

Full Length Research Paper

A survey on recreational use of domestic water supply reservoirs: A case study from Kurtboğazi–Ankara, Turkey

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Water-based activity is an important element in recreational areas. A dam lake can be used for recreational purpose and has created vast opportunities for camping, scenery watching, fishing, rowing and other water sports. Recreational purpose of the dam lake has used in a growing since 1945. Our country in recent years, lake, pond, dam and dam of the lake for recreation and sports activities with the increasing interest in these areas, and environmental regulations to be made in the weight has been given. Kurtbogazi dam is also one of the areas in our country. Kurtboğazi Dam is used for drinking water and irrigation purposes in addition to serving as the dam is our recreation. In the context of this research, the purpose of providing water to the city's recreational use Kurtboğazi Dam and user expectations in terms of the current situation was discussed. By the obtained information, the issues about recreational uses are identified and the development of Kurtboğazi Dam's recreational uses opportunities is aimed. Kurtboğazi Dam and its surrounding area in order to determine the potential of the recreational survey was conducted, with the work user profile of the dam, visitors' usage trends, expectations and desires were determined. Depending on the survey identified problems and requests on the basis of suggestions have been made for the field.

Key words: Recreation, dam lake, Kurtboğazi.

INTRODUCTION

The functional use of water through the ages of living space formatted directed, has a significant influence on environmental design. In addition to the use of water for various purposes has refreshing climatic features, to create a living suitable environment for all living things and has the visual aesthetics features, to become an indispensable element in the landscape has provided (Memluk et al., 1994). To create the union between space elements and to strengthen the sense of space on people, to bring dynamism, mobility and depth to the composition, to reflect in detail the characteristics of the landscape elements, important functions, such as improving climatic comfort of the water, almost every

where except recreation is a fact that creates the optical (Gülkal, 1999). Despite the abundance of recreational activities, humans are mostly enjoyed water-based recreational activities. Water-based recreation is no doubt that the increase of needs. Naturally, the water surface provides great advantages in terms of recreation (Tanrıvermiş, 2000). Water in recreational areas, both inland and coastal water-based activities is an important element. For example, streams, lakes, ponds and dams' coast, walking, cycling, water sports, picnics, etc. for recreational activities are indispensable elements of life (Sarıkaya, 2007). In addition to the potential power of water into electrical energy by converting, the utilization of irrigation water taken from the highest yield per unit area is applied as one of the important factors. For these purposes different from the dams and dam lakes, and to exploit opportunities in the middle of the large water area for recreation and sports in terms of evaluating the

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Photo 1. A view from the Kurtboğazi dam.

benefit of versatility is seen as a necessity (Özkazanç, 2005). Also, around the dam, after dam construction, as the erosion of the lake to prevent the filling in a short time, to ensure site safety and recreational use of plantations for such purposes are to serve. Dams so they have the water surface, as well as the environment created in vegetation due to recreational activities that allow the position is reached. Many offer recreational activities to do together in the dam lakes, they have surface water, natural and cultural features and recreation has a great importance as a source (Bulut, 2000).

Recreational purpose of the dam lake to be used in a growing began in the United States since 1945. Flood control, power generation and irrigation for the dam-related recreational development in the initial stages the National Parks Service and other agencies conducted by the turned, the recreation of the true purpose of this project over the adoption of the 1940s, much has not been possible. After this date, dam lakes have created vast opportunities for camping, scenery watching, fishing, rowing and other water sports (Bulut, 2000). Our country in recent years, lake, pond, dam and dam of the lake for recreation and sports activities with the increasing interest in these areas, and environmental regulations to be made in the weight has been given (Özkazanç, 2005). Oruçkaptan (2002)'s, as indicated in these areas for recreation and water sports activities are necessary to determine the planning criteria. Recreation, development plans and policies for the coast must have an active role (O'Neill, 1992). Water resources management has increased the importance of water-based recreation (Dwyer and Espeseth, 1977). To be made the dam lake or ponds should have done planning also taking into consideration recreational uses ((Kukushkin et al., 1987). The people live in the city far away from the water and green-peak like Ankara, mostly prefer nearby surface of water and natural green areas. Lakes and dams in this respect is the preference of many people. Recreational

participants in these areas can be found varied activities such picnics, hiking, water sports, camping.

In the context of this research, the history and characteristics and the purpose of providing water to the city's recreational use Kurtboğazi Dam and user expectations in terms of the current situation was discussed. By the obtained information, the issues about recreational uses are identified and the development of Kurtboğazi Dam's recreational uses opportunities is aimed. In this context; Kurtboğazi Dam and its surrounding area in order to determine the potential of the recreational survey was conducted, with the work user profile of the dam, visitors' usage trends, expectations and desires were determined. Depending on the survey identified problems and requests on the basis of suggestions have been made for the field.

STUDY AREA

Kurtboğazi Dam is today still drinking water and irrigation purposes in addition to serving as the dam is our recreation. The purposes of providing drinking water to Ankara by DSI General Directorate and meeting the needs of Mürted Lowland irrigation water Kurt Creek was built on Kurtboğazi Dam between 1963 and 1972. The dam has large water surface and around the greens with the audience for the city of Ankara is one of the few areas of significant recreational potential (Photo 1). 56 km north of Ankara, Ankara-Istanbul road right next to the dam is located between 40° 17' – 40° 28' north latitude and 32° 46' east longitude. It is approximately 25 km away from Kızılcahamam District (Figure 1). Opened in 1973 to operate dam is a shareholding 85% of drinking water and 15% of irrigation water (Anonymous, 2000).

DSI General Directorate, to meet the needs of public such recreation, entertainment and sightseeing, modern, aesthetic and economic principles based on a master plan in order to obtain, in 1965, "Ankara Kurtboğazi Dam Recreational Facilities Project Ideas Competition" opened. At the competition, dam function and purpose of compliance, settlements, water views, wind, maximum and minimum water level, land topography, natural cover, traffic safety, facilities access and connectivity, economic factors taken into consideration the evaluation was performed. After the implementation of selected projects based on the current situation; dam area in the path of the total length of 6320 m, all the way width of 6.5 m and the total of road area 41.080 m², the total of parking area in dam area is 10,507 m², and has 698 car parking capacity. The total of junctions is 580m² (Anonymous 2002) (Photo 2). Approximately 3.500 people a day use the dam of the picnic area have a total area of 350 hectares (Photo 3). Whole-leaf and coniferous forested with trees of this area is 80 hectares are available for public and germination. Annual and perennial flowers, grass fields, as well as the types of flowers have been



Figure 1. The map of Kurtboğazi dam location (Anonymous, 2010).



Photo 2. A view from the Ankara Kurtboğazi dam recreational facilities project.



Photo 3. A view from the Kurtboğazi dam picnic area.

arranged with the pit in this area, including a 112 bench and table-bench is 66 (Anonymous, 2002). Ankara Metropolitan Municipality before being transferred to Kurtboğazi Dam, dams and access to these areas from the pool is paid to the number of individuals belonging to the most recent data is 1999. Accordingly, the number of visitors to the dam in 1999 is 110.000 people, while the number of visitors who take advantage of the pool is 21.940 people (Anonymous, 2000). With the dam transferred to the Metropolitan Municipality of Ankara in 2004, came into the area and the number of visitors has not been charged with the Metropolitan Municipality has not done any work. Dam downstream in the summer months (From June to September) to be used 5600 m³ of water storage volume, the Olympic standards, and 10.5 m in height 3 stage jumping trampoline with a 130-seat

changing cabins, showers and toilets with a swimming pool is available. Also in the pool area is covered with grass and flower area basketball court, children's play area and restaurant are also available such as the use. The total of pool area is 28.000 m². 1200 people meet needs a day such swimming, sunbathing and picnic at the pool and around.

There are 7000 m² camp-caravan sites on Düzmeşeler Hill position and the west of dam site area. Toilets, showers, caravan with electricity and tent sites are located in the area. There are one cafe and a restaurant, a music hall with non alcohol and two buffets as recreational facilities, with lake view terraces on

Düzmeşeler Hill (Anonymous, 2002). In addition there are 200 m² business building, boarding and guest house and two 63 m² twin motel buildings near it on the area (Anonymous, 2002). It has four toilets, one of picnic area near Kret, one of them in the camp-caravan site, others at the swimming pool and on Düzmeşeler Hill. Dam recreation area has 7 picnic fountains and serves visitors (Anonymous, 1996). Dam project, within the limits of natural oak (*Quercus pedunculata*) woods available, and complete manner, the way silvicultural plantation were conducted. 98183 leaf trees, 268999 units in total 367182 trees were planted for park, picnic, recreational areas and reservoir areas in the dam by DSI General Directorate. General Directorate planted 13880138 leaved and coniferous species plants on the dam afforestation area (Anonymous, 1996).

MATERIALS AND METHODS

Kurtbogazi Dam and its near surroundings are basis material on this work that was fulfilled in Ankara in 2009 about investigating Kurtbogazi Dam's recreational possibilities and determining user expectations. It was utilized from following sources on this study:

1. Editions on topics paralleling about the area of research and research subject (book, magazine, thesis, report, etc.), photos which were taken to determine area's status at the trips to the area.
2. The questionnaires which were applied on user groups coming to Kurtbogazi Dam and data which were obtained from these questionnaires and the program of statistic SPSS were used as a material.

It was followed on committed work the following running order:

1. First, it was examined the researches which had been carried out by searching literature about the topic.
2. It was examined workings studied on academically to determine of natural data such as geographical location, geological and soil structure, climate of working area. It was applied a questionnaire work to determine area's recreational potential and user' socio-economic and demographic features and their opinions and proposals about the area.
3. It was evaluated by khi-square statistic on the questionnaire polled with area's users to determine whether the relationship between individuals' socio-economic structure and their opinions and proposals about the area is independent or not.
4. It was proposed about recreational planning and arrangements on Kurtbogazi Dam by the questionnaire ratings were propped up with literature data.

The questionnaire was applied on the purpose of determining the potential of working area's recreational potential and detecting how public wants to benefit from Kurtbogazi Dam in terms of recreative. It was examined the questionnaire forms which had been prepared for this topic and used on scientific works. 26 questions which would provide the most convenient data were determined, as well as considering area's characteristics.

The questionnaire was carried out with 100 people on August-October 2009 and weekends, at the dam area. The data which are obtained from questionnaire forms are analyzed by means of SPSS the program of statistic package. It is created "birectional tables" with the results of analysis. It was used khi-square statistic on calculating test statistic about "birectional tables". According to

calculated khi-square amount's level of significance 0.05, it is examined whether the relationship between individuals' socio-economic forms and area is independent or not. It is aimed to determine demographic data such as gender, age-group, educational status, as well as working area and user's opinions and views about working area on considering questionnaires.

RESULTS

In order to determine the recreational potential of Kurtbogazi Dam Lake, a survey was conducted on various dates especially when the area is visited on weekends and a questionnaire survey made up of 26 questions was carried out on 26 people. What we aimed through the survey was to determine the socio-economical structure of the people who make use of the dam lake for recreational causes, the data concerning with the recreational demands in their spare times, their views, suggestions and demands for the mentioned area. One of the factors that affect the preference of recreational activities is the gender. 42% of those who participated in the survey were women while the rest 58% were male. As is seen, the number of the people that represents the both groups is highly similar to each other (Table 1).

When looking through the results of the survey you may easily recognize the fact that the people who most make use of the area is of 29 - 39 years of age which accounts for 40% of the total. This is followed by 19 - 29 years of age, which accounts for 28%. The third place belongs to the age group of 39 - 49 by a ratio of 25%. And the last group making use of the facilities the least is made up of the people whose age is above 50, which accounts for 7% of the total group (Table 1). As the age groups of the individuals affect the kind of the recreational activity, it is of importance to determine the age group of the people who make use of the recreational activities in the area in order to determine the recreational activities to be performed in the area. While those belonging to the young age group prefer an active recreation which necessitates a physical participation, those who are above a certain age prefer a passive recreation which requires less physical effort (Table 1).

The marital status of the individuals is sure to have an impact upon the recreational style they choose and it is of importance to determine the place which they would prefer to go. The fact that the individuals are either married or single and the number of the children whom the married have cause the desires and demands related to the area to become of various natures.

The families who have children are in a position to take the desires of the children into account while deciding over a recreational activity (Table 1). 68% of those who responded the survey are made of up married individuals and while 43% of them have 2 children, 29% of them. The ratio of those who have not got any children is 13%. 32% of the people who joined the survey are made up of single individuals (Table 1). When those who responded to the survey were asked the total number

Table 1. Demographic characteristic of visitors.

Demographic characteristics	Demographic difference	Percentage
Gender	Male	58
	Female	42
Age	Between 19 - 29	28
	Between 29 - 39	40
	Between 39 - 49	25
	Older than 50	7
Marital status	Single	32
	Married	68
Have children	No child	13
	1 child	29
	2 children	43
	3 children	10
	More than 3 children	5
The total number of the individuals present in family	3 or fewer individual	48
	4 - 6 individual	52
Education	Primary education	5
	High school	44
	University	51
Profession	Unemployed	15
	Worker	13
	Retired	16
	Public official	22
	Private sector job	34

of the individuals present in their family, the answers showed that while 52% of them were coming from families of 4-6 individuals, 48% of them were coming from 3 individuals or fewer individuals, which may well be described as nuclear families (Table 1). Another question which aimed to determine the education level of the people showed that generally the people who are well educated have a tendency of making use of the recreational area. 51% of those making use of the area had a university education.

44% had high school education and 5% had primary educational level (Table 1). When the results of the survey were examined in terms of job groups, it was seen that an important portion of the people, 34%, were coming from private sectors and it was followed by the clerks the ratio of whom was 22%. The 15% of the remaining individuals didn't have any activity to engage in and 13% were working as workers (Table 1). When the participants were asked how many people there are in their families who contribute to the family budget it was

seen that there was only one (1) person who worked in their families in 51% of those and there were 2 persons working in the family, the ratio of which was 38%. It was witnessed that those who have medium incomes were comprising the majority (Table 2).

First of all, 4 income groups were determined so as to be informed about the income status of those joining in the survey. It was classified in that while the minimum group was earning 1000TL and maximum group was earning 3000TL and more the other two groups were between them. According to the results obtained, it was determined that the first group was 47% who have about 1000-2000TL monthly income. The second biggest group, who joined the survey, 33%, was comprised of those having less than 1000TL of income (Table 2). Also, the ownership status of the houses and private cars of those responded to the questions was an important data which would enable us to form our opinion on the income levels of the people and their preferences. According to the answers of these questions, a high proportion of

Table 2. Demographic characteristic of visitors.

Demographic characteristics	Demographic difference	Percentage
Number of individual who contribute to the family budget	1 individual	51
	2 individual	38
	Nobody	11
Income status	Less than 1000 TL	33
	1000-2000 TL	47
	More than 2000 TL	20
The ownership status of the house	House holder	59
	Lease holder	33
	Mass housing	6
	No answer	2
The ownership status of the car	Own private car	81
	Not have private car	19
Residential area	Etimesgut	25
	Keçiören	24
	Yenimahalle	24
	Çankaya	23
	Other	4

those joined the survey, 59% are the owner of their houses. 33% inhabited as those who have rented the houses and 6% were residing in the flats belonging to their workplaces (Table 2). When we look at the ownership status of the cars, we may state that 81% of the people have their own private cars and the rest 19% didn't have their private cars (Table 2).

The individuals making use of the recreational area were asked in which avenue they were staying. While Etimesgut town was taking the first place with a ratio of 25% it was followed by Keçiören, Yenimahalle and Çankaya, all of which were approximately within the same ratio. When we analyzed the results it was easy to conclude that the proximity to the area wasn't a factor in their preference since the participants were coming from various residential areas (Table 2). The activity of picnic was the most preferred activity, with a 44% of ratio. It was followed by 12% of people whose aim was to read books and watch TV besides bearing the aim of visiting relatives and friends.

The fact that picnic was determined to be the most preferred activity is an important data to be employed for the studies to be done on the area (Table 3). Those who joined the survey circled more than one choice as the general properties of the area which they have chosen. When we evaluated the results, we concluded that about 41% of the people preferred the places of safety which could be visited by the family member altogether. The forestry areas, having a 37%, took the second place.

While well designed picnic areas had an impact over the results about 25%, the existence of water was determined to be at the 4th grade with a ratio of 20% (Table 3).

In order to determine the places which the participants choose for their recreational areas so as to evaluate their recreational tendencies so that we could determine the importance of Kurtboğazı Dam lake among their preferences, we asked questions to the participants and the answer was that Kurtboğazı Dam was the first preferred area with a ratio of 29%. Having analyzed the answers, we concluded that the most preferred places were the places of picnic.

At the second stage of the survey study, the utility frequency of the individuals who visit Kurtboğazı as part of their recreational activity, the transportation facilities and usage styles were analyzed. When they were asked by which vehicle they arrive at the recreational area, it was determined that nearly all participants arrived at the site by their privately owned vehicles. The fact that the dam is far away from Ankara city centre and the fact that there were no other mass-transportation vehicles apart from Kızılcıhamam buses whose road route was Ankara-Istanbul was what caused the people to arrive at the recreational area by their own vehicles. When the participants were asked how often they visited Kurtboğazı Dam, those who come several times a year take the first place with a ratio of 43% while 22% of them visited once a month. 14% stated they visited the site one a week.

Table 3. General visitor preferences.

Demographic characteristics	Demographic difference	Percentage
The most preferred activity	Picnic	44
	Read book	12
	Watch TV	12
	Visiting relatives	12
	Other	20
The general properties of the area which visitors choose	The places which could be visited by the family together	41
	Forestry areas	37
	Well designed picnic areas	25
	Existance of water	20

Table 4. Visit frequency of Kurtboğazı dam recreation area.

Demographic characteristics	Demographic difference	Percentage
How often do you visit the area?	First time	21
	Several times a year	43
	Once a month	22
	One a week	14

Table 5. Basic aspects worth visiting Kurtboğazı dam.

Demographic characteristics	Demographic difference	Percentage
Why do you visit Kurtboğazı Dam?	Picnic activities	82
	Meet need of children such as entertaining, playing, etc.	7
	The other	11

The ratio of those who visited the site for the first time was 21%. When analyzing these results, we concluded that the arrival frequency of the people visiting the site doesn't have a continuing nature thus new facilities should be introduced to the site so as to provide continuity of the facilities existing in the site which have lost their functionality thus should be renewed (Table 4). When the individuals were asked why they visited Kurtboğazı Dam, 82% stated that the main motivation behind their visit was for picnic activities. %7 stated they wanted to meet the needs of the children such as entertaining, playing etc, while 11% circled "The other" as their choices. The fact that the main activity coming to the fore in the site is picnic was also a result of there being no recreational activity other than picnic. Thus we inferred from the fact mentioned above that this data should be taken into account while making suggestions as to the new facilities to be employed in the site, and thus new arrangements should be introduced to the site so as to increase the kinds of the recreational activities (Table 5). Those who answered the related question as

"other" stated that, viewing the lake scenery, wandering around, enjoying fresh air, remaining free from stress, enjoying the quiet nature, being together with the nature and the green alone and resting were what they searched for.

Those who participated in the survey circled more than one choice as their preference in choosing Kurtboğazı Dam. According to the answers obtained in this respect, 30% of the people preferred Kurtboğazı Dam owing to the fact that it is a place which is far from the dense noisy atmosphere of the city. 21% stated that it was a suitable place to visit together with the family members. 15% stressed that the existence of water had the most profound impact upon their choice and 11% stated that their preference was dominated by the fact that it was a forestry site. Altogether, it was concluded that the individuals who visited the site first were in quest of quiet and comfortable place especially far from the hectic life style of the city and they stated that only after this condition is realized do they attach importance to the physical properties of the area. At the other section of the

Table 6. Visitor preferences for Kurtboğazı dam.

Demographic characteristics	Demographic difference	Percentage
Why do you prefer Kurtboğazı Dam?	It is a place which is far from the dense noisy atmosphere of the city	82
	Suitable place to visit together with the family members	7
	The existence of water	11
	The fact that it was a forestry site	

Table 7. Tourist aspects about the facilities in Kurtboğazı Dam.

Demographic characteristics	Demographic difference	Percentage
How did you find the facilities and services?	Sufficient	9
	Insufficient	91
What factors that troubles you and causes you not to visit the site more frequently?	Restaurants, picnic units and W.C are insufficient	40
	There are not enough personal and facilities for cleaning process	14
	The difficulty they had in arriving the area	11
	Other	35
What arrangements do you wish to be done?	The facilities such as W.C and fountains should be improved while their numbers should be increased and restaurants should be ready in service	24
	The situation of the roads should be improved	15
	Picnic areas should be arranged	13
	Arrangement of the environment and planting trees	12
	Other	36
If new facilities will be done, there will be a change in your visit frequency?	Yes	77
	No	23
What kind of recreational activities do you prefer to be introduced to Kurtboğazı Dam and its vicinity?	Picnic	25
	Camp areas and holiday cottages for weekends	24
	Canoe, sailing, go boating sports and so like which ultimately depend upon the existence of suitable water resources	9
	Swimming pool, water parks and walking routes	8
	Other	34

survey, through the questions prepared, we aimed to evaluate the views of the participants over the facilities and service capacities in the site, their demands and suggestions in terms of the site. Because only after the evaluation of the concepts stated above are made, it will be possible to determine whether in planning the site the decisions true or not (Table 6). When the individuals were asked whether the facilities and service were sufficient, 91% stated that they were of insufficient level while the rest 9% stated it was of sufficient level. This answer may well be regarded as a data showing that not all of the participants are satisfied with the service and facilities in the site (Table 7). When we asked what the factors that trouble them and cause them not to visit the site more frequently were, 40% stated that restaurants, picnic units

and W.C were insufficient. 14% stated that there were not enough personal and facilities for cleaning process while 11% stressed that the thing that troubled them was the difficulty they had in arriving the area, in terms of transportation facilities. The results of the survey show a parallel line with the determinations we made (Table 7). When the participants were asked what the arrangements they desired were, they stated that the facilities such as W.C and fountains should be improved while their numbers should be increased and 24% stated that restaurants should be ready in service. The most troublesome issue was the physical situation of the roads in the site. Thus those who stated the situation of the roads should be improved, 15%, took the second place. While 13% of all who stated that picnic areas should be

arranged took the third place, 12% who stated the arrangement of the environment and planting trees took the fourth place (Table 7). When we asked whether there would be a change in their visits in the case that there might be some new facilities to be introduced to the area, 77% of those joined in the survey answered this question in a positive way while the rest, 23%, answered it in a negative way (Table 7).

In the survey study applied, the individuals were asked what kind of recreational activities they preferred to be introduced to Kurtboğazi Dam and its vicinity. When the answers were examined, it was absolutely determined that the most preferred recreational activity was picnic, with a ratio of 25%. Camp areas and holiday cottages for weekends had an impact upon the 24% of the participants in the survey. While canoe, sailing, go boating sports and so like which ultimately depend upon the existence of suitable water resources took the third place with a ratio of 9%, swimming pool, water parks and walking routes had an effect upon the 8% of the answers (Table 7). Through cross-matching the socio-demographic features of those visiting the site and their answers in terms of the site, we aimed to obtain new information. While some of the statistical data were significant, the majority of the data didn't show results which were of statistically significance. 60% of those who had an education level of primary school came to the site for picnic. 79.5% of those who had an education level of high school came to the site for picnic. And that number was 86.3% for the university graduates. When we analyzed the results obtained from this cross-matching, we inferred that visiting the site shows difference according to the educational status. However you should also bear it in mind that the present structures of the site and the activities the site provide have impact upon this result. By cross-matching studies we tried to determine the visit frequencies of the individuals of various job groups. According to the results of the cross-matching studies, the job groups of the individuals and their visiting frequencies are not dependent on each other. Generally the individuals who visit the site several times a year comprise the majority. Through the cross-matching studies the aim of which was to determine whether there was a meaningful relation between the visiting frequencies of the individuals and their incomes, it was shown that 18.2% of those whose income is less than 1000 TL, 19.1% of those whose income is between 1000TL-2000TL 26.7% of those whose income is between 2000TL - 3000TL 60.0% of those whose income is more than 3.000TL stated that they visited the site once a year. It was also inferred that there were individuals of among all the various income groups who visited the site several times a year. When we analyzed the results we obtained, we inferred that the income levels of the individuals did not have an effect upon the visiting frequency.

When we analyzed the relationship between the

educational status of the individuals visiting Kurtboğazi and the places which they prefer to go for entertaining and resting reasons, while there was no one among the individuals of primary education who preferred Kurtboğazi, 25% of those who had high education and 35.3% of those who had university education preferred Kurtboğazi Dam. When we analyzed the relationship between the educational status and the recreational activity the individuals preferred we saw that 20% of the individuals who had primary education desired picnic areas, facilities which would enable the people to make use of water sports and walking routes. 34.1% of the individuals who had high school education desired camping areas and holiday cottages for weekends and 29.4% of the individuals who had university education desired picnic areas.

DISCUSSION

In order for any recreational planning to gain success besides the natural properties of the area being suitable for these kinds of activities it is also important to make the individuals making use of it satisfied. Age, income group, gender differences, educational status and so like affect the satisfaction level of the individuals. The properties of the recreational area and the kinds of activities present in the area are also of importance. The decisions which aim at sound planning should be produced by taking the individuals criticism, desires and suggestions into account. When we consider the factors mentioned above we may state that the results of the survey conducted in the mentioned area is as following. As the users of the area mostly come together with their families, the married users (68%) comprise the majority and thus the numbers of the woman and men users are nearly the same, which is 58% for men and 42% for women. Most of the individuals who take part in the survey conducted are among the age group of 29-30, with a 40%.

This is followed by 19 - 29 age group, the ratio of which is 27%. The fact that most of the users in the area fall into a young age category shows that activities aiming at active recreations will bear more successful results for the area. When we analyze the educational status of the users, university graduates comprise the biggest ratio as 51%. When we assess the situation according to the job groups of the users, we see that most of the users are from private sector (craftsmen and shopkeepers) (34%) and the clerks (22%). According to the income classification, 47% of the individuals are from the level group of 1000-2000 TL. When we consider these results it is safe to state that the area is mostly visited by those who are from the middle income groups. When we consider the residential places of the users visiting Kurtboğazi, while Etimesgut town takes the first place with a ratio of 25%, it is followed by Keçiören (14%), Yenimahalle (13%), and

Çankaya town (13%). Since the individuals mostly come to the site by their own vehicles, the proximity of the area to the place where the visitors live doesn't have an impact. However when we take the transportation means of the individuals who don't have their own vehicles into account, we may state that planning is sure to cause the area to be utilized more profoundly. When we consider the frequency of visits by the users, those who come several times a year take the first place with a ratio of 43%. In order to increase the frequency of visits it is possible to create new recreational activities and bring the other activities such as restaurant and swimming pool which have lost their function into service again. When we consider the aim of individualistic visits, a high proportion of the individuals (82%) choose the area for picnic. The issues which are complained about most is the neglected situation of the picnic units, the lack of fountains, WC, playing area for the children, dustbins all of which should be present at the area, the vehicle park areas' being far away from the picnic area and the neglected condition of the vegetation, the most important aspect of all the recreational areas. The picnic units which have lost their visual quality completely and which have lost their functionality substantially should be completely removed and new ones should be replaced.

As the families constitute those coming for picnic, there should be places where the children may enjoy. There are two children playing units in the area which have completely lost their functionality and which were situated in casually chosen places. New children playing units of more visual quality and having more functional features may be planted at the suitable places in the vicinity of picnic areas. Apart from the pool and camp areas which are not in use now, there are two fountains and 2 WC. The fountains and WC are in a neglected situation and are insufficient in number. These facilities should be increased in number and the present ones should be rearranged and thus improved. The dustbins that are not in harmony with the natural quality of the area should be substituted and be increased in number and the nasty images dominating the picnic area should be covered by suitable robust vegetation. Within the context of the improvements that are mostly desired by the users like apart from those mentioned above are restaurants, buffets and so like. Although there are not any buffets in the area, there are two unexploited restaurants one of which is overlooking the swimming pool and the other of which is overlooking Düzmeşeler hill dominating over the lake. We conclude that both restaurants should be put into service after the structural maintenance works have been carried out in parallel with the desires of the users while the vegetation arrangements are not being neglected. There are not any kinds of recreational activities other than picnic areas. Thus the fact that the activity that comes to the fore in the area is picnic should not be attributed to the desires of the users only. In fact the proportion of those who state that there will absolutely be

a change in the frequency of utilizing the area in the case that new activities are introduced to the area is 77%. While thinking over the suggestions in terms of the area, we recommend these data should be taken into account and we conclude that in addition to picnic, new arrangements that will increase the kinds of recreational activities should be considered.

There is an open swimming pool of Olympic standards only to be used in summer months. The pool which was run by DSI before Kurtboğazı Dam was handed over to ASKI was closed to service after the transfer transactions were concluded. Most of the visitors to the area are not aware of the swimming pool due to the fact that the dam's concrete body prevents its being noticed. The pool presenting the people with the opportunity of swimming in a natural environment should be brought into service together with the facilities in the vicinity of the pool. One of the issues that got the most complaint was the neglected situation of the roads in the recreation area. There occurred some deformations on the roads which do not allow the vehicles to pass. The required maintenance and repair work on these roads that enable the circulation in the recreation area should be one of the most privileged issues. Camping which is one of the main components of recreational activities is one of the leading activities that the people in western states are interested in. This housing kind which makes the person to live in a free way by becoming integrated with the nature isn't shown much interest in our country. As most of the visitors are of younger ages, some sport facilities may be built on the suitable spots determined on the area and they may be brought into service. It is thought that the smooth area overlooking the main concrete body of the dam is more suitable for such activities.

Furthermore the people stated that studies related to the vegetation arrangements should be done. Although there were 15 persons in total who were in charge of maintenance and safety before the dam was handed over, after the handing over process, only those in charge of safety are on duty. Therefore, as no kind of maintenance study has been carried out after the handing over process, the present vegetation is in a neglected position, thus presenting a nasty visual image. After the maintenance studies of the plants have been made and the plants of visual value are planted on the suitable plots, the recreational area will gain a more imaginary acceptance. Also, it was stated by some persons that the usage time is restricted due to the insufficient illumination units. Thus the illumination units should be increased in number and informative boards should be placed on the area. Most of the people who joined the survey stated that they preferred the Kurtboğazı Dam as they thought it to be a suitable place for the families. However there were also people who stated that there was not enough security in the area. As those who are in charge of the security in the area will have difficulty in preventing any negative situation that might occur because the area is

vast, increasing the number of the security guards is considered as a measure that will cause the users to feel themselves more secure. Another important outcome of the survey is that there are concerns that the area may lose its natural beauty if some new facilities are introduced to the area. Although there are rights in these concerns, a careful planning that will affect the natural beauties of the area in the least negative way is certain to be a more sound approach.

Conclusion

Today's people who reside in the cities which have lost their natural properties and thus become unhealthy for the healthy people prefer green-natural areas which are far from the hectic life style of the city so as to renew themselves both in physical and emotional terms. When you take the properties mentioned above into account, Dam Lakes are among the areas which present the people with unmatched opportunities. There are a lot of various recreational activities in Dam Lakes. These recreational activities are picnic facilities, camping, fishing, observing the birds in their natural environment, hunting on lands, swimming, walking, enjoying the scenery, horse ridings, canoe, and water skiing. All these recreational activities ultimately depend of the transportation facilities, legal liabilities and the desires of the visitors. In our study we determined the general specifications of Kurtboğazi Dam Lake and its vicinity, the activities it provides and the expectations of the individuals who visit Kurtboğazi Dam Lake. When we assess the Kurtboğazi Dam which still provides most of the drinking water of Ankara city in terms of its recreational potential, Kurtboğazi Dam Lake has a high recreational potential for Ankara city due to the facts that there are large clean water reservoirs surrounded by city forest and the fact that it has a clean air besides having a land feature that will make a lot of various different recreational activities available. The facts that it is also among the main transportation net and it is away from the noisy city centre may also be mentioned.

However the insufficiency of the various types of recreational activities, the present recreational facilities ' having lost their functions and visual attractions, the insufficient facilities and means of mass transportation all, as a whole, affect the recreational attraction of the area in a negative way. When we look at the present situation of the site, we see that the sustainability of the arranged sites couldn't be provided and the present applications have become insufficient as the recreational desires and demands of the individuals have changed. After the Dam was handed over to the management of Ankara Metropolitan Municipality, there was no planning study in connection with the area and furthermore the facilities were left to their own fates. Consequently, in cooperation with the efforts of several organizations, well designed

area planning that take the demands into consideration should be made for Kurtboğazi Dam which still allows the recreational activities to be performed with its present properties. Together with the service opportunities, the new main facilities determined in parallel with the demands of the users should be planted on suitable plots and the required sub facilities should be introduced to the area. After these facilities have been brought to the area they shouldn't be left to their fate and their maintenance should be regularly carried out. The fundamental aim should be both enhancing the satisfaction of the users and using the sources in a lucrative way.

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