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THE UTILIZATION OF SZCZECIN'S NATURAL POTENTIAL FOR THE INHABITANTS' RECREATION

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Natural environment potential encompasses such components as e.g. climate, relief, biota, waterways, all of these significant for the recreational activity carried out in nature. Such activity is increasingly more popular with city dwellers who, encouraged by new lifestyle trends, try to engage in active recreation on weekdays and at weekends. Existing environmental potential in urban areas may determine to a great extent the opportunity and nature of recreational activities of city inhabitants. Szczecin spans across a large area (over 300 km²) and enjoys versatile natural environment, with predominance of water and green areas (25% and 20% respectively). Green areas include forests with great landscape, recreational and specialist values, which allows the citizens (approx. 400 000 inhabitants) to engage in various forms of recreational activities. However, half of this area remains unkempt or not properly maintained which results in concentration of recreational traffic in the other areas, now hosting better leisure facilities though still not sufficient to meet the needs of the city's population. The accumulation of tourist and recreational infrastructure over a limited area causes an over-concentration of recreational traffic. contributing to excessive exploitation of natural environment (as estimated, capacity norms are being exceeded 15-16 times). At the same time, even though there are several initiatives in operation aimed at integrating Szczecin's green areas, the city still lacks a coherent, sensible system of developing and using Szczecin's wooded areas which would benefit the citizens, as well as sustain the ecological balance of its forests. It can be thus concluded that the huge recreational potential of Szczecin's wooded areas is used only in part.

Key words: recreation, natural potential, woodland

Introduction

Natural environment potential embraces an array of various components, including components being the constituents of natural environment. The nature of these constituents makes a given environment attractive and conducive to given forms of human activity, including recreational activity, which reflects current trends in leisure tourism promoting active outdoor leisure. A growing number of urban residents who perform their daily (and weekend) leisure activity in their place of residence contributes to an increased use of the natural environment potential of urban areas.

Szczecin is a city spread over a large area (over 300 km²), with a diverse natural environment dominated by water and green areas (25% and 20% respectively). In result, the city inhabitants (population of approx. 400 000) have a wide range of options for outdoor leisure or recreational activities to choose from. The most significant constituents of Szczecin's environmental potential are woods and environmentally valuable areas with a number of leisure, landscape and specialist values allowing for various recreational

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activities such as hiking, Nordic walking, cycling or horse riding. The purpose of this study is to identify how and to what extent Szczecin's natural environment is being used for the city inhabitants leisure and recreational activities, based on wooded areas.

1. Natural environment potential and the recreational activities of the city inhabitants

Geographic environment, in its broad term, forms the basis for the functioning of socioeconomic systems and is the most primary of environment in which all human activities are manifested and located. In more specific terms, geographic environment can be treated as one of the factors affecting (positively or negatively) the activity of entities forming socioeconomic systems. Currently, it is increasingly being observed that geographic environment does not only act as a stimulus for growth of enterprises which use its resources, but also, due to the limited nature and accessibility of its resources, it is becoming a hindrance to this growth.

According to a classical definition, geographic environment is understood as the natural environment of human society. It can be divided into two subsystems: natural and anthropogenic environment. Natural environment forms the basis of human life and activity, whereas anthropogenic environment is created by humans. The latter embraces two aspects: social, comprising humans with all their interactions (on a macro and micro scale) and technical, covering the sum total of tangible assets and infrastructure used in economic and other than economic human activity (Meyer 2004, p.21).

Natural environment is the sum total of mutually linked components of nature which form the framework for the functioning of socio-economic systems. It affects human activity in a direct and indirect way, as it encourages a particular type of activity, which through the transformation of natural environment, indirectly determines the functioning of anthropogenic environment in new conditions. Natural environment is constituted by the following components: climate, waters, relief, soils, geological formation, biota (Boć, Nowacki, Samborska-Boć 2005, p.51). Today, also the geographical space is treated as a component of natural environment (Bernaciak, Gaczek 2002, p.47), functioning also as a broader concept in economics, geography and related sciences as "a real, three-dimensional extent in which various forms of socio and economic activity of mankind, as well as what conditions them occur"(Kuciński 1998, p.15).

Individual fragments of natural environment have different environmental (ecological) potential which consists of nature's resources and environmental capacity. Nature's resources consist of: natural resources including: raw materials, soil, water, air, biota, natural forces (such as: the Earth's core energy, solar energy, kinetic water and wind energy, molecular energy), landscape values, space and geographical location (Kuciński 1998, p.24). Nature's resources are distributed unevenly, they are mostly immobile, with a different degree of exhaustibility and renewal capacity.

The second constituent of natural environment is its assimilative capacity (Manteuffel Szoege 2003, p.70), that is the ability to absorb anthropogenic wastes at certain concentrations without itself being degraded. Ecological capacity is increasingly more important for the area's tourist appeal, as the condition of the natural environment and the extent to which its capacity is used constitutes a significant location factor in tourism, which in its attempts to

provide attractive options for recreation and leisure is on a constant outlook for unpolluted and not degraded areas.

Natural environment potential hugely determines the recreational and tourist attractiveness of a given area and denotes its appeal, subjectively evaluated by tourists, which is determined by objective tourist values, tourist facilities and area's accessibility (Kurek, ed. 2008, p.24).

Recreational appeal of an area is predominantly determined by its tourist and recreational values. These aspects determine in the first place the area's attractiveness, complemented by infrastructure and services which provide for tourists' needs, interesting leisure activity options and area's accessibility. In functional terms, recreational, landscape and specialist values are distinguished. Recreational values encompass an array of natural environment components which ensure the best possible regeneration of physical and mental powers. Among these one can distinguish a set of necessary features the appearance of which forms minimum conditions needed for recreation, and a set of favorable features which enhance the recreational potential of an area. The essential features include: climate and weather conditions, peace and quiet, high forestation rate, aesthetic landscape values. Favorable features include: special landscape values, conditions conducive to active leisure activities, favorable bioclimatic conditions and medicinal values (medicinal waters and gases). Landscape values encompass objects of material or spiritual culture which might be of cognitive interest to tourists. Specialist values enable tourists to carry out specific forms of leisure and qualified tourism.

Special role is played by natural environment potential in urban areas as modern lifestyle (adopted more quickly by city dwellers) promotes a model of physically active behaviors, both frequent and diverse, benefiting overall health and encouraging outdoor hobbies. For city inhabitants, whose pace of life constantly gets faster and more intense, the possibility to take up recreational activity in their place of residence, both during the working week and at weekends, is very important. The attractiveness of such activities increases if they can be conducted in a likeable, pleasant surrounding, such as the natural environment.

The need to spend leisure time in an active way contributes to a constant development of recreation understood as a set of activities taken up beside one's professional, family and social obligations, which are meant to provide relaxation, entertainment and enhance psycho-social development(Panasiuk ed. 2011, p.39), including self-development attained through engagement in hobbies, physical activities, sport, tourist and entertainment activities (this type of recreation is called active leisure or physical recreation, Kwilecka 2006, p.11). In practice, recreation can be of active or passive nature. In the first case, that is goal-oriented behaviors, physical effort, Toczek-Werner 1999, p.12) or mental effort is predominant. Passive form of recreation encompasses behaviors which do not require intentional and purposeful actions such as: listening to music, watching tv, sunbathing etc. Among trends identified in present day recreation (Panasiuk ed., 2011, s.172), one may distinguish trends which encourage people to take up recreational activity in the place of permanent residence, that is:

- increased awareness of the benefits coming from active leisure related both to self-development and personal growth, as well as to the benefits of pursuing a healthy lifestyle,

- favoring recreation in natural surroundings in form of physical activity in contact with nature that enables one to rest and relax,

 dynamic growth in the popularity of extreme forms of recreation carried out in natural and urban surroundings, being a response to the needs manifested by high-aspiring, competitive individuals.

Physical recreation is conducted with the use of diverse recreational means defined as "a set of exercises, procedures and activities, as well as devices and facilities which are used to affect human body dependent on individual needs, and with consideration given to individual interests and specific goals" (Toczek-Werner 1999, p.25), which are meant to facilitate, secure and enable physical activity. Among means of recreation, comprising exercise and fitness equipment, along with elements enhancing the attractiveness and efficiency of physical exercise, special role is given to natural environment due to its health enhancing function, that is the capacity to induce positive changes (functional, metabolic, morphological) in human body. The diversification of components of natural environment greatly determines the nature of the activity being undertaken, and the activity's health impact is reinforced by the surroundings in which it takes place.

Woods are one of the component of the natural environment potential, defined as a given type of ecosystem distinguishable by a big proportion of compact woodstand (Pawlikowska-Piechotka 2009, p.135). The appeal of wooded environment results from many factors, yet the woods' capacity to modify the bio-climate and generate a specific microclimate, conducive to humans, is of primary importance. Diffused sunlight, low noise levels, clean air and green surroundings encourage physical and mental regeneration. Moreover, variety of landforms and landscape, appearance of watercourses and unique sites under protection increase the value of woods as recreational areas. Maintaining proper proportions between the intrinsic function of woods and its use by humans (including recreational use) is of crucial importance for the sustenance of wooded environments in the state of ecological balance which ensures their future usability and availability for humankind.

The use of woods in urban areas is becoming increasingly important. There is a growing number of city inhabitants looking for rest and relaxation and willing to use wooded areas where the needs for pursuing a healthy lifestyle and a pleasant green setting for recreational activities can be satisfied. Woods in urban areas (and in close vicinity thereof) host nowadays city dwellers on a regular, daily basis, which in turn generates the demand to ensure adequate infrastructure for their activities, as well as to create a system of protection against excessive exploitation.

2. Woods as a component of Szczecin's natural environment potential

Szczecin is located in the West Pomeranian province, in a setting of Szczecin Hills (max 147 m above sea level), with the estuary of the Oder River determining the structure and functions of the city and dividing it into three major districts: Left Bank (the city centre), Right Bank (residential and recreational areas) and Oder Valley (hosting industrial, storage and transportation facilities). Over 1/5 of the wide-spreading city is occupied by green areas. These can be divided into urban green areas, allotment gardens and wooded areas. Together with water areas and agricultural land, they constitute over 65% of Szczecin's total area, thus determining the environmental potential of the city and ensuring favorable

conditions for health and recreation of its inhabitants. The total urban green area of the city, with recreational, decorative, ecological and technical functions, amounts to over 530 ha comprising of (Program 2004, p.7):

1) Parks which occupy approx. 27% of the urban green area. There are 16 parks in Szczecin, perfect sites for relaxation and strolls. The most popular and biggest parks of the city are: Kasprowicz Park (over 27 ha) with an artificial lake called Rusalka and Zeromski Park (approx. 22 ha). Other parks located in different parts of the city are significantly smaller, but readily enjoyed by nearby inhabitants (inter alia, Stefan Kownas Dendrological Garden, Jasne Blonia, Raport 2010, p.13).

2) Cemeteries (approx. 37%), among them the biggest, Central Cemetery (168 ha) which is also the biggest necropolis in Poland and third in Europe, following Haburg and Vienna. It was created according to the design plan of W.Meyer-Schwartau and originally supposed to combine the features of a park, with emphasis put on landscape values, tombstone art and architecture and surrounding greenery. Nowadays the Central Cemetery is one of the nicest parks in Szczecin, with an abundant variety of flora (360 species of trees and bushes, including 54 rare species). The length of main park alleys is 12 km, the side alleys – 60 km, and they are well communicated, with a number of tourist trails and walking paths.

3) Green squares and lawns (approx. 10%) are minor green elements near public utility buildings, along boulevards or avenues. There are about 90 in total.

4) Street green (approx. 26%), that is the green elements along roads and traffic routes which complements the city's architectural concept.

Large areas of the city (over 1200 ha) are occupied by allotment gardens defined as recreational green areas with restricted accessibility. They are located mainly in the Left Bank district of the city (in more than 110 allotment gardens only 14 are situated in the Right Bank district).

However, the most significant element of Szczecin green areas are wooded areas located within the city's administrative borders. Their total area amounts to almost 5 500 ha, and they are located in the northern, southern and south-eastern part of Szczecin; they form protective forest complexes. Among them two major complexes of similar size can be distinguished (Diagnoza 2010, p.167):

1) 'State Forests' managed by Polish State Forests organizations, state-owned, occupying the area of 2 716 ha, administered by three forest divisions: Trzebiez, Kliniska i Gryfino.

2) 'Municipal Forests' covering 2 764,17 ha; protective function is combined with recreational. These forests are part of the three primeval forests located in the lower course of the Oder River: forests westwards from the Oder belong to the Wkrzanska Primeval Forest, the south-eastern part belongs to the Bukowa Primeval Forest (Beech Forest), whereas the eastern and north-eastern stretch of woods is part of the Goleniow Primeval Forest. The Municipal Forests area is divided and managed by two forest districts:

- Glebokie Forest District (1 735,27 ha), which comprises woods on the western side of the Oder River,

- Dabie Forest District (1 044,90 ha), comprising woods located to the east from the Oder River.

The area of Municipal Forests is dominated by forest habitats (almost 80%), including fresh mixed forest habitats, coniferous habitats and alder swamp forests. 13 separate forest complexes can be identified in the area, referred to as forest preserves (casually often called forest parks), among which the biggest are: Arkonski Forest (976,90 ha), Dabie (465,56 ha), Glebokie (351,77 ha), Msciecino (281,46 ha) and Zdroje Forest (151,03 ha). The forests show the predominance of pine trees (over 42% in State Forests and over 51% in Municipal Forests area), alder (5% and 15% respectively), with other species such as: beech, birch, Robinia Acacia, larch, poplar, horse chestnut, spruce and hornbeam. The fauna and flora of Szczecin's forests includes species under full or partial protection (over 30 plant species and 160 animal species).

The area of Szczecin's forests is where majority of natural sites under protection are located, partly within administrative boundaries of the city of Szczecin (approx. 6%)

Forests situated within the city limits play a number of functions, including such significant ones as neutralization of pollution, dust and gas pollution, and the renewal of oxygen resources through solar energy conversion and accumulation of the products of photosynthesis (Program 2004, p.9) thus affecting the existing micro-climate. Simultaneously, this contributes to the recreational and leisure function of the forest, often perceived as the sole and certainly, the most attractive aspect of a forest.

3. Recreation in the wooded areas of Szczecin

Wooded areas can be used for recreation and repose without any particular site preparation or investment, yet if some purposeful development is implemented, it ensures suitable protection to the forest through managing a range of human activities in a planned way, thus limiting human-related disturbance to natural habitats. An attractive, well-kept and sensibly located infrastructure favors leisure activities taken up in the forest and often acts as an incentive for city dwellers.

There are 200 km of walking trails running in the forest complexes within the city limits. However, these areas are insufficiently prepared (in terms of leisure development and infrastructure) to cater for active or passive leisure and recreation activities. In addition, throughout the wooded areas cycling paths have been marked out: 17,6 km of walk and cycle trails, 52,3 km of cycling paths and about 40 km of walk and cycle trails in municipal forests. As city roads are being reconstructed and modernized, their number is constantly growing. However, there are still too few trails and paths and unfortunately, they run in a rather incoherent, random way – as mostly these are single, short stretches (Raport 2010, p.13). Moreover, in the Municipal Forests area the following trails have been marked out: educational trails (e.g. educational trail 'In Search of the Green Land Mysteries' located in the Beech Forest), green trails and paths (e.g. 'Along the Glebokie Lake', Irena and Karol's green trail) and two fitness trails running through Wkrzanska Primeval Forest (3,2 km long) and Bukowa Primeval Forest (Beech Forest, 2,1 km) [14].

As it comes to recreational infrastructure in Szczecin's forests, it is mostly limited to Municipal Forests and includes picnic sites and recreational clearings, along with benches, rain sheds, and in some cases also outdoor sports facilities, such as: pitches, chess and table tennis facilities, and parking lots. In Szczecin's wooded areas there are 17 recreational clearings in total, most of them on the city's Left Bank. Also three leisure sites with dogruns have been created. A Green Educational Workshop operates in Glebokie Lakeside, which aims at spreading environmental knowledge and rising the eco-awareness of children and youth, as well as all other interested parties. Over 1200 persons participated in the workshops in the period from 15 October 2010 to 15 March 2011 (based on data obtained from the Public Utilities and Environmental Protection Department of Szczecin City Council). Poor leisure and recreational infrastructure of areas which are not administered by the Polish State Forest (two recreational sites) might be the result of their insignificant size and location at the outskirts of the forest division.

Szczecin's wooded areas (or their periphery) also host other facilities created thanks to the initiative of housing estate boards or private entrepreneurs. The first group includes f.eg. outdoor gyms. The very first gym of this kind was created in Arkonskie-Niemierzyn residential area in the Chopin Park in 2005, followed in 2009 by four more outdoor gyms in other areas (Lekno, Osowo, Wielgowo, Zalom, Zydowce-Klucz, Bukowe-Kleskowo) and in 2010 in Zawadzki-Klonowica housing estate. The rope climbing park is, on the other hand, a private venture (one of this kind in Szczecin), created in 2009 near Glebokie Lake (Raport 2010, p.199), as well as the sports and recreational centre Szczecin Gubalowka with ski trails, illuminated and covered in artificial snow, T-bar ski lifts, an ice rink, a special sleigh slope, and in the summer, a children's scooter track and a year-round dry ski slope [15].

Such versatility of Szczecin's woods, a relatively big forest area per inhabitant (approx. 150 km², Poznan aprox.123 km², Krakow 65 km², Gdansk 134 km²) [16] and their good accessibility make them a popular leisure site. As it is estimated (data obtained from the Public Utilities and Environmental Protection Department of Szczecin City Council), the recreational facilities located in Szczecin's woods are used by approx. 1,5 mln annually. In other words, every citizen uses the facilities 3-4 times a year. The most common activities carried out in the wooded areas of Szczecin, as it has been observed, are strolling, hiking, cycling and nowadays increasingly, Nordic walking.

Pilot research conducted by the City Council of Szczecin (Public Utilities and Environmental Protection Department, to be exact) in selected recreational sites confirms that they are used mainly by the city dwellers at weekends, but the number of people resting in the woods is relatively large also during the working week. A sample distribution of recreational traffic over a weekly period in selected wooded areas is shown in Drawings 1,2 and 3. Drawing 1 presents the traffic on the walk and cycle trail 'Glebokie-Osow', Drawing 2 in the 'Red Clearing', and Drawing 3 on the 'Arkonska-Glebokie, fitness trail'. They indicate unequivocally that wooded areas are frequented almost exclusively by Szczecin's inhabitants (which is distinctly shown in Drawing 3, fitness trail) and that the traffic volume is the biggest on work-free days (weekends). The analysis into the place of residence of forest-goers who are visitors to Szczecin and not residents shows that they come from different places (both from smaller towns in Szczecin's vicinity - Police, Gryfino, Stargard Szczecinski, as well as from far away cities such as Biala Podlaska, Sosnowiec, Warsaw, Lodz), which would indicate that their presence in Szczecin's forests was rather incidental. Or else, it might also mean that they found Szczecin's woods to be attractive since they decided to spend their leisure time there, rather than enjoy other tourist attractions offered by the city.



Walk and cycle trail 'Glebokie-Osow'

Drawing 1. Traffic on the walk and cycle trail 'Glebokie-Osow'.

Source: Study by Public Utilities and Environmental Protection Department of the City Council of Szczecin



RED CLEARING

Drawing 2. Traffic on the recreational 'Red Clearing'.

Source: Study by Public Utilities and Environmental Protection Department of the City Council of Szczecin



'Arkonska-Glebokie' fitness trail

Drawing 3. Traffic on the 'Arkonska-Glebokie' fitness trail.

Source: Study by Public Utilities and Environmental Protection Department of the City Council of Szczecin

Summary

Szczecin is a city with high natural environment potential, with predominance of green and water areas, providing a perfect surrounding for a wide array of recreational activities. Green areas are formed, in major part, of highly versatile forest landscape. However, half of these areas (State Forests) remains unkempt and lack leisure facilities which shifts recreational traffic to Municipal Forests. In turn, the latter areas are becoming better and better groomed and prepared for recreational traffic, although considering Szczecin's population, this still does not suffice. The accumulation of tourist and leisure infrastructure in just a few sites causes a concentration of recreational traffic and thus excessive exploitation of natural environment (as estimated, capacity norms are being exceeded 15-16 times). Despite the fact that several initiatives/ programs aimed at integrating Szczecin's green areas are in operation (Promotional Forest Complex 'Szczecin's Primeval Forests', System of Municipal Green), still what is lacking is a coherent, sensible system of developing and using Szczecin's wooded areas which would benefit the citizens, as well as sustain the ecological balance of the forests. It can be thus concluded that the huge recreational potential of Szczecin's wooded areas is used only in part.

LIST OF REFERENCES

- 1. *Bernaciak A., Gaczek W.M.*, 2002, Ekonomiczne aspekty ochrony środowiska. Wydawnictwo AE w Poznaniu, Poznań.
- Boć J., Nowacki K., Samborska-Boć E., 2005, Ochrona środowiska, Kolonia Limited, Wrocław.
- 3. Diagnoza 2010. Diagnoza społeczno-gospodarcza Szczecina 2010
- Kuciński K., 1998, Geografia ekonomiczna. Zarys teoretyczny. Szkoła Główna Handlowa, Warszawa.
- 5. Kurek W. ed., 2008, Turystyka, PWN, Warszawa.
- 6. Kwilecka M. ed., 2006, Bezpośrednie funkcje rekreacji, ALMAMER, Warszawa.
- 7. Manteuffel Szoege H., 2003, Zarys problemów ekonomiki środowiska. Wydawnictwo SGGW, Warszawa.
- 8. *Meyer B.*, 2004, Turystyka jako ekonomiczny czynnik kształtowania przestrzeni, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin.
- 9. Panasiuk A. ed., 2011, Ekonomika turystyki i rekreacji, PWN, Warszawa
- 10. *Pawlikowska-Piechotka A.*, 2009, Zagospodarowanie turystyczne i rekreacyjne, Novae Res Wydawnictwo Innowacyjne, Warszawa
- 11. Program 2004. Program konserwacji i bieżącego utrzymania istniejących terenów zieleni miasta Szczecin
- 12. Raport 2010. Raport o stanie miasta Szczecin 2010
- 13. Toczek-Werner S., 1999, Podstawy rekreacji i turystyki, Wydawnictwo AWF Wrocław, Wrocław.
- 14. www.zuk.szczecin.pl/aktualności
- 15. www.ekologia.szczecin.pl
- 16. According to the World Health Organization the area of green terrain per inhabitant in an agglomeration should amount to at least 50m². The less rigorous standards, however, point to values between 8 and 15m². Program 2004, p.3

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ВИКОРИСТАННЯ ПРИРОДНОГО ПОТЕНЦІАЛУ ЩЕЦІНА ДЛЯ ВІДПОЧИНКУ ЖИТЕЛІВ

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Б.Меєр

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Природний потенціал навколишнього середовища включає в себе такі компоненти, як, клімат, рельєф, біота, водні шляхи. Така діяльність стає все більш популярним серед городян, які намагаються займатися активним відпочинком у будні дні та у вихідні дні. Існуючий екологічний потенціал в міських районах може визначити, в значній мірі можливості і характер дозвілля мешканців міста. Щецін займаєзначну площу (більше 300 км²) і має універсальне природне середовище, з переважанням води і зелених насаджень (25% і 20% відповідно). Накопичення туристичної та рекреаційної інфраструктури на обмеженій території призводить до надмірної концентрації рекреаційного руху, що сприяє надмірній експлуатації навколишнього природного середовища). У той же час місто досі немає послідовної, розумної системи розробки та використання природних ресурсів. Таким чином, можна зробити висновок, що величезний рекреаційний потенціал лісистої місцевості Щеціна використовується лише частково.

Ключові слова: рекреація, природний потенціал, ліс.

ИСПОЛЬЗОВАНИЯ ПРИРОДНОГО ПОТЕНЦИАЛА ЩЕЦИНА ДЛЯ ОТДЫХА ЖИТЕЛЕЙ

Б.Меер

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Природный потенциал окружающей среды включает в себя такие компоненты, как, климат, рельеф, биота, водные пути. Такая деятельность становится все более популярным среди горожан, которые пытаются заниматься активным отдыхом в будние дни и в выходные дни. Существующий экологический потенциал в городских районах может определить, в значительной степени возможности и характер досуга жителей города. Щецин занимает значительную площадь (более 300 км²) и имеет универсальное среду, с преобладанием воды и зеленых насаждений (25% и 20% соответственно). Накопление туристической и рекреационной инфраструктуры на ограниченной территории приводит к чрезмерной концентрации рекреационного движения, что способствует чрезмерной эксплуатации окружающей природной среды). В то же время город еще нет последовательной, разумной системы разработки и использования природных ресурсов. Таким образом, можно сделать вывод, что огромный рекреационный потенциал лесистой местности Щецина используется лишь частично.

Ключевые слова: рекреация, природный потенциал, лес.