

Zsuzsanna Ivancso-Horváth, Ida Ercsey

## **A regional-based analysis of angling tourism**

### **Abstract**

In the first part of our paper we presented the theoretical background of angling tourism, because this topic has only a few literature in Hungary. In our primary research we made interviews with leaders of angling association and travel agency manager, whose experiences were useful, and we carried out a research using a questionnaire to investigate the behavior of anglers in order to help create the suitable supply of products and services. The aim of our research was to explore problems which currently block the extension of angling tourism. In our research we also revealed the different regions. We believe, that angling tourism can play an important role in the development of rural tourism and create new jobs in undeveloped regions.

**Keywords:** fishing, angling tourism, regions, angling habits

### **Introduction**

Angling tourism, in domestic and international studies alike, is mentioned as an important area of national economy (Dr Kohl Research Consult, 2000, McManus et al. 2011, Brown, et al. 2012). According to Brainerd (2010) recreational angling has important and positive social, economic, and environmental impact in Europe. Hoitsy (2012) in his writings considered angling tourism as a complex industrial sector. Fishing tourism may be one of the activities of rural tourism (Wilson et al. 2001, Ryglova, 2007) and at the same time one of the most significant recreational activities related to water and waterside (Navratil, 2009). In spite of this fact, in Hungary, very few people do research in this topic.

According to the European Anglers Alliance (EAA) recreational angling is beneficial to the countryside and to the less developed regions as well as the dependency of these regions on it is increasing. The geographical endowments of Hungary justify that greater emphasis should be placed on angling tourism because the country is very rich in waters and to the inhabitants of watersides and to the providers of accommodation in less developed areas the development of angling tourism would mean a breaking point. The distribution of the angling waters in Hungary would make a high-level activity of angling tourism in economically developed and less developed regions. We compared the angling opportunities of Győr-Moson-Sopron and Szabolcs-Szatmár-Bereg counties. It can well be seen that angling – as an active tourism product, based on the classification by Gábor Michalkó (2003) – would provide equal opportunities to rural tourism in both the economically developed Győr-Moson-Sopron and in the less developed Szabolcs-Szatmár-Bereg counties.

In our country, after football, angling is the second largest mass sport. The Hungarian National Angling Association has more than 300 000 registered members, but the number of the participants of angling tourism is substantially greater than that since family members with no angling license accompany the “angler” several times in order to relax, be in fresh air, and rest at a waterside. With an elaborate strategy, taking into consideration the angling habits, the ”anglers” demands, significant potential could be found in angling tourism.

For the last days the international angling association with the help of angling organizations of some countries has been trying to get a more precise picture of angling habits. In our research besides angling we have also analyzed tourism.

In the first section of this work we present the theoretical background of angling tourism because in Hungary there is very little literature related to this topic. In our primary research we focus on regional differences in anglers and their habits which later could be helpful in working out angling tourism strategies.

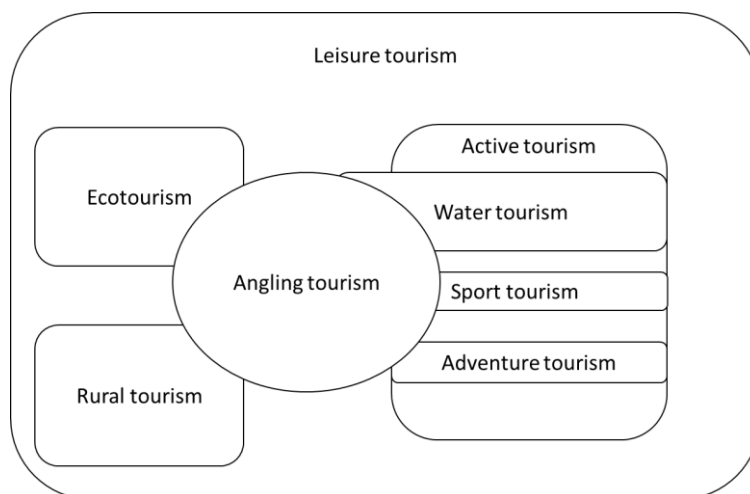
### **The position of angling in tourism**

The European Anglers Alliance (EAA) in its study (2004) defined the difference between fishing and angling. Fishing is fishing with nets and longline. Recreational angling is the activity of catching or attempting to catch fish, principally by rod and line, pole or hand-held line for non-commercial purposes; recreational anglers do not sell the fish they catch. In Hungary the CII. law of the year 2013 regarding fish management and protection brought a breakthrough because it regards angling as a recreational activity since it states that angling is the skillful fish-catching with recreational intentions in fish-farming waters in a permitted way or with a net less than 1 square-meter. In this research the word fishing is used every time as meaning of angling.

“We understand tourism partly as the changing of place and activity by a person which is apart from their constant way of life and work (their house and workplace) whatever their specific purpose, time length and destination is for doing so. On the other hand tourism is the combination of material, technical and organizational conditions and services created to satisfy needs and wants related to the previously mentioned changes.” (Lengyel, 2002) In 2001 Michalkó gave an alternative definition of tourism as follows: “tourism is the changing of environment by an individual which goes along with getting experiences and demanding services.” Despite the fact that earlier many people did not consider angling as a tourism product because the demand for services was non existing or too insignificant, there is a contrary example to that which is the increasing number of “rented ponds” - ponds in private hands - which await anglers with complex services. While the ones preferring natural waters looking for unique activities and longing for adventure are members of alternative tourism. According to former studies angling that takes place not far from the place of residence and demands no accommodation for the night is classified as short and recreational trip, while domestic or international angling trips that last for several days are considered tourism trips (Aubert 2005, Bánhidi et.al 2014). Fishing tourism belongs to free-time tourism and within that category it can also be included in various groups of products like water tourism, sport tourism, eco-tourism; Eden and Baratt (2006) relate it to adventure tourism, Szabó (2012) refers to it as an element of the agricultural supply in a publication. Angling tourism is strongly related to water, waterside tourism and it is one of its special forms (figure 1). The word “special” is really appropriate here because like in hunting, but unlike the other types of tourism, fishing is an exam-and licence-bound activity. Angling tourism is an activity to be supported since 2014 with a state permission for tourists (who are not a member of the angling association) that can be obtained on-line which is valid for 90 days. Examination is also required here but it is a simplified way of getting a state permission. By doing so more people may try fishing, later take an official exam and obtain a state permission and become members of a fishing association.

Figur 1

### The place of angling-tourism in tourism



Source: Own editing based on Hoitsy (2012)

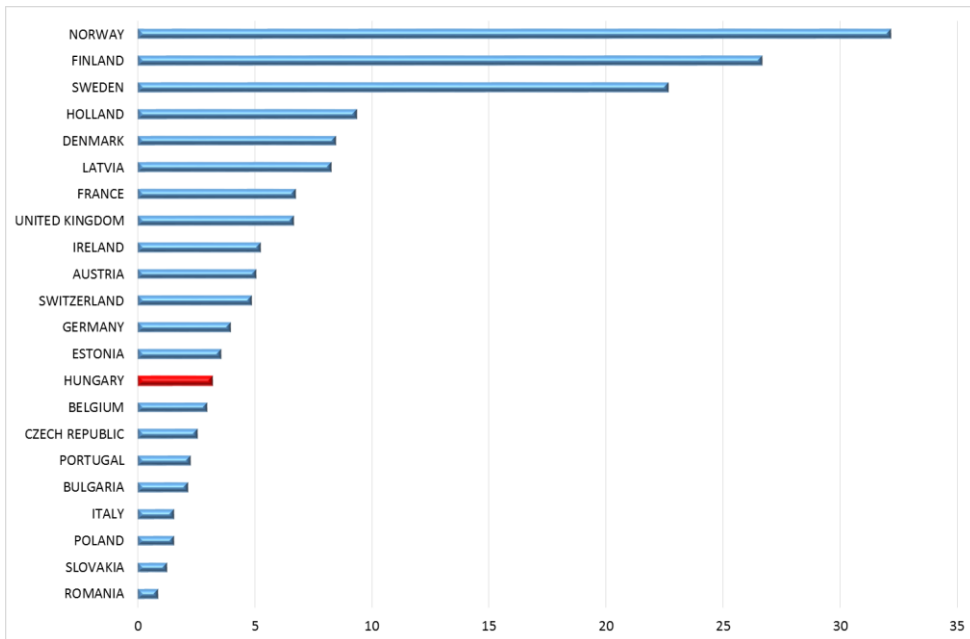
We can distinguish active and passive forms of water tourism depending on the type of activity carried out by the participants. According to Bánhidi (2013) “in the passive water-tourism people first of all use the good effects of water-environment in such a way that they do not exercise activities in an active way.” We understand passive tourism as the participation of spectators in angling competitions or the presence of accompanying family members in free-time fishing. However, fishing in itself is a type of active tourism. Privately-owned ponds offer standardized services. People fishing here can be treated to be participants in mass tourism.

#### Fishing reflected in numbers

In Hungary – according to the data of 31<sup>st</sup> December, 2014 – altogether 367,689 people got a state permission and 13,319 out of that number were foreigners. Although this number seems to be significant comparing it to European countries we are at the back of line (figur 2).

Figur 2

#### The ratio of the anglers in European countries compared to their population

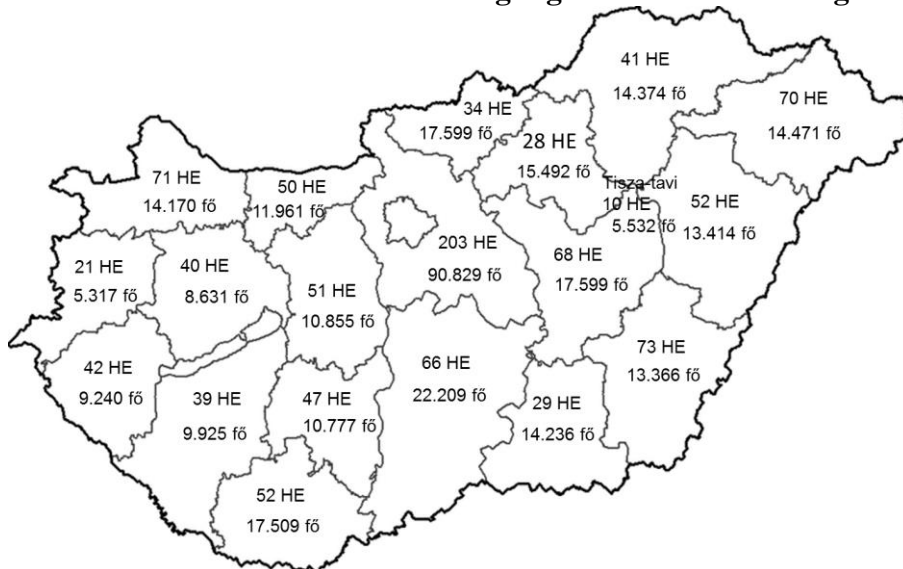


Source: Own processing based on data by MOHOSZ, 2013

The Hungarian National Angling Association hereinafter, MOHOSZ has a direct control over 28 counties or regional alliances which are in charge of more than 1000 angling associations; 630 associations out of that number have their own waters. The figure 3 shows the several yearly average of fishing associations and fishers by county (Fűrész-Zellei, 2013).

Figur 3

**The numbers of the angling associations and anglers by county**



‘fő’ members

‘HE’ Angling Association

Source: Own processing based on Fűrész-Zellei, 2013

In 2015 in Hungary fishing was possible roughly in 130 – 140,000 hectares of water. Out of this amount about 30,000 hectares (21,8%) were handled by angling organizations (associations, county-regional-national alliances) and the rest was managed by Balatoni Halászati Zrt. (share holding company) (45%), fishing cooperatives (24,4%), agricultural cooperatives (2,8%), local governments (1,7%) and small producers, private users (1,6%). Since 1st of January 2016 all the natural waters have been handled by MOHOSZ providing an opportunity to the development of angling tourism.

According to the collected data of caught fish from the Hungarian anglers' diaries in 2012, a total of 4,039 tonnes of fish were caught and 84,4 % of this amount (3,408 tonnes) was caught in waters managed by angling organizations. The total amount does not include the number of fish caught in privately-owned ponds. However, we can still state that the amount of caught fish shows an increasing tendency from year by year.

### **Different methods of angling – or segmentation of anglers**

Angling is a collective concept. It comprises every method which enables us catch fish with fishing skills. According to the law a skillful fishing requires a fishing rod, a fishing net with no more than three hooks on it. The law does not go beyond this statement. A human being is very creative and is able to obtain various combinations of the cited skills so that they would be able to catch several fish in different waters. Depending on how we make the equipment and how we offer bait to the fish we distinguish the types as follows:

- floating
- ledgering
- feeder
- trout fishing
- fly fishing
- ice fishing
- carp fishing with boile
- etc.

We can use the methods mentioned above to segment the anglers. The reason for the existence of the method-based angling-segmentation is better demonstrated by the fact that some associations, fishing-ponds managing businesses provide special areas for some angling methods, for example in Maconka topic-related ponds were created for anglers using different methods.

In England there are professional trainers and tour leaders specialized in specific angling methods who can be “hired” for one or a couple of days to give training in a chosen angling method.

Another important point of view for segmentation maybe the targeted fish. In his work Füstös (2010) segmented anglers under several points of view, for example in regard to their demands related to the place of angling. This appears in the case of those who like natural (natural or intact environment) and artificially made ponds as supported by Eden's and Baratt's (2009) writings.

### **Research methods**

In the course of our primary research we analyzed the Hungarian anglers' habits especially regarding the characteristics of angling tourism. The analysis aimed at bringing the problems to light that currently hinder the expansion of angling tourism so that we would adjust the supply elements of angling tourism to the anglers' demands.

Before the quantitative research -with the help of an in-depth interview- we carried out a qualitative research with many county and association leaders as well as with the leader of the only travel agency (Adventure fishing) which is specialized in angling tours. In these interviews several causes that hinder angling-tourism were revealed and contributed to a better understanding of the problems.

To develop angling-tourism we need to know the fishing and angling-tourism habits, so between November of 2013 and March 2014, with the help of a questionnaire, we conducted a survey among anglers. We sent the questionnaire to 1439 anglers. In the sample we used different techniques. As a filtering criterion we let into the sample only those anglers who currently are still

active. Since there was no sample frame we used a non-random sampling method. To the quota sampling we determined two quota-attributes, one being that in the regional units (counties) the samples should follow the distribution of the number of anglers. (figure 3), the other attribute attempted at ensuring that every angling method would be proportionally and adequately represented.

It was relatively simple to determine the basic data because until 2013 only those could be officially called anglers who got the state permission for the given year. The determination of the place of residence was justified by several factors: on one hand the tourist's income plays an important role on the side of the tourism demand which shows a considerable difference among the residents of different parts of the country and this difference is also detected in the amount of their discretionary income. On the other hand on the supply side the different counties have different geographical endowments, provide different fishing possibilities which may also be important when choosing a destination.

The different fishing methods were considered important points of view since the fishing place is considerably influenced by the fish-target of the fisher and the fishing methods they intend to use.

We made the questionnaire using an on-line program and we shared it on-line with fishing-associations, with different fishing-groups, partly we had them filled out in a printed version by fishers in fishing-exhibitions and we also sent printed copies to several associations and fishing-shops. The survey was completed by 658 anglers.

We evaluated the results using the SPSS program. We analyzed the data with frequency, cross-table, variance analysis and cluster-analysis.

### **The results of the research**

As we evaluate the results of the empiric research we also show the experiences of international researches made in a similar area.

Based on the number of years spent in angling we came to the same result as our southern neighbours. About 80% of the Hungarian respondents have been angling for more than 10 years. If we take into consideration the fact that 4,7% of the respondents were under 18 this number is relevant. Matulic and his co-authors (2010) researched recreational anglers along the Croatian river-border (the river Danube and Sava) aiming at gathering information about their fishing behaviour, and their fishing experience. In their research 89% of respondents have been angling for more than 10 years. Schramm (2003) got the same result in the case of Americans angling in Mississippi.

The Hungarian and the Croatian anglers have the same motivations, their primary point of view is to relax and be away from the daily routine and fish-catching is secondary. The growing of the "catch and release" movement in Hungary also supports this.

20% of the Croatian respondents declared that fish-catching is not important at all for them. At the same time in the case of American anglers (Schramm and Gerard, 2004) fish as a cheaply obtained food plays a greater role among their motivations. Kauppila and Karjalainen (2012) based on motivation group the fishers in tourism-market into three categories. Those anglers whose main motivation in choosing a destination belong to the first category. The second category is represented by those who consider angling as one of the motivational elements among others. Lastly, in the third group angling is not detected as a motivational factor when choosing a destination.

It also became obvious that anglers are greatly influenced by people surrounding them and being so, 55% started fishing because of their parents' or relatives' influence and 19% because of their friends' influence. Based on this we can say that when involving children in angling the example given by the adults counts a lot as well as the common fishing and the waterside holidays.

In our work we analyzed the angling-time, that is, the regularity and the number of days spent on angling. All in all we can say that 76% of the anglers spend more than 21 days, and within this group 40% percent spend more than 50 days a year at a waterside. Comparing this information with the international data we can say that the Hungarian anglers sacrifice more time than the European

average to their hobby, because according to Kohl's (2002) study the Swiss spend 44 days, the Austrians an average of 23.3 days while the Finnish spend 18.8 and the Norwegians 13.3 days a year fishing. The cross-table analysis of the angling frequency and the time spent on fishing and the occupation of the fishers and their income showed a weak correlation. As a tendency we can say that the blue-collar workers fished more regularly and spent more time angling and as their income increased the time they spent angling on a single occasion also increased. We analyzed the data of our research breaking it down into statistical regions (Central-Hungary, The Trans-Danubian region, The great Plain and The North of Hungary) and using the NUTS1<sup>1</sup> level as determined by the Central Statistical Office and where was it possible we provided a more detailed analysis and we also analyzed the data according to the planning statistical regions NUTS2.

The spending amount in itself also showed quite a significant dispersion. Based on the cross-table analysis we were surprised to experience that although the income differences among the planning statistical regions were detected, in the research we did not find a close relation between income and spending. Upon analyzing the data it turned out that there are such fishers who spend almost all their money on fishing. If the majority of the fishers bought fish in a shop with the money they spend on fishing they would triple their annual fish-consumption if we start from the annual 5 kgs. consumption per capita announced by KSH (The Central Statistical Office) in 2013 and the pike-perch price of 3,000 HUF a kilo.

Recreational fishing is one of the most favourite hobbies in Western Europe (Mordue, 2009). For example, 44% of the Finnish population goes fishing regularly and about the half participates in boat tours (Sievänen and Neuvonen, 2006).

Under the point of view of angling tourism how much time the anglers spend in the selected fishing area is an important question. Kauppila and Karjaleinen (2012) analyzed the behaviour of Finnish fishing tourists in time and place dimensions and the number of their trips. The respondents' answers showed that the time and distance factors have an impact on the number of trips. The majority of the fishing Finnish tourists arriving at the river Iijoki belong to the "one-day excursion zone" with a maximum distance of 90 kilometres from the river which makes possible a higher number of regular trips. At the same time if they want to increase angling tourism in the form of "weekends" and "vacation zone" it means smaller number of trips because of the longer time and more spending. Matulic (2010) brought to light a significant relation among the area of angling, its distance from the place of residence and the time spent in the area.

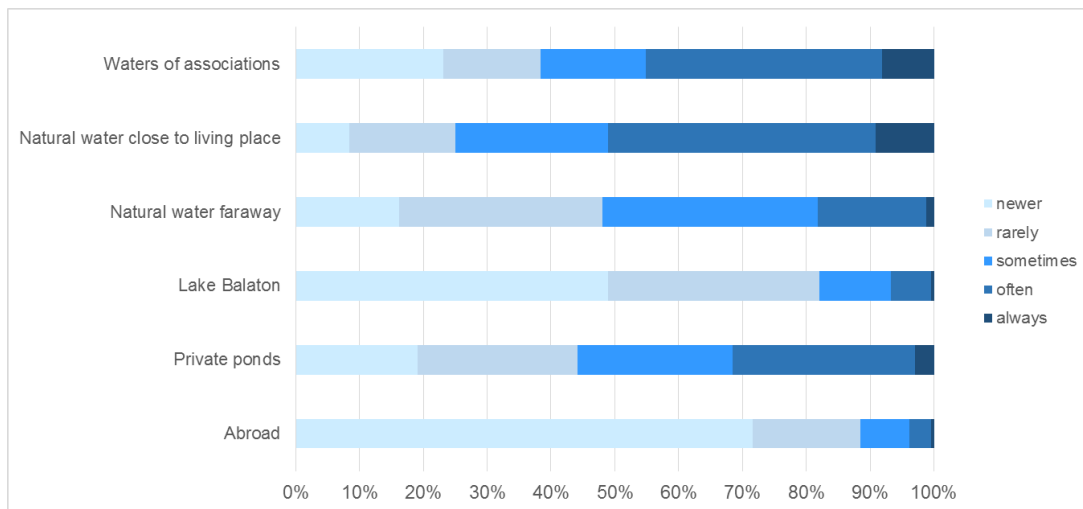
In our work we also examined the habits of the anglers in relation to their angling area. The results of our research show that the majority of the fishers seek the waters of their associations or close natural waters and "rented-ponds" so, in most of the cases they only participate in the local tourism (figure 4). This fact plays an important role which emerged to the surface during the in-depth interview. This fact is that fishers' opinion about the fish stock of the natural waters is not very good, so they do not think it is worth travelling for several days to the more distant domestic waters.

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<sup>1</sup> Nomenclature des unités territoriales statistiques

Figure 4

The frequency of angling of the respondents on various waters



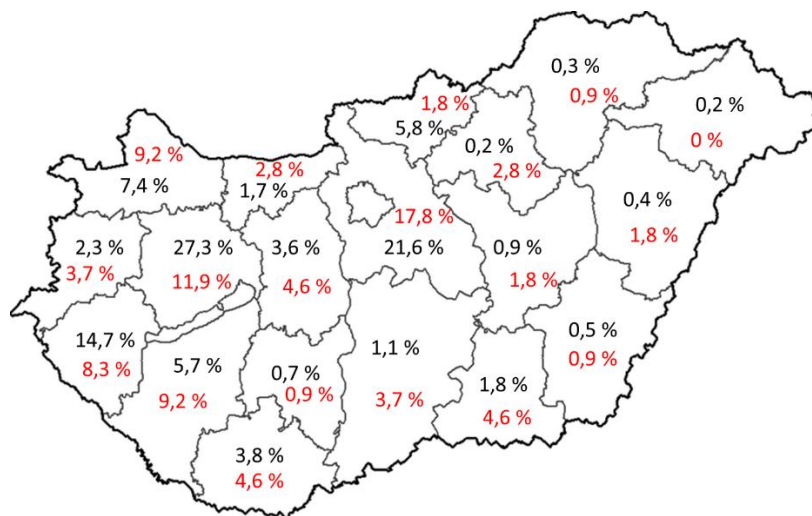
Source: Own research

Analyzing the large regions the data showed a relation only in the case of fishing at Lake Balaton and “rented-ponds” regarding who lives where. We analyzed separately the fishing frequency at Lake Balaton and how it relates to the place of residence. Our results were similar to those obtained by MOHOSZ in its research published by Fűrész and Kovács (1999). Surprisingly few fishers chose Lake Balaton as a fishing destination and most of them were those who live in counties nearby. The further the fisher lives from Lake Balaton the smaller is the probability that they would go fishing there (figure 5). It would be worth examining in the future what the image of Balaton is like under the fishing point of view because it could be improved and with family holidays linked to fishing it would become an attractive destination. This is specially up to date nowadays after net fishing stopped in Balaton and the recreational fishing became relevant.



Figure 5

**The anglers from different counties, who fish at Lake Balaton in the rate of respondents**



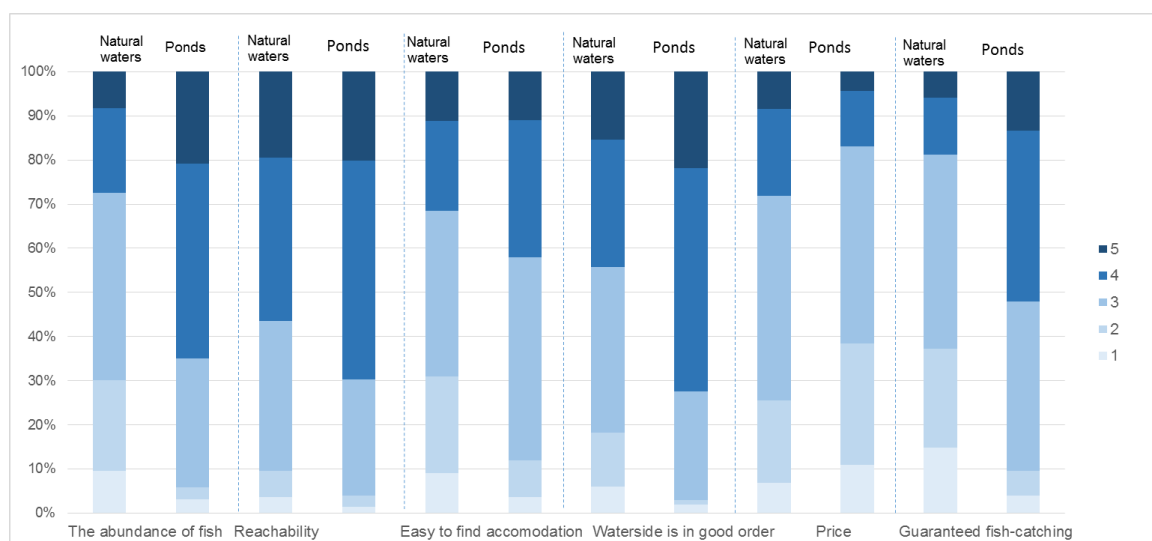
- values of our research,
- values of research of MOHOSZ from 1999

Source: Own research

During conversations with anglers it turned out that many of them would rather pay extra fee over the daily fee for fish but they would prefer to go fishing in “private-ponds” because in the waters of their own associations or in the surrounding natural waters they do not find adequate conditions. We included 6 questions regarding how the respondents judged both the natural waters and the “private-ponds”. These questions were related to the abundance of fish, how the areas could be reached, the availability of accommodation in the area, how the area was looked after, the price and the fish-catching guarantee. For the sake of making a good comparison we have condensed the obtained results in a table. The columns in pair in figure 6 simultaneously show the evaluation of both the natural waters (the first column) and the “private-ponds” (the second column). The darker the column is the more favorable the judgement is.

Figure 6

**The opinion of respondents about natural waters and private-ponds**



Source: Own research

In figure 6 we can clearly see that the judgement of the natural waters with the exception of the “price” criteria is worse in every other respect than that of the “private-ponds”. The most significant difference was detected in “the abundance of fish” and in “guaranteed fish-catching”. It is also noticeable that in the case of the natural waters a great number of the respondents provided a neutral answer to almost every question. The examination strongly supports the assumption that in order to achieve a high-level fishing-tourism the most important task is to make it possible that our waters have abundant fish, the waterside is in good order, and can be easily reached. The majority of the associations cannot ensure that fish is adequately guarded and the fishers are controlled on every single fishing occasion. Being so in the case of regional permissions the associations do not have the possibility of implementing price differentiation when the fish is taken away or returned (eg. sport ticket). The area-price is the same if the fisher keeps the caught-fish or releases it. On the contrary, numerous entrepreneurs and some associations – who own water-fields can fence and get an adequate number of guards to guard them – can differentiate their prices on this basis. Naturally, price differentiation means competitive advantage for them and through this practice they can also favor the participants of the movement “catch and release”.

When analyzing the large regions we discovered an average tight relation between the frequency of visits to the “private-ponds” and the place of residence. During the examination we found that “rented-ponds” are the most visited by the residents of Central-Hungary and the least by the residents of the Great Plain and North-Hungary. The judgement of the natural waters was substantially better in the planning statistical regions like the opinion about the “private-ponds” where besides the above regions we also found higher values in the Central-Trans-Danubian region. We can conclude, that the natural waters performed more poorly on the basis of the answers given to the questionnaire.

In our research we also analyzed the fishing in foreign destinations. The most often visited destinations were Romania, Italy, Spain, Slovakia and Czech Republic, Slovenia and Norway (figure 6). The base of choosing the country was mainly the type of target fish. In an interesting way the connection between income and destination was not significant.

Figure 6

### The most favorable foreign destinations



Source: Own research

In our research we tried to segment the anglers based on the characteristics associated with tourism. To the segmentation we used cluster analysis which based on 14 Likert-questions. Issues concern to

the length of the angling trip, the destination of angling, other activities besides angling and using services (accommodation, restaurant, etc.)

The clusters has even distribution. Each cluster contains 138, 146, 167, 122 elements. The characterization of clusters was made with the help of multi-factor. Clusters were characterized on the base of centroid of clusters, values of crosstabs analysis between the clusters and the non-used variable in cluster analysis:

“Weekend anglers travelling with families”:

They fish on natural water for one or more days, spending their angling holiday with their families. They do not use restaurants for meals. Respondents typically live in Central Hungary, in West-Hungary or in South-Great Plain. All the ages are well represented in the cluster, but they have at least final exams or higher graduation. Most of them are white collar workers.

“Ponds anglers”:

Those are shown in the second cluster who travel typically only on one day-holiday and visit near waters mostly ponds. They provide their meals themselves. In this cluster there are anglers living in West-Trans-Danubian, North-Hungary, Central-Hungary and South-Great-Plain. They have also higher education, but they are both white collar and blue collar workers.

“Party-anglers”:

The third cluster includes mostly one day angling. The anglers visit natural waters with friends, they make their meals themselves at the water. Every region of Hungary is represented in this group in the similar way. These respondents mostly have final exams or are low skilled, mostly blue collars workers.

“Lonely anglers”:

Those in the fourth cluster also prefer the short term trip, typically one day, but they visit only natural water closed to their living place. They do not like company, they take their meals with them. These anglers live mostly in the north part of Hungary. Most of them are aged between 55-65.

As it is shown, most of the anglers prefer the destination nearby, so their angling journeys are not accommodation and catering oriented. The biggest amount of their costs is an angling-licence for new fishing destination, fishing tackles, baits, and the price of the fish caught in case of angling at a private pond.

## **Conclusion**

The number of the private ponds has grown rapidly in Hungary in recent years. They provided the right conditions for the anglers. In our research we demonstrated that they are more preferred in all respects except price to natural waters.

Angling tourism has a significant economic potential of tourism as a special tourism product, which with proper exploration, could make a chance for region with economical drawbacks to join tourism. It can create jobs and tax-revenue. In particular, we see good opportunities for connecting it with rural tourism. Those rural accommodations, which are close to a natural water could supply angling as a special offer. To make this happen, angling associations would play an important role to get in touch with the owners of rural lodgings.

According to the research only a few anglers stay in hotels or apartment and have meals currently during their fishing holidays because they prefer ponds rich in fish nearby. The future task consists precisely to create the right conditions to improve recreational angling in natural waters. To do this, favorable legal conditions have just been made for fishing association. Several examples demonstrate that this can be done by appropriate work. Just to mention a few examples: Lake-Maconka, Lake-Deseda, Brook-Gyöngyös, Brook-Pinka, Lake-Alpine. Considerable improvements

have been made in each of these places recently and a significant increase in the number of anglers and nights spent in the area can be observed. Raffay already wrote in the 2001 about successfully completed project in South-Trans-Danubian region.

The development of angling tourism is vital to get the natural waters to be richer in fish. The new laws, regulations help the forefront angling from trade fishing, but it is not enough without the join forces of the associations and anglers. In our primary research problems have been identify by anglers for example the lack of big fish and the fish as such, the neglected waterfronts, the difficult accessibility.

Of the study has revealed the same problems in all regions, so we could apply the same strategy first.

The richness of our waters, the beauty of nature and not to mention, favorable prices could start up foreign angling tourism as true in the case of the natural waters close to the border in West-Trans-Danubian region. However, major success in foreign markets can only be expected in case of a strong domestic market.

The human factor has not been mentioned so far. It is also very important to have well-trained tour guides for angling, who know the natural waters as angling destination and they are expected to speak foreign languages.

Educational courses, organization of summer camps are needed to reach children and teenagers, which are also the tasks of associations and federations, as well as the support from the parents.

Our research shows that anglers can be segmented on the basis of angling methods and this segmentation provides good marketing tools to reach.

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