

LAKES, RESERVOIRS AND REGIONAL DEVELOPMENT THROUGH SOME EXAMPLES IN POLAND AND HUNGARY

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Abstract: An artificial reservoir can be one of the most important factors creating the tourist attractiveness of an area, and therefore it can have an impact on the level of tourism development. This paper consists of two basic parts. In the first part, the author describes the importance of an artificial reservoir for the tourist attractiveness of the area and its impact on the socio-economic development. Also, problems related to the tourist utilisation of the reservoirs are pointed out. In the second part, the issues listed above have been described on the basis of selected reservoirs in Hungary and Poland. As can be concluded from the research conducted, the Solińskie Lake located in South-East Poland, Lake Tisza in the Northern Great Plain have a significant impact on the local development.

Key words: artificial reservoirs, local development, the Solińskie Lake, Lake Tisza

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1. INTRODUCTION

In the remote past, lakes were important from the mankind's point of view primarily for his existence. They provided both potable water and food and therefore they made it possible for people to function and for settlements to develop. Nowadays, the presence of a lake is not as important for human survival, but it is still important for the socio-economic development. This is related to the opportunities for the development of various forms of tourism, as well as with the specific properties of water. Also A. Kowalczyk (2001) lists surface waters as one of most important natural values. The author remarks that not only the sea, but also larger lakes and rivers are important from tourist's point of view. Moreover, apart from the presence of water itself, also the character of the shores and the bottom, as well as the chemical composition of waters are of importance. For tourism, the most advantageous lakes are

ones with clean water, accessible dry beaches, sandy bottom, located among forests and hills. For tourist purposes not only natural lakes but also artificial reservoirs are utilised. The purpose of this paper is to show the importance of such reservoirs for the social and economic development of adjacent areas. The issue is presented on the basis of selected examples from Hungary and Poland.

2. THE IMPORTANCE OF RESERVOIRS IN TOURISM

In many localities and administrative units near lakes, tourism is the main direction of economic development. Thanks to tourism, new jobs are created, even for unskilled workers (Puczkó-Rátz 2002, Smith 2003, Puczkó-Rátz 2005, Michalkó 2007). This can be particularly important in rural areas (Kandefer, 2000, 2006, Wyzińska-Ludian, 2000), where this economy sector is often an alternative for such sectors of economy as fishing, forestry, and farming (Smith 2003), and therefore it is perceived as a source of affluent life for the local population (Linjama, Tonder, 2003). This is related, above all, with new opportunities for improving financial conditions of the local population, and therefore with improving its living conditions. Apart from creating new jobs and new sources of income, tourism encourages entrepreneurship, modernisation of infrastructure, creation of new infrastructure; it also encourages people to care for tourist values, including the cultural heritage (Kandefer 2006). The locals can, therefore, take jobs in tourist services, but also offer rooms for rent in private houses or in agritourism farms. According to the research by J. Wyzińska-Ludian (2000), in agritourism farms the increase of income from non-farming sources is greater than that from farming. Moreover, the author points out other, non-economic advantages of the development of tourism in rural areas, namely: change of living standards and models, drive to gain knowledge and to get involved in various actions and enterprises, or attention to aesthetics. In France, tourist areas by artificial reservoirs are called “rural poles of development” and regarded as a “symbol of progress” (de Reparaz, 1991).

In view of the issues described above, sustainable development of near-lake areas seems particularly important. In the literature of the subject, many authors refer to the idea of sustainable development of tourism (e.g. Wiśniewski 2003, Hynonen 2003, Maatta, 2003, Linjama, Tonder, 2003, Ireland, 2003, Druva-Druvaskalne, Slara, 2007). The idea of sustainable development (ecodevelopment)¹ was a response to the degradation of the environment and to the changing awareness of world societies. Tourism was one of the branches of economy where the principles of sustainable development has soon reflected and found their application. In the literature there are many definitions of sustainable tourism, but there is a full agreement as to the principles of tourism development. The development should take into account, first of all (Kurek, 2007):

- needs of the local communities, which will result in improvement of living level and quality;
- tourist expectations;
- protection of natural and cultural environments.

The seasonality of the use of lakes for tourism is an important issue from the point of view of (above other things) the idea of sustainable development; it is also a limitation on the socio-economic development of lakes. Their use is limited to the spring/summer

¹ This notion was made precise in 1975 during the Session of the Council managing the environment protection programme. The next stage consisted of the creation, in 1983 by the United Nations, of the World Commission on Environment and Development (WCED), which presented the so-called Brundtland Report four years later. In 1992, an international conference of the United Nations was organised in Rio de Janeiro, during which the principles of sustainable development have been accepted. The next important event was the Earth Summit in Johannesburg (RSA) in 2002, also organised by the United Nations. As a result, Agenda 21 has been published (cf. Niemczyk 2008).

season, with emphasis on the summer season² (cf. David, 2003, Furgala-Selezniow et al. 2003, Maatta, 2003, Linjama, Tonder, 2003, Kokkonen, 2003, Druva-Druvaskalne, Slara 2007). During the winter, the shores of artificial reservoirs are difficult to access, which is related to low water levels at that time and to the icing (Sroczyński, 2006). Walking on ice is also dangerous, since the stability of the ice cover is limited (constant oscillations of the water table and water currents).

It is very difficult to prove the tourism and economic importance of lakes (cf. Hall, Harkonen, 2006). This is related to the broad understanding of the term lake tourism by most researchers, and therefore with the complexity of the phenomenon. In the literature there are no comprehensive works pointing out the economic importance of lake tourism. One should note here that many papers can be found which deal with the economic importance of the individual types of lake-related tourism (cf. Fadali, Shaw, 1998). Much attention is devoted to rod fishing, which is regarded as one of the more important tourist-recreational activities (e.g., Jakus et al., 1998, Lee, 2001, Provencher et al., 2002). Moreover, the theory of two tourism sectors states that in the area of tourism reception, the formal and the informal sectors co-exist (Cohen, after Kowalczyk, 2001). The former includes registered businesses, the latter, unregistered ones (Kurek, 2007). This makes it even more difficult to gather comprehensive statistical data, also on areas near lakes.

As follows from the discussion above, the issue of the importance of tourism in the socio-economic development is very complex, and therefore difficult to research and to draw unambiguous conclusions from. It depends on many factors, such as the location of the area and its development potential. Thus, the importance of lake tourism in rural, isolated areas, where there are few opportunities for socio-economic development, will differ from its importance in the proximity of smaller towns or large agglomerations.

In the case of artificial water reservoirs the situation is somewhat more complicated. Their tourism function is usually a secondary function, subordinated to other, higher-priority goals, for which it had been decided to build such a costly and often controversial construction. However, many such objects are used for tourism and they successfully contribute to the socio-economic mobilisation of the surrounding areas.

3. THE LAKES STUDIED

Both the Solińskie Lake and Lake Tisza are examples of positive impact of tourism on the socio-economic development in the vicinity of reservoirs. The Solińskie Lake is situated in South-East Poland, in the vicinity of the Bieszczady Mountains (a mountain range in the Carpathians). It was created in 1968 as a result of the building of a dam on the San River. The Solina Dam is the tallest dam in Poland (81.8 m). It is also the longest concrete dam (646 m). The capacity of the lake is 472 million m³, but as a result of silting-up it decreased to about 470 million m³ (Sroczyński, 2006). It fulfils several functions: energetic, flood protection, water supply, discharge equalization, and recreational.

These characteristic features of the reservoir, together with its localisation, the opening of the dam crown to the public, and recently also the opportunity to visit the waterpower plant, make the area attractive for tourists. Of the lake shores, those convenient for water- and waterside recreation and tourism take up about 15.5 % of the shore length; shores with average attraction, 66 % (accessible, with some difficulty, during medium and low water stages); and cliff shores, very difficult to access, 5.5 %

² One of the idea to combat the typical problems associated with the “lake tourism” and its seasonality is the development of health tourism (Molnar 2007). It guarantees a differentiation of tourism offers, which would certainly result in a longer tourist season. Moreover, facilities created for this form of tourism could be localised farther away from the lake. The author lists also other advantages, such as: longer mean length of stay, greater profits, combating unemployment, and higher profits for the local population and enterprises.

(Sroczyński, 2006). Due to contemporary geological processes, gravel and sand beaches had been created by the reservoir. This is a rare phenomenon since, as the author claims, sandy beaches are seldom encountered near dam reservoirs in the Carpathians.

A few decades ago people had an extraordinary idea, and conjured up a lake right in the middle of the steppe, the Great Hungarian Plain. This extraordinary area of 127 square kilometres, created by damming the River Tisza, was given the name Lake Tisza. The construction of the lake and its filling with water was planned in three stages, of which only two were realised—fortunately for the natural wildlife. In 1973 the water levels in the channels were raised, and then in 1978 the storage area was inundated by approximately 1.5 meters of water. The third stage would have meant a further 1.5-2 metre rise in the water level, leading to the disappearance of the islands which are now such a special feature of the lake and form a valuable natural habitat. The original purpose planned for the Reservoir of Kisköre was reassessed and the idea of "Lake Tisza" was born. The new concept, as well as safeguarding the water supply, gives priority to environmental protection and tourism.

The tourist base around the reservoirs is well developed. The variety of accommodation or catering facilities, and of the water-sport services is an additional element attracting the tourists. In the coastal area there are harbours and marinas, equipment rental places, recreational centres, holiday cottages, and numerous hiking trails. Opinion polls conducted among tourists in July 2006 show that those polled are satisfied with the individual elements of tourism infrastructure at the Solińskie Lake (Duda-Gromada, 2008). The positive evaluation given by the people who use the tourist facilities is an evidence of the quality of the services.

4. ANALYSIS

As can be shown from the discussion above, the Solińskie Lake and the Lake Tisza are significant tourist attraction, one of the main and, probably, the most important factor attracting tourists. Two basic indices describing the phenomenon of tourism have been computed for communes in the vicinity of Solińskie Lake and Lake Tisza for all the communes in the region (in Poland: voivodship). The first index is the so-called Baretje and Defert index³, indicating the level of development of the tourism function (Fig. 1).

In the communes in the vicinity of Solińskie Lake and Lake Tisza, the tourism function is better developed than in an average commune. The Solina commune in Poland stands out: its Baretje and Defert index equals 95.6, which means that its tourism function is very well developed. Near the Lake Tisza are Abádszalók and Kisköre the most important settlements in the point of this index. Interesting, that Poroszló, which is outstanding from the point of the second index, has only the average value. The second index is the index of the intensity of tourism traffic per number of inhabitants⁴ (Fig. 2).

Similar results have been obtained for the second index in Poland. The intensity of tourist traffic in the communes under investigation is greater than in rural communes in the Podkarpackie voivodship. The similarity of the results of the two indices analysed is not surprising, since the size of accommodation facilities (as measured here in the number of beds in accommodations) depends on the number of tourists (as measured here in number of persons staying overnight). In the Lake Tisza region has Abádszalók an outstanding position, as well, But the value of Poroszló is higher, of Kisköre is less, than from the point of the index above. Both indices show a high level of tourism development in the area studied.

³ Calculated by dividing the product of the number of beds in the given area and the number 100 by the population of this area ($Lx100/P$).

⁴ The indicator has been calculated by dividing the product of the number of persons staying overnight in the given area and the number 100 by the population of this area ($Kx100/P$).

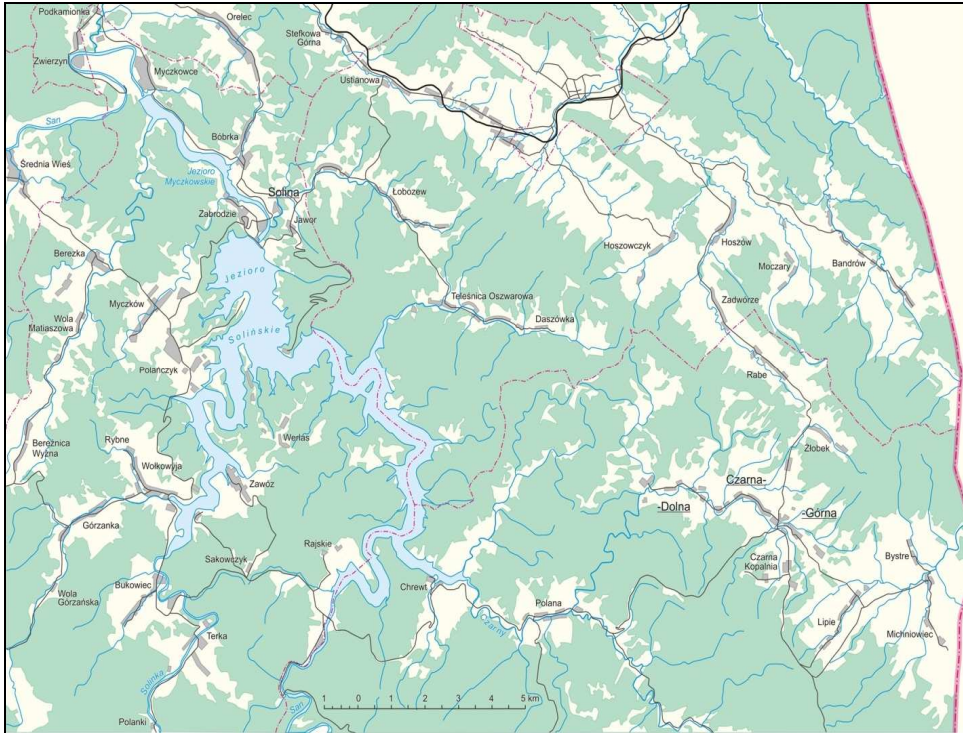


Figure 1. Solińskie Lake in Poland

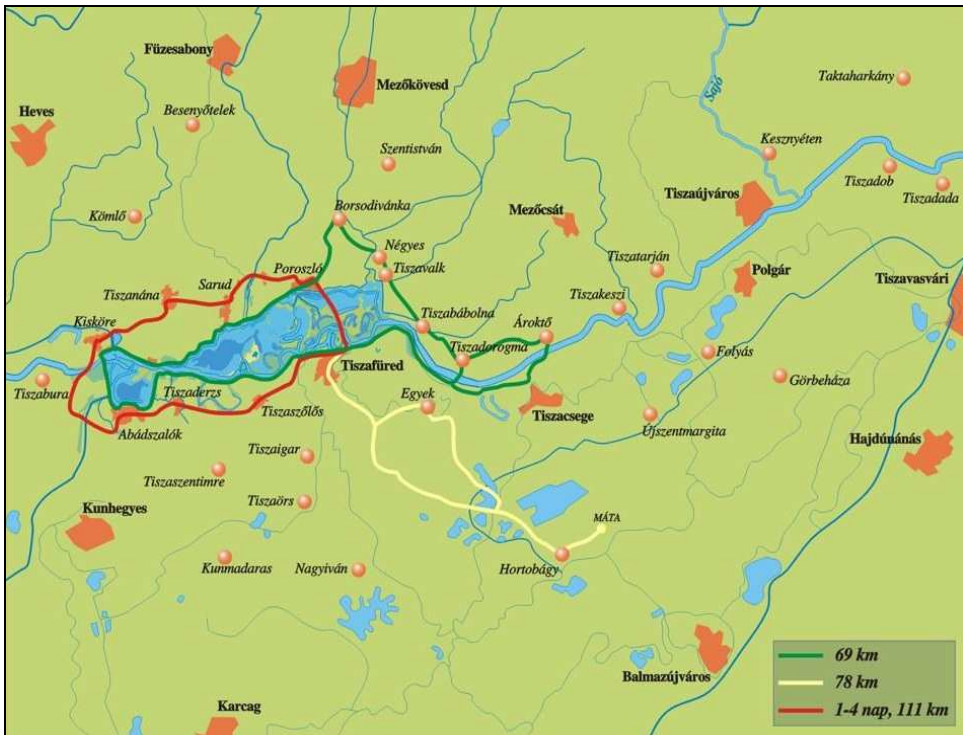


Figure 2. Lake Tisza in Hungary

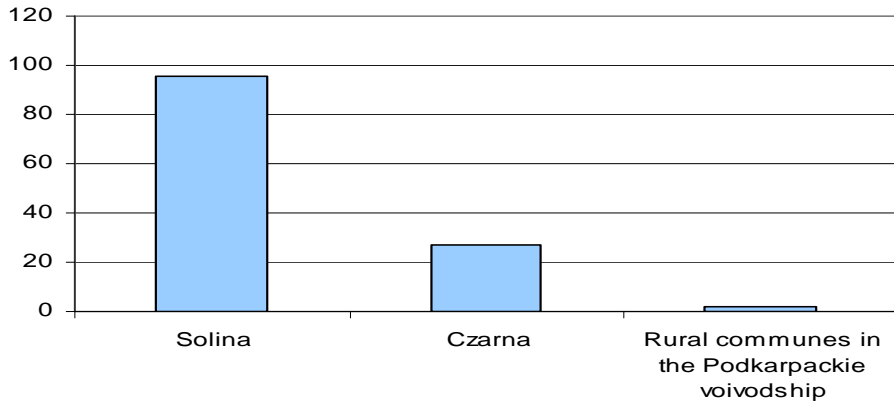


Figure 3a. Index of tourism function development (Baretje and Defert) in the communes studied (in the vicinity of Solińskie Lake in 2007)
(Sources: Author's own study based on Regional Data Bank GUS and data from the Department of Tourism of the Ministry of Economy)

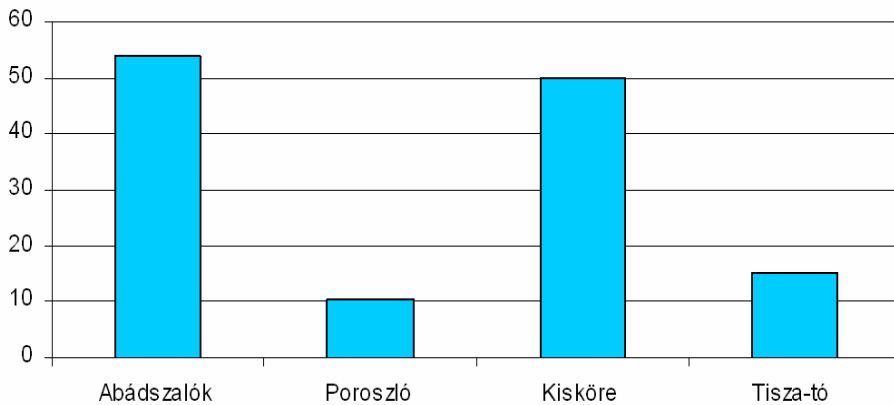


Figure 3b. Index of tourism function development (Baretje and Defert) in the communes studied (in the vicinity of Lake Tisza in 2007)
(Sources: Author's own study based on data of Statistical Office of Hungary)

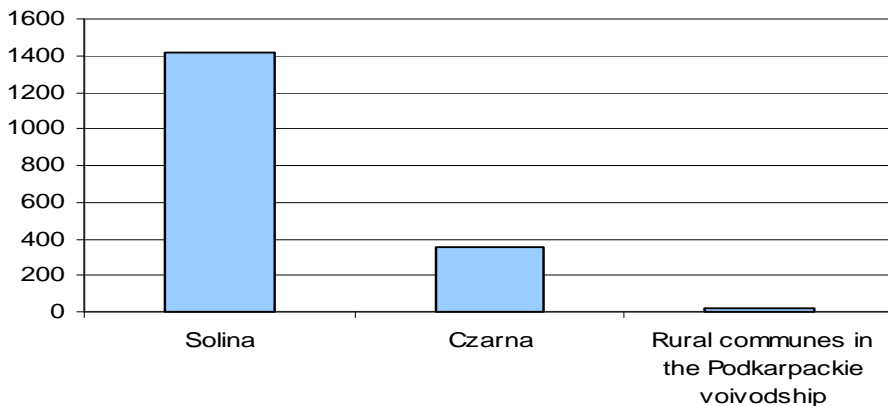


Figure 4a. Index of tourism tourism traffic intensity in the communes studied (in the vicinity of Solińskie Lake in 2007)
(Sources: Author's own study based on Regional Data Bank GUS)

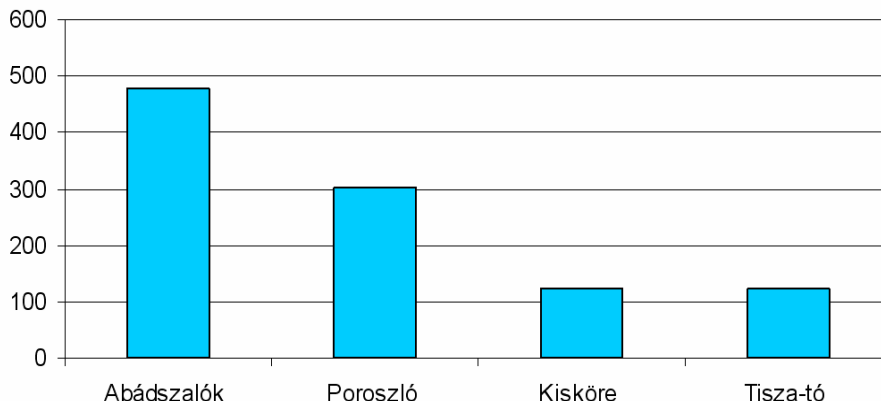


Figure 4b. Index of tourism traffic intensity in the communes studied (in the vicinity of Lake Tisza in 2007)

(Sources: Author's own study based on data of Statistical Office of Hungary)

5. CONCLUSIONS

The importance of tourism for a local community is reflected, above all, in the number of jobs, and therefore with greater opportunities for gaining income. In the employment structure in the individual communes in 2003 the share of population working in service industry is particularly high – in Solina it is about 65 %, in Czarna almost 71 %, in Abádszalók 66 %, in Poroszló 41 %. This is important, because all the jobs in tourist-related services (in a broad sense of this term) are categorised as belonging to the service sector. However, many efforts have already been made and several ideas have been promoted to solve the problems in the development of socially and economically underprivileged, peripheral areas. According to our surveys it can be stated that sustainable and responsible rural tourism development is unbelievable without the application of economic and ecological thinking as well. Consequently tourism economy and ecology, as theory and practice, naturally helps developing the tourism of rural areas based on local natural, social and cultural resources.

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