





DOĞA DERNEĞİ

Our Vision

To reach a world in which humans respect the integrity of nature, are aware of the impact of their being on nature and live with this awareness, and embody a culture of living that does not necessitate the protection of nature.

Our Mission

To defend the rights of nature.

dogadernegi.org

No Lake, No Burdur!

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No Lake, No Burdur!







Lake Burdur, the dearest of Burdur with the fertile agriculture land lying around it, the famous water birds that come to spend the winter and Burdur killifish that lives exclusively in Burdur Lake...

It is the heartland of agriculture, nature and life in Burdur which welcomed various civilizations that are established around it and inspired legends and epic stories over thousands of years...

Today Burdur Lake is drying.

In the last 35 years, Burdur Lake lost one-third of its water. The amount of rainfall is the same but the lake is drying up as a result of human actions. Dams and ponds built on the rivers that feed the lake are preventing the rivers to reach the lake. A large number of boreholes drilled around the lake cause a decrease in underground water.

Yet, water is the life itself. If there is no water, there is no life. The climate of the region will change if Burdur Lake dries and this will in return harm fruit growing and animal breeding.

The risk of wind erosion as a result of the shrinking of the lake, will threaten the health of the locals living in villages and Burdur city center. Yield losses in agriculture and animal breeding due to the drying of the lake will trigger migration from the village to the city center and to other cities. If Burdur Lake is destroyed, life in Burdur will never be the same. Public institutions, civil society organizations, Burdur locals, in other words, all of us, need to come together to prevent the drying of Burdur Lake.

We need to find solutions and implement them immediately to save our lake. It is in our hands to save Burdur Lake.

Tomorrow may be too late...





Burdur Lake Identity Card

Location

Within Burdur and Isparta provinces

Surface area

153 km² (September 2011)

Protection Status

- Ramsar Area
- Nature Protection Area
- Wildlife Protection Area

Did you know?

• Burdur Lake is the seventh biggest lake and third biggest salty lake of Turkey.

- The lake's deepest point is 61 m.
- Burdur killifish (*Aphanius sureyanus*) lives exclusively in Burdur Lake across the world.

• Until recently, Burdur Lake was the wintering location of 70 per cent of the endangered white-headed duck (*Oxyura leucocephala*).

• Because it is highly salty, the lake never freezes during the winter.

• Burdur Lake is one of the 305 Key Biodiversity Areas in Turkey. "Key Biodiversity Area" is a term given to areas that have a special importance for the continuation of species.

• Burdur Lake Management Plan was prepared in 2008 with the aim to protect the lake. The Plan covers the time period between 2008 and 2012.





Lovers Drowned in Burdur Lake

Burdur Lake has inspired many legends in the communities that have lived by the lake. One of the most popular ones is the Tekelioğlu Legend.

A brave Zeibek called Tekelioğlu fell in love with the daughter of an eminent Burdur Bey and asked for her hand in marriage. The Bey replied by saying "We have no daughter to give away to a Zeibek". However, the girl was also in love with Tekelioğlu.

As time passed, news of the girl's marriage to another man reached Tekelioğlu. Tekelioğlu and his friends ambushed the marriage convoy and kidnapped the bride. The guards of the convoy started to chase Tekelioğlu and there was a battle by the Burdur Lake.

Tekelioğlu, who realized that he will soon die, said to the bride: "We cannot escape. Get off the horse and save your life". The girl replied: "God gave me one life and I devoted it to you. Only death can set us apart."

Desperate Tekelioğlu rode his horse to the lake. Burdur Lake embraced the lovers silently. This dramatic event was never forgotten. Since then, it has been told as "Tekelioğlu Zeibek Song" in weddings.

Burdur Lake: The Heart of Life in Burdur

The story of people who settled by the Burdur Lake is centuries old.

Excavations carried out near the Hacılar village on the south-west edge of Burdur Lake, suggest that there have been settlements in the region since ancient times.

Burdur, is one of the centers where the first social formations and commercial activities occured in human history. The existence of thousand-year-old civilizations in Burdur is dependent on this complicated and interconnected web of life.

Not only that the lake hosts the people of Burdur, it also determines their culture and lifestyle. It gives life to agriculture, fruit growing, traditions, folk songs, fairy tales, in short to everything that makes life possible and richer.

Burdur Lake provides a suitable climate for the walnut trees, as well as other agricultural products and fruits.

For many years, the wood of the juniper trees in the north of Burdur Lake has been transported across the lake by boats to be used in the construction of wooden houses.



Praying mantis



White pelican



Little egret



Black-winged stilt



Bee-eater



White-headed duck







194 different species of birds and 10 different species of reptiles live around Burdur Lake.

Burdur Lake does not only host human life but also hundreds of different kinds of living beings. The world famous, endangered white-headed duck spends winters in Burdur Lake.

Burdur killifish (*Aphanius sureyanus*), lives exclusively in Burdur Lake across the world.



White-headed duck (Oxyura leucocephala)



Burdur killifish (Aphanius sureyanus)

Burdur Lake is Drying

Every single living being around Burdur Lake, including the humans, owes its presence to the presence of the lake. However the lake is drying up.

Burdur Lake has lost approximately one third of its water since 1975. Within this period, water level of the lake has decreased by 12m 25 cm and the surface area of the lake shrank from 228 km² to 153 km².

Considering that the surface area of the covered market place in the centre of Burdur is 15.000 m², we can say that Burdur Lake lost an area equal to 5000 covered market places in the last 35 years.

Dried Up Area of Burdur Lake in the last 35 years



Irce: State water works 182. Branch Directorate

As the amount of water Burdur Lake has lost is 45 hm³ last year (between the years 2010- 2011) and a carboy holds 19 litres, more than 2 billion carboys are required to store the amount of water Burdur Lake lost last year.



The rock that has come out as Burdur Lake shrunk near Karakent Village

Changes in Burdur	Lake's Area,	Water Level	and Volume
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Date (September)	1975	1980	1985	1990	1995	2000	2005	2010	2011
Water Level (m)	855,12	854,59	854,41	851,49	848,19	846,09	845,64	843,26	842,87
Area (km ²)	228,254	225,370	224,160	206,625	185,634	171,742	168,432	154,568	153,47
Water Volume (hm ³)	6876	6762	6723	6098	5450	5068	4986	4609	4564

Source: State Water Works 182. Branch Directorate



The Amount of Rainfall is the Same but the Lake is Shrinking

Burdur Lake Basin is a closed basin that has no outflow to the sea. The main resources that feed the lake are rainfalls, rivers and underground water resources. Among the important water resources that feed the lake are Bozçay, Suludere, Keçiborlu Deresi and Asar Dere. Although the basin has been witnessing a period of high precipitation since 1995, there has not been any increase in the water level of the lake. This shows us that the decrease in the water level of the lake is not caused by a lack of rainfall. On the contrary, human actions have a considerable role on the water decrease in the lake.







Source: State Water Works 182. Branch Directorate

Rivers that Feed the Burdur Lake Cannot Reach the Lake

The main reason for the decrease in the water level of Burdur Lake is the dams and ponds constructed on the rivers that feed the lake since 1970. The dams and ponds prevent these rivers from reaching the lake.

For instance, there are 14 dams and ponds on the main river that feeds the Burdur Lake: Bozçay. After the Karaçal Dam, which was constructed on Bozçay a few years ago, Bozçay no longer feeds Burdur Lake.

Seasonal fluctuations in the water level of the lake has largely disappeared in the last 20 years. The main reason of this is that the flow occurring due to high levels of rainfall during the winter and spring is mostly stored in these dams and ponds and not in Burdur Lake.

A large number of boreholes drilled around the lake also cause a decrease in the level of underground water. It is estimated that the amount of water drilled only from the licensed boreholes in the basin is 42 hm³. When water drilled from the unlicensed boreholes is added to this amount, one might imagine the total amount of underground water drilled by boreholes.

In Burdur Lake Basin, 126 hm³ water is held in the dams and ponds constructed on the rivers that feed Burdur Lake and 72,4 hm³ of this water is sent to agricultural lands for irrigation. With the construction of Karaçal Dam on Bozçay, the amount held in these dams and ponds reached 202 hm³. On the other hand, the water used for agricultural irrigation is wasted when water-saving irrigation methods are not used. The decrease in humidity, the increasing effects of continental climate and the risk of wind erosion due to the drying up of lake will adversely affect agriculture in Burdur. In other words, the dams and boreholes around Burdur Lake aiming at agricultural irrigation is in fact harming agricultural production in the long run.

"Water can't reach the lake because of the dams built. The lake is not fed; where will water come to the lake? Dams have been built on the rivers that best feed the lake. There is no other water inflow to the lake."

Mehmet Naci Gözütok, shopkeeper, Burdur city center



Karaçal Dam



A borehole drilled around the lake

The terrible end awaiting Burdur Lake

"The evaporation rate will decrease as Burdur Lake gets smaller. But the lake will continue to lose water as long as the rate of water inflow does not exceed the evaporation rate. If it continues like this, in 2080 Burdur Lake will turn into a highly salty, 80 km² mass of water, devoid of shallow coasts that are suitable for the growing of reeds that birds need. "

Assistant Prof. Dr. Murat Ataol, Çankırı Karatekin University

Satellite Images of Burdur Lake



10km

Lake Means Life

There are many reasons why civilizations have been established around lakes over hundreds of centuries.

First of all, lakes regulate the region's water regime by charging, discharging and balancing underground water, as well as decrease the adverse effects of floods. They increase water quality by detaining toxic elements. Lakes, along with their landscape beauty, increase the level of humidity in the region and affect rainfall and temperature positively.

Thus, lakes support not only biological wealth, but also animal breeding and agricultural production.

No Lake, No Crop

60 percent of the population of Burdur is involved in agriculture. The agricultural areas around the lake are the livelihood sources of thousands of locals. The main products there are grown are wheat and barley. Sugar beet, rose, anise and corn are among the other products. Fruit growing is becoming increasingly important in Burdur. Production of apples, pears, grapes, peaches and walnuts is also increasing. Because 70 percent of the farmers are also involved in animal breeding, there is an increase in the amount of fodder crops like clover, vetch and sainfoin. If Burdur Lake dries up, the climate in the lake basin will change. Humidity will decrease, rainfalls will be irregular, temperatures at night will drop, frost will begin to happen more frequently. The effects of continental climate will be felt more harshly and all these will harm agriculture and animal breeding.

As the effects of continental climate are felt more harshly and level of humidity decreases, more amount of water will be needed to irrigate the same amount of land. This will increase the irrigation costs in agriculture and animal breeding. The rise in the production costs of crops including fodder crops will adversely affect agriculture and animal breeding.



The agricultural lands around the lake are the livelihood source of many farmers.

"This year rain was good but because of the Karaçal Dam, the water of the lake decreased. In the past, the lake would reach the edge of the main road. We used to jump from the rocks over there to the lake. It all ended with the shrinking of the lake. Dams multiplied, the lake shrunk. If the lake dries up, Burdur is going to be like hell."

Mehmet Ali Gökmen, shopkeeper, Burdur city center



No Lake, No Burdur

The drying up of Burdur Lake will adversely affect the life of every living being including the humans in the region. Yield loss and cost rises in agriculture and animal breeding will cause migration from villages to city center and then to other cities.

As the lake dries up, the material accumulated at the bottom of the lake (sediments) may be carried by the wind and turn into dust clouds, or in other words wind erosion may occur. The dust clouds may not only accumulate on the agricultural land depending on the direction of the wind and decrease agricultural productivity, but may also trigger upper respiratory tract infections among those living in Burdur city center.

Shrinking of Burdur Lake has already led to the disappearance of the shallow coasts which are vital for many water birds including white-headed duck. The lake is drying and the living areas of water birds and Burdur killifish – the witnesses of the liveliness of the lake – are disappearing.

What Will Happen if Burdur Lake Dries up?

- The effects of continental climate will be felt more strongly with a decrease in humidity.
- Fruit growing will be damaged in parallel with an increase in early spring frosts.
- Crop diversity and productivity in agriculture will decrease.
- Animal breeding will be damaged in parallel with a decrease in fodder production.
- Loss of productivity in agriculture and animal breeding will initially trigger migration from villages to Burdur city center and then from Burdur to other cities.
- Risk of upper respiratory tract infections will emerge for the people living in villages and city center as a result of the dust clouds due to wind erosion.
- Species unique to the lake and basin will disappear.Burdur will lose its nature tourism potential.
- Shallow areas important for water birds will disappear.
- An important wetland area which has been a cradle of civilizations for centuries will fade away.

"After 1978, irrigation dams and boreholes withdrew the water. Extracts and streams feeding the lake disappeared. Many dams are built. There's constant migration from Burdur. After the earthquake the people, after the shrinking of the lake the birds left Burdur.

İrfan Eren, shopkeeper, Burdur city center

What Happened when Karagöl and Avlan Lake Dried up?

What happened when Karagöl and Avlan Lake Dried up? What happened in Karagöl and Avlan lakes set an example for Burdur Lake. Karagöl and Avlan lakes were dried by the State Water Affairs between the years 1976-1980 in order to obtain agricultural lands. The land obtained was leased to the farmers.

But what happened then was a total disaster for the farmers. The average annual temperature increased by 0.6 degrees and the annual total precipitation decreased by 41.7 kg. Before they were dried up, the lakes were increasing the humidity rate in the basin; the evaporating water was preventing the temperatures to fall down to minus degrees.

When the lakes were dried up, the climate turned continental, frosts in spring became frequent. The underground water level fell down from 5-18 meters to 60-90 meters. This decrease both led to an increase in the cost of borehole drilling and irrigation and caused soil salinization.

The farmers who were not able to irrigate their apple trees any more began to cut them. Between years 1989 and 1994, nearly 320.000 apple trees were cut down and used as firewood. Drying of the lakes has led to declines in the productivity of other agricultural products. Chickpea production declined by 2/3, while the production of sugar beets and melon declined by 1/3 per decare.

Following the disaster that occurred due to the drying of the lakes, people of Elmalı town collected nearly 3.000 signatures and delivered them to the Ministry of Enviroment and Foresty. Upon the demand of the people living in Elmalı, including the farmers who obtained lands when the lakes were dried, water started to be kept again in the Avlan Lake in 2003. Still, Avlan Lake never returned to its old days.

Wind Erosion As a Result of the Drying of the Ereğli Reeds

Ereğli Reeds which are located in the middle of the Ereğli Closed Basin in Konya were dried up gradually between the 1950s and 1983 to fight malaria.

Today what is left of Ereğli Reeds is only a little water mass called Akgöl with surrounding reeds, salty marshes and areas of barren steppe. Moreover, as dams were built on lvriz and Gödet Streams - which feed Akgöl - in the 1980's and water of these streams has been held in dams, Akgöl and the surrounding reeds are drying up as well.

The drying of Ereğli Reeds not only affected the presence of fish and birds in the region, but also changed the lives of the people living around. With the drying up of the reeds, the level of underground water fell down; the climate that has enabled fruit growing and agriculture changed; desertification and wind erosion began.

Sandstorms with a speed 90 km per hour began to threaten the 100.000 people living in Ereğli. In 2007, Ereğli State Hospital patients had to be referred to other places due to the sandstorms and classes in the Police Academy were cancelled. Because of erosion, irrigation canals were filled with large amounts of soil.



View of Avlan Lake in 2005

Drips can Save the Lake

The agricultural lands around Burdur Lake are irrigated through the dams built on the rivers that feed Burdur Lake. However, while the dams that are built in an unplanned fashion prevent the waters of these rivers to reach the lake and lead to its drying, the water that is sent to the agricultural lands is wasted when inefficient irrigation methods are used. Yet, more water will be saved if wise methods such as drip and sprinkle irrigation are used instead of wild irrigation that uses excess amount of water.

"If Burdur Lake dries, the villages will not be able to live here. Water is essential. Life is water. Just like humans need blood to live, water is also essential for life. If we protect the lake, we can eat fruits and bread here. But if the lake dries up, we won't have a chance to eat anything. If drip irrigation and sprinkler irrigation are used instead of wild irrigation, the water from the dams and ponds will flow to the lake. But if we continue with the wild irrigation, there is no chance of water flowing from the streams."

Veli Büyük, Burdur Karakent Village Mukhtar

The average amount of water used to irrigate an area that can be irrigated only by 1 hm³ is 2.45 hm³ in Isparta province. In Burdur Lake Basin there is 31.000 ha irrigated land and 76 hm³ water is adequate to irrigate this land. Yet, when we consider the Isparta example, the water used for the irrigated land in Burdur Lake Basin is estimated to be 187 hm³, in other words, 2,5 times more than the needed amount.

If wise irrigation methods such as drip irrigation and sprinkler irrigation are used in all of Burdur Lake Basin, the amount of water saved will be 62,6 hm³. This amount is 1,5 times larger than the amount of water lost by Burdur Lake last year due to shrinking. In case this water reaches Burdur Lake, water level of the lake will start to increase and drying of the lake will be prevented.



Doğa Derneği Pilot Areas of Drip and Sprinkler Irrigation

"I'm involved with agriculture and animal breeding in Bağlar neighborhood of Burdur city center. I have been producing corn for silage for 8 years. This year, for the first time, with Doğa Derneği, we used drip irrigation in corn silage production. We planted corn for silage in an area of 16 decares.

With wild irrigation, we used to obtain 4 ton silage but with drip irrigation we obtained 7 ton crop per decare. With wild irrigation, we irrigated the land in 192 hours with 50 ton water per hour, while with drip irrigation we irrigated the same land for 83 hours. We obtained more crops with less water.

There are 2 boreholes in our land. When we opened the first one in 1995, the water level was 9 m. We used wild irrigation. As water level decreased, we drilled the second borehole in 2000 and the water level was 13 m. In 2008 when we pulled off the submersible pump for maintenance, I saw that the water level decreased to 25 m.

As someone born and raised in Burdur, I think this decrease is due to the shrinking of the lake. I think that the lake will dry up more quickly, if we don't switch to drip irrigation and save water."

Mustafa Seçilmiş, farmer, Burdur city center

5 Benefits of Drip Irrigation Method

•The plant takes most of the water it needs from the upper parts of the root. With drip irrigation, water loss and costs are minimized.

•With drip irrigation labor and energy is saved.

•In wild irrigation fertilizers and other nutrients descend into the soil where the plant cannot reach them. But with drip irrigation, the nutrients directly go to the plant's roots, so maximum benefit is obtained while fertilizer is saved.

•Drip irrigation may be used with water that has low flow rates and the system is not affected by the wind.

•Drip irrigation provides the equal amount of water for each plant in a specific land. Thus, especially in sloping terrains, problems such as root decays because of excess water or drying because of inadequate water will not occur.

What is Drip Irrigation?

Drip irrigation is a method in which water is cleaned from its sand, clay, algae etc. through special filters and given to the plant's root zone gradually, drop by drop, using special pipes manufactured in factories. Drip irrigation can be used to water the plants in agricultural fields, gardens and greenhouses.

What is Sprinkler Irrigation?

In the sprinkler irrigation method, the water is sprinkled to the soil just like natural rainfall. Water is moved up to mechanic sprayers by closed pipes and sprinkled onto the soil by rotating heads.



Doğa Derneği Pilot Areas of Drip and Sprinkler Irrigation

People of Burdur say: "Lake Burdur Mustn't Dry"

"The Socio-Economic Analysis of Burdur Lake Basin", a survey carried out by academics from Boğaziçi University in 2007, reveals the sensitivity of people living in Burdur towards the lake.

According to the survey, 94 percent of Burdur locals worry about the shrinking of the lake. Farmers involved in agriculture around the lake are aware of the lake's positive impact on the climate and its importance for agricultural productivity. Burdur locals interviewed describe the preventive role of the lake against dusting as follows: "Sand from the areas where the lake has shrunk is coming into the villages, like in a desert."

What Will Happen If the Lake Dries Up According to the People of Burdur?









Burdur Locals and Public Institutions Should Collaborate To Save the Lake

Burdur Lake - which has hosted various civilizations for thousands of years, creates moderate climate conditions for living, agriculture and animal breeding and contributes to biodiversity with Burdur killifish and white-headed duck – is drying up today.

It's in our hands to save Burdur Lake and prevent its shrinking. All public institutions, local administrations, civil society organizations, farmers, students, artisans, youth, in other words, all of us should seek solutions to save the lake and act together to implement those solutions. "The reason the lake is drying is the dams built and that people remain insensitive to this. The lake shrank to a great extent. Because of the irrigation ponds and dams, rivers' flow to the lake stopped. Only sewage water is flowing to the lake currently. Everyone has to take action. People should take action. It is not only the task of people or institutions. But the support of the institutions is necessary as there will not be any success with only the support of the people. We can save our lake with collaboration. Eventually, it is our Lake."

Nazım Gül, shopkeeper, Burdur city center



To save Burdur Lake, we should rapidly and continuously move towards these targets: • Ensuring that the rivers that feed the Burdur Lake reach the lake.

• Widening the scope of the Burdur Lake Management Plan so that it will include all the activities affecting the lake in the basin and implementing the Plan.

- Determining the underground water reserves and minimizing the effects of boreholes around the lake.
- Promoting rain-fed agriculture and water-saving irrigation methods on all irrigated farms without negatively affecting the income of the farmers.
- Reminding all the people living in connection with Burdur Lake that the lake is essential for the continuation of life in Burdur.

Doğa Derneği

Doğa Derneği is a civil society organization founded in 2002 with the aim of bringing constructive and on-site solutions to the problems of Turkey's nature. Although its headquarters are in Ankara, it is one of the most efficient nature conservation organizations at the local and national level with the work it has carried out across various places in Turkey.

Since 2007, Doğa Derneği, through its Burdur Office, is working to prevent the drying up of Burdur Lake and to promote wise use of water in Burdur Lake Closed Basin. Some of the work that Doğa Derneği has carried out between 2007 and 2011 in Burdur in cooperation with the Governorate, Municipality as well as relevant public institutions and civil society organizations are as follows:

•1524 farmers in 41 villages and 3 towns are informed on the advantages of drip irrigation for saving energy and water.

•3 drip irrigation pilot sites were established in two different villages and one in the city center in Burdur through purchase and delivery of drip irrigation systems to the pilot farmers.

•Doğa Derneği has contributed to the preparation and implementation of Burdur Lake Management Plan (2008-2012).

•Trainings are carried out in schools to inform the students on the species living in and around Burdur Lake. Bird watching trips are organized around the lake.

•A documentary film entitled "The Story of Water: Burdur Lake" as well as many brochures and posters are prepared. "The Story of Water: Burdur Lake" was won the best documentary film of the year award in 9. International Environment Short Film Festival.

Doğa Derneği will continue to:

- Remind the lake's importance for Burdur and the locals.
- Inform the farmers on the advantages of drip irrigation for saving energy and water and encourage farmers to use drip irrigation,
- Contribute to the implementation of the Burdur Lake Management Plan (2008-2012),
- Support all actions to save the lake carried out in cooperation with the relevant public institutions and ministries.







Burdur locals came together for Burdur Lake



Big Jump Activity in Burdur Lake

Sources

• "Akgöl Sazlığı kurudu; kum fırtınaları 100 bin nüfuslu Ereğli'yi tehdit ediyor". Zaman newspaper, 08.01.2008.

• Adaman, F., Hakyemez, S. and Özkaynak, B. "The Political Ecology of a Ramsar Conservation Failure: The Case of Burdur Lake, Turkey", *Environment and Planning B*, 27 (5), 783 – 800. 2009.

• Ataol, Murat. "Burdur Gölü Havzası İçin Yeni bir Su Yönetimi Modeli Önerisi". Phd thesis, Ankara University, 2010.

• Burdur Gölü Yönetim Planı (2008 – 2012). Burdur: Burdur Provincial Directorate of Environment and Forest, 2005.

• *Burdur*. Burdur: Burdur Municipality Cultural Publications. 2010.

• *Burdur İl Çevre Durum Raporu*. Burdur: Burdur Provincial Directorate of Environment and Forest, 2009.

• Data from General Directorate of State Meteorology Affairs.

Data from State Water Works 182. Branch Directorate.

• *Pilot Tarım Uygulamaları Raporu.* Towards Wise Use of Turkey's Water Resources – Building on Lessons Learned in the Burdur Closed Basin Project, Ankara: Doğa Derneği, 2010. • Erdem, Osman. Onlar Ne Dedi? : Seyfe Gölü, Gavur Gölü, Ereğli Sazlıkları, Eşmekaya Sazlıkları ve Avlan Gölü Nasıl Kurutuldu? Ankara: Bird Research Society, 2005.

• Kayacan, İsa. Ş*iirlerle Burdur*. Burdur: Burdur Municipality Cultural Publications, 2005.

• Kesici, Erol, C. Kesici ve K. Kesici. "Doğal Göllerin Koruma Kullanımına Avlan Gölü Örneği". Paper presented to VII. National Ecology and Environment Congress, İnönü University, Malatya, September 10-13, 2007.

• Ozaner, F. Sancar. "Avlan Gölü Yeşererek Ekosistemdeki Yerini Alabilecek mi?". Ankara: TÜBİTAK Earth Marine and Atmospheric Sciences Research Institute, 2004.

Abbreviations

cm – centimeter da - decare ha - hectare hm³ – hectometer cube kg - kilogram km - kilometer km² –square kilometer mm - meter mm - milimeter m² –square meter



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