a role in the selection of timber frame construction: human life is temporary, so it is only natural that houses are also built to last for a temporary period; and there is no reason for greed concerning belongings. As a result of this outlook, repairing or renewing a house as it wore out allowed updating its style and meeting the growing needs of family. Timber frame construction also facilitated opening more windows, building projections and wide eaves. This provided control over climatic conditions and enabled the building to breathe in humid climates, which in turn, helped prevent condensation and moisture inside (Günay, 1998).

According to the art historian and architect Sözen (2002), wooden houses constructed on tableland imply the best way of living for adapting to local snow, cold, rain, as well as tree and fruit species in local conditions. Masters of building observed the reasons of damages resulted from local climate and they improve some local techniques. They learnt local possibilities related local trees and other natural sources. Vanishing of these cultural values means the loss of traditional knowledge and expertise produced by local experiences. Therefore, the main problem is not the protection of a cultural existence, but the conservation of the knowledge hidden in it.

In spite of all of the advantages and opportunities mentioned above, concrete houses and tenements have displaced wooden buildings in the last fifty years in Anatolia. Increases in the price of wooden materials, migration from rural areas to urban areas and fashionable trends are some of the reasons that the number of wooden houses has decreased. On August 17, 1999, the Marmara earthquake, in which 17 000 people died, reminded people that they were living in a seismic zone. Many concrete houses and almost all of the tenement homes were either damaged or collapsed completely. Images of this wreckage brought the construction of wooden houses back to mind.

In the Safranbolu region in particular, restoration stimulated the interest of people in constructing traditional Turkish houses and living quarters. Other successful restorations in Kastamonu, Muğla, Beypazarı, Taraklı, Göynük, and İbradı also captured the attention of Turkish people regarding the advantages of traditional Turkish houses. At present, many people want to increase the share of wooden materials in their houses. This situation should be considered as an opportunity that is allowed due to cultural conservation of forests, which are the resource of these materials. In other words, cultural conservation generates positive externalities for forest management and nature conservation.

DISCUSSION

As can be seen from what is described above, there are many opportunities in the cultural arena for nature conservation programs. Therefore, as a next step, we must discuss the methods that may be used to combine findings of cultural studies with nature conservation activities. Güne (2010) mentioned some historical legislative arrangements on nature conservation in different societies. But usage of cultural opportunities is still very weak in conservation management. On the other hand, as seen from UNCCD (2005), land degradation and desertification problems have cultural dimensions and traditional knowledge may accept as a cultural opportunities. UNCCD (2005) proves that there is a rich potential in this area.

Social assessment is a method that has often been mentioned in recent years in forest resource management and nature conservation planning. It is used to determine social variables in the planning environment and to evaluate alternative management regimes concerning social conditions. In these studies, cultural values related to the planning unit are also considered, and it is understood that planners can take into consideration generally tangible components of the culture. However, as explained above, in Turkish cultural heritage, many intangible elements, such beliefs about trees or animals, are hidden in cultural values. Therefore, the portion of the intangible elements of Turkish culture that are mentioned above is not sufficient to represent a complete inventory or social assessment analysis of these factors in the present.

To discover the opportunities hidden in intangible cultural values for nature conservation, site-specific

situation analysis must be done, and the analysis must be expanded from tangible to intangible cultural values for each natural resource protected. Furthermore, when individuals responsible for nature conservation activities, such as forest engineers, landscape architects, biologists, and ecologists are investigated, it becomes clear that they do not have the knowledge and experience to uncover intangible cultural values. Consequently, a team must be put in place to discover tangible and intangible cultural opportunities that may assist in promoting environmental protection.

Conclusion

It is clear that the cultural inheritance of Anatolia provides many opportunities for promoting protection of wildlife. In particular, animals that are believed to be lucky can be used as a symbol for public awareness. Ekinci (2007), who is an expert on the conservation of cultural values and a journalist, gave an example of the usage of cultural values in nature conservation. He invited two singers who are famous for their songs mentioning cranes (*Antropoides virgo, Grus grus*) to participate in the leadership of conservation programs. Thus, a conservation project can direct the attention of people toward animals that face the danger of becoming extinct, such as wild cats (*Felis silvestris*) and black storks (*Cicinia nigra*). They can compare the black stork to the white one, or the wildcat to the wolf. While management plans are developed for protected areas, designs are also needed for entrance gates, simulation sites, visitor centres and education tracks. Therefore, another opportunity at this step in the planning process is to draw attention to species that have gone into extinction, such as the Anatolian leopard, lion, and tiger, and to bring to mind current restrictively protected species.

Although the opportunity mentioned above concerning fallow deer might not be used by nature conservationists, they must be aware of other opportunities hidden in cultural values. At present, beliefs about fallow deer can either be seen as a lost opportunity or a starting point for a new public awareness program for fallow deer conservation.

People who are interested in breeding hunting birds, partridge, nightingale and goldfinch may be accepted as potential sources of voluntary participants for nature conservation. In particular, breeding of hunter birds has been perceived as an illegal activity in Turkish legislation, and there have been serious conflicts between government employees and breeders. Today, it is possible to obtain a “breeder certificate,” and this is a more suitable protection strategy for the current cultural conditions. At the same time, if these breeders are controlled, it is clear that there is another opportunity to sustain cultural experiences related to the biology of these animals for use in nature protection.

The experts who prepare nature protection plans currently have opportunities to discover intangible cultural values that can be used to support protectional aims. On the other hand, it should not be forgotten that some elements of culture might also be a threat to protectional aims. The beliefs about owls, rabbits, partridges and boar in Anatolian culture have a negative effect on people, and these beliefs are weaknesses or problems that can be seen as targets of nature conservation projects.

As we mentioned above, there is a strong possibility of finding folk stories related to any region of Anatolia. These local stories both increase the value of an associated protection zone and function as a cultural memory resource. Consequently, festivals such as Cılbak must be considered in the official activities of government and must be supported by groups of concerned people to enlarge their impact on natural protection. Places associated with such activities both protect specific trees and the surrounding forest and promote sustainability of culture.

Similarly, Nevruz and Hıdrellez must be entered into the calendar of official institutions. In this context, Hıdrellez could be accepted and declared by general directorate of nature protection and natural parks as a beginning of the visiting season to protected areas. By celebrating Hıdrellez officially, the directorate may benefit from these cultural opportunities for its public relations.

NWFP also present an important opportunity to improve the level of the people’s consciousness about why the components of nature protection areas must be protected. In Turkey, people have learned to benefit from 1,010 different plants for different purposes. However, the current condition of the beneficial and protected species proves that there is no correlation between the usage and permanence of plants. Furthermore, it is known that some species used in mass production that are heavily traded, such as *Orchis* spp, are threatened. Usage density and protection status of the plants in Table 1 show that people connected to nature based on their traditional knowledge are more sensitive than commercial collectors for conservation. Therefore, traditional uses regarding protected areas should not be restricted; on the contrary, such experiences should be introduced as an “option value indicator” of other plants.

However, when plant species are protected, their traditional uses must also be recorded and sustained by nature conservationists. Consequently, a protected area should not only conserve natural values but also conserve traditional knowledge and intangible cultural heritage. It is as important to save the knowledge related to these products as the NWFP themselves. For this reason, introductory and demonstrative activities that stimulate traditional knowledge about NWFP should be used in management plans for nature conservation.

As shown in the architecture example described above, achievements in protection projects based on pure cultural values sometimes also result in positive

approaches or opportunities for forests and natural protected areas. For this reason, it should be studied whether there are some for creating synergy between cultural and natural protection issues. In this context, the decision of the Turkish council of ministers numbered 2512 in 2001 was an experiment in supporting cultural values by subsidising cheap material for restoration projects. Unfortunately, the quantity of the timber material obtained for restoration projects from the facility specified in decision 2512 is very low because of the price applied for its allocation. By determining the near market timber prices, nature conservationists determined that they could not initiate a cooperation opportunity. Unfor-tunately, this attempt, which started with good will, could not bring about what all of us expected.

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