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HEALTH – SPORTS – TOURISM
with the Prospects of Hungary

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PREFACE

The unity of health, physical beauty and mental fitness have always been in the centre of people's notion of an ideal life. It was early in history that the necessity of an appropriate lifestyle was recognized as precondition to achieve that aim. At the same time there are technology- and urbanization-related changes affecting people's lives – especially physical inactivity and stress – that negatively influence people's spheres of life and their health. It was only at the end of the millenium that the questions of physical and mental health, the idea of the wholeness of life began to gain momentum, meaning, that physical activity, recreation, spiritual revitalization, mental regeneration and the traditional and modern branches of medicine got intertwined. This value is closely linked to the idea of the necessity of being successful in the modern world: people's success in their career as well as in their private lives is largely dependent on their health, neatness and fitness.

The recognition and the appreciation of the beneficial effects of active spending of leisure time and of values inherent in nature are by-products of urbanization processes. An increasing number of urban population have had to face crucial problems and the diseases of modern civilization, part of which are caused by people's love of convenience and the lack of exercise. These changes in lifestyle have altered people's needs, too: an increasing number of city dwellers want to spend their free time actively by doing exercises which offer them positive experiences and good health. The health protective effect of sport has been confirmed several times by previous research. Sport functions as a protective factor against unhealthy behavior. By the end of the 20th exercising has been considered as a socially useful and economically significant activity.

These days technological development has broadened society's possibilities for mobility, thus travel has been made easy and the spatial mobility of people has increased. All these features have made it possible for people to leave their everyday lives behind every now and then, and find those features elsewhere which are thought to have been missing when being at home. In a paradoxical way people have to turn into tourists to spend their leisure time, have fun in their sport activities, recover from their illnesses and then return home as healthy and relaxed persons.

Parallely with all these changes the economic sector was gradually realizing that physical activity or health motivated tourism has a lot of economic benefits. It has become evident that people in our modern age are willing to spend more and more money on services that make it possible for them to spend their vacation and/or free time actively or just relax in a healthy environment.

The modern, universal definitions of health enhancement, sports, recreation and tourism could not pose problems to understand these notions' connection to each other. They are well-defined, autonomous entities, which are at their best when interrelate with one another and strengthen each other's beneficial effects. Their common areas do not narrow down the meanings of specialist terms, but, instead, they offer new dimensions for interpretations. This is how they can serve the needs of modern societies and people. They can be defined as parts of modern lifestyle, deriving from the somatic and psychological needs of people. In addition, they are closely related to the geographical (physical, social and economic) environment. The author intends to contribute with his work to a better understanding of the significance, connection points and intertwining of the concept of health-sports-recreation and tourism complex.

Szeged, in the autumn of 2020

The Author

1. INTRODUCTION

It was recognized early on that a well-developed lifestyle can help to achieve, maintain and, if necessary, regain fitness, health and physical beauty. In the education of young people, regular exercise, purposeful exercise, nutrition in the prevention and treatment of diseases, and external environmental influences (e.g. mountain air, baths) have become the means of implementation (Fóris and Bérces 2006). Exercising, health, and spending leisure time in a cultured way, which was often accompanied by spatial displacement (travel), became intertwined early on.

Recreation, as an academic problem, became an autonomous research area at a relatively later date. Its most important features were first explained with the terminology and within the system of notions and paradigms of other academic disciplines, including leisure time sociology and recreational geography. The situation was the same with sports. Sports research first developed within the framework of other academic disciplines and it was only at the beginning of the 21st century that sports science was declared an autonomous academic discipline (Bognár 2009). Research into tourism was launched earlier, because its area was clearly identified by geographers as early as the beginning of the 20th century. Tourism thus had a well-defined place on the border between human and physical geography. At the same time, the growing popularity of tourism, its increasing economic significance, as well as its becoming a mass phenomenon were all features, that have made it a multi-faceted and complex research topic (Aubert 2002). Health promotion as a technical term has only appeared in the health literature for four decades ago. The expansion of health promotion into the movement was fueled by the new realization that not only individual genetic, biological and external natural factors but also spiritual, community and social factors play a role in the state of health or the accouring of

diseases. At the heart of the modern concept of health promotion is a change in one's lifestyle. It is the process that enables people to gain control over their health and improve their health. Health promotion is actually a continuous personality development and lifestyle program (Pikó 2003). What we need to say is that substantial health-enhancing potential of physical activity can be only realised on population level best if people can incorporate physical activity into their daily life routines (Oja et al. 1998).

Actually all the four previously mentioned areas have become central topics in academic research when due to the developments of civilization and urbanization the relationship between humans and nature has been changed forever. The proportion of people who wanted to build a relationship with nature only temporarily, has been on the increase, and the harmful effects of modern life have become increasingly manifest. The self-definition and the emergence of the science of recreation (recreology, leisure sciences), sports science, health science and the science of tourism (tourismology) as autonomous academic disciplines were actually answers to the process of the differentiation of academic disciplines and social challenges. Today these academic areas integrate both natural and social sciences, they synthesize them into one new discipline and they are considered transdisciplinary areas. They use the terminology and the symbolism of several other disciplines.

On the other hand the ambitions and terminological disputes to legitimize the previously mentioned academic areas as autonomous disciplines have misinterpreted several issues onesidedly. Polemics beginning with the questions words: Where do these terms belong? Where are the boundaries? What is the exact term? – lead to uncertainties in our days as well. Current problems include questions like: Is tourism part of recreation? Are health enhancing activities parts of recreation, or vice versa?

Where are the boundaries of recreational sports? Is there such a phenomenon as sports recreation at all?

The main cause of dilemmas is that recreation, sports, health enhancing and tourism are all parts of universal human culture and as such they share a lot of common characteristics. They have many similarities concerning their aims, development, as well as the tools they use. In short, they have more features in common than differences. It is especially true when considering interdisciplinary areas, like health tourism or sports tourism. All these above mentioned areas are potential parts of people's lifestyle and they include optional human activities deriving from people's somatic and psychological needs, and which are aimed at the renewal of physical and intellectual energies. All of them have psychological, social and economic correlations and they are part of those activities, which are closely related to the geographical (natural and human) environment. An equally important aspect is that at the higher level of social development these areas become mass activities and – through related industrial and service activities – they speed up the economic development of the given country by creating jobs, stimulating markets and by increasing income.

The rapid integration of different forms of activity for the implementation of a healthy lifestyle has led to the formation of institutions that have combined the various possibilities of sports, recreation, a healthy lifestyle and patient care. Resorts providing resorts, spas, tourism, sports and medical services have been built, which, in line with local possibilities, performed their tasks with a team of suitably qualified professionals (Fóris and Bérces 2016). So, recreation, sports, health enhancement and tourism are intertwined in a way that their services are often offered within the same infrastructure. In common thinking these areas are often confused, and, it is not rare either that they, or some of them are

used interchangeably by specialist literature as well (e.g. Mitchell and Smith 1985).

On the basis of the above it has become evident that recreation, sports, health enhancement and tourism are not part of a hierarchical system (Győri 2015). It is misleading to think that one represents part of the other. E.g. tourism is not part of recreation, or, recreation is not part of health enhancement. All these areas have properties, which make it necessary to define them as autonomous and independent entities, consequently they are co-ordinates. At the same time, they have common areas which are determined by common goals, similar tools and activities. My model below cannot reflect the entire truth – and this is the nature of models in general – but it does explain its essence.

The relationship of these entities can be modeled with a triangular prism (Figure 1). The triangular base (ABC) of the model symbolizes staying in place, the triangular top (DEF) symbolizing temporary, voluntary absence, what we call tourism. The edges of the Sports (ABED), Recreation (BCFE) and Health Enhancement (ACFD) side panels form the edges of the lower and upper triangles, i.e. they can also be hypothetically realized locally and with a temporary spatial displacement connecting to the tourism system. Eg local recreational opportunities (BC) or health tourism (DF). Each of the side panels is in contact with the other ones, suggesting other close relationships: sports recreation (BE), health enhancing recreation (CF), health sports.

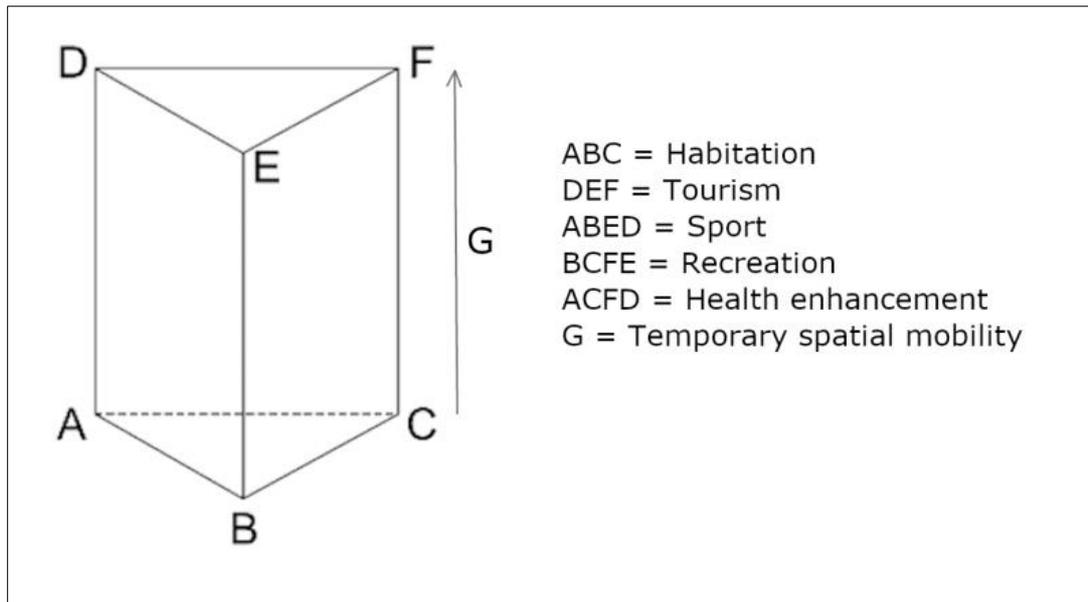


Figure 1: Triangular prism model of sports, recreational and health tourism (ed. by the Author)

Relationships are actually those kind of attributes that characterize two or more entities at the same time. For example, participating in a street running race is basically a sporting activity, but it can also provide a recreational experience (BE). Both together can be accompanied by travel and the use of tourist services too (E = recreational sports tourism).

According to the previously outlined characteristics the ‘meeting edge’ of recreation and sports covers activities which may be characterized by the features of both notions. In Hungarian and international specialist literature this area is called sports recreation and this term is interpreted as the synonym of leisure time sports and mass sports (Blagajac 1979, Kozmanovics 1989, Dobozy and Jakabházy 1992, Szabó 2006) underline, that sports is a community activity, it has beneficial physiological effects and it is at the same time, enjoyable. In the opinion of Kis (2002) the term sports recreation narrows the meaning down and burdened with inconsistencies since it denotes two contradictory value systems, i.e. achievement-oriented sports and the joy of well-being. Kovács (2002) thinks that the area between sports and

recreation should be called recreational sports, since, in his opinion this term emphasizes that sport is a mean to achieve an aim. Which of the two terms can be considered correct? Is there any better term available?

In connection with physical activities which are done with the aim of recreation, the term mobile recreation may be used (Drdácká 1984). It might include activities other than sports, for example dance, artistic movements, action games. The term seems to be good, but it does not mean to abandon the previously described terms of recreational sports and sports recreation. Both terms seem to be useful and their usage depends on the fact which distinct area (sports, or recreation) is in the focus.

The term recreational sports is interpreted within the realm of sports. It means that the person doing recreational sports has recreational motives, and, at the same time, he or she wants to benefit from the positive effects of sports, intending to optimize his or her psycho-physiological condition. It can be achieved within the wide spectrum of doing sports. In the strictest sense of the word recreational sports are really sports! It also concentrates on achievements, requires mental and physical efforts and, in addition to seeking recreational pleasures, it can be competitive as well. Achievement-centeredness – similar to competitive sports – is typical of the younger generation, engaged in recreational sports (1).

Leisure time sports, hobby sports, or competitive sports done by amateurs may root in recreation. At the same time, it is customary in Hungarian literature on recreation that sports training and recreational training are described by using different parameters (e.g. frequency of training programs, intensity, pulse rate) (like Szabó 2006, Kovács and Szollás 2008). It is misleading, too, that rehabilitational, fitness and health training programs are often called recreational programs. These indicators are suitable to evaluate only one cross section of sport, i.e. its impact on

people's physiology and health, but in this case the recreational impact of sport remains undetected. Those general(?) indicators which are typical of recreational training programs are rarely specified. The number, length and intensity of weekly training programs might vary depending on the purpose of training. Health, fitness or rehabilitational training programs are different. Consequently, when planning a recreational training program, it is important to consider the chronological, biological and training age of those in training. It is important not only in order to optimize the physiological effects, but also because it is necessary to make the training a joyful event.

All the above statements prove that it is a mistake to interpret the relationship between recreation and sports as a hierarchical relationship. Recreational sports are not always a lighter, lower-level sports activity, but, it is an activity, synthesizing the characteristics of sports and recreation. It is also important to note that recreational sports can occasionally be an extremely high-level activity, uniting both the achievement-centeredness of sports activities with the joy and motivatedness of recreational activities (Pálvölgyi et al. 2020a).

When describing the recreational function of sports it is also important to mention recreational experience (Gray 1978). It can be identified with the so-called 'flow' experience (Jackson and Csíkszentmihályi 2001, Kovács 2002). The flow may be experienced by each sports person, who would like to have optimal experiences in exchange for his or her efforts. From this point of view it does not matter what the original motivation of the person was: recreation, or the improvement of his or her health condition.

Doing sports becomes a real experience if it is aligned with the appropriate physical activity and training load. There are many sportspeople who are amateurs, not professionals, (but who belong to the category of 'true' sportspeople), who work very

hard in their chosen type of sports on a daily basis, only for the joy of it. An important momentum of recreational sports that everybody can find challenge and joy in it. The research work carried out by Balogh and Domokos (2013) can be quoted here as a good example. The researchers concluded that the flow can be found in traditional recreational activities, in leisure time activities and in competitive sports as well. Surveys were done in the group of hip-hop dancers and handball players respectively, and the results undoubtedly prove that no significant differences could be found in the two groups concerning the flow experience. Briefly, both types of physical activities lead to a flow experience.

Sports activity functions a reward; this way the sportsperson is not only a subject, but also a creator of the flow experience (Jackson and Csíkszentmihályi 2001). The intention of improving our health, or losing weight might serve as motivators, too, to do some sports. On the other hand, if we are not rewarded by the enjoyment of it, the recreational nature of the activity is questionable. Those people who do sports under compulsion, would sooner or later get bored and give up on it.

One more beneficial psychological effect of recreational sports needs to be emphasized: it influences creative thinking in a positive way (Gondola and Tuckman 1985, Steinberg et al. 1997, Cavallera and Boari 2011). Those people who are physically active are also stable emotionally and, if certain types of physical activities are compared, it can be stated that it is sports that has the most beneficial effect on the health condition of people (Pálvölgyi et al. 2020b). It is the combination of different types of sports that makes recreational activities the most efficient (Carmont 2012).

The list of the beneficial social, economic and health enhancing effects of recreational sports is very long. But now it is time to go back to terminological problems again. Having overviewed the

characteristics of recreational sports we are back to square one. The only difference is that now instead of sports symbols it is the symbolism of recreation that guides us.

As mentioned above, sport tourism, that is sport-oriented leisure time activities, done at places other than one's place of residence, includes very diverse activities from the discovery of nature's beauty to doing sport activities in man-made environments. The interrelatedness of sport and tourism is caused by spatial and temporary changes of societies, a fact, that is closely related to the quality of life, health, social intellectual and emotional conditions of individuals, who make up the given society. Spending one's leisure time has become a more conscious activity, changes in recreation, the slogan 'do sports wherever and whenever you can' have led to an increase concerning the number of sportspeople, and it had a tremendous effect on one type of sport, the so-called health sport. These features led to new services, new industries, wonderful business opportunities and created an enormous new consumer market (Turco et al. 2002, Hsu 2013). In general it can be stated that the exceptionally close link between sport and tourism is available for members of the middle and upper classes of developed societies (1).

So, sport tourism is a new trend, a new way of spending one's leisure time in the modern age. It is an indicator of modern lifestyle, and an important factor of global development (Giddens 2001). Sport tourism has an enormous potential for development. The international academic community devotes an increasing attention to the investigation of the relationship between sport and tourism. This trend is attested by the fact that the International Olympic Committee (IOC) as well as the WTO organized many conferences on this topic during the past two decades (Hsu 2013). Sport tourism includes all those sport-oriented travels and activities, which are aimed at actively or passively participating in sport events. Consequently, sport tourism can be considered one

branch of tourism in which sport has many different roles: adventure tourism, competitors' tourism, supporters' tourism, nature lovers' tourism, sport educators' tourism (Delpy-Neirotti 2003). On the other hand, there are situations, when tourists travel for pleasure and in addition, they also enjoy one or another type of sport event. It is called the sport of tourists.

It is obvious that recreation, the physical and intellectual rejuvenation of people is one of the main aims of tourism. Due to peoples financial wealth, paid holidays from work, the development of transport and production, increased buying power of consumers have made recreational tourism a mass phenomenon. Its driving force – to relieve civilizational stress – is active recreation, the creation of well-being, the restoration of one's working capacity, the preservation and improvement of one's health. It included a variety of tourism activities from getting acquainted with faraway and exotic places or enjoying seaside holidays and participating in cultural programs and different forms of entertainment.

The main aims of recreational tourism include active participation in some kind of recreational activity, or, participating in a sport or cultural event as spectator (e.g. going to a play in a theatre). Intellectual recreational activities are also realized within the framework of tourism. Cultural tourism can be taken as a good example. Visiting castles, folk art museums, religious tourism can serve as examples. Gastronomy is also important from this point of view (1). The recreation of tourists primarily means recreational activities done by travellers. They may use those recreational opportunities, which are offered by the natural or man-made environment of their destination.

Recreational tourism shares many common attributes with health tourism. Health tourism can be defined as an area of tourism where the main motivation of the traveler is to improve or maintain his/her health, i.e. healing or prevention. Basically, we

distinguish three major areas in health tourism: traditional, therapeutic-based medical tourism, wellness tourism, and the increasingly popular medical wellness tourism. At the same time, we must also consider that guests arriving at a destination not for healing or prevention purposes, are expecting a high level of health services in developed countries nowadays.

HEALTH TOURISM

2. THE PHENOMENON OF HEALTH TOURISM

The term health was defined by the WHO in its document “Global Strategy for Health for All by the Year 2000” (1979) as a state of “total physical-mental and social well-being”. Despite the fact that in the past most people first sought the health or recovery near their homes, some of them travelled for health reasons. The spatial mobility of patients and of those healthy people who wished to preserve their health, gained a special significance in the second half of the 20th century. In the opinion of tourism experts it is health tourism that shows the fastest growth within the tourism sector in the 21st century. This growth is intensified by the demographical situation of developed countries, namely, the fact that the 50+ age group, which is the most willing to travel for health reasons, are increasingly becoming active travellers. Quality assurance as well as the improvement of the conditions of medical treatments and of the places of treatments of rehabilitation are of utmost importance for all ageing societies. On the other hand it is a general tendency in societies that people are becoming more and more health-conscious, meaning, that they want to prevent illnesses and preserve their good health. Thus the target market for health tourism services is growing and the aspect of prevention is becoming more and more emphatic (2). Due to these characteristics it has become evident that the interest of the younger generations in health tourism has intensified, especially in its new and fashionable forms (Sándor 2011). At the same time there are several cases when one can also find economic motives behind health tourism, since many people travel because they may have access to cheaper medical treatments abroad (Fenyvesi 2010).

Health tourism is a relatively well researched area both in Hungary and abroad and today there are diverse specialized

articles, journals and magazines available for researchers. Due to this fact health tourism does not have a single and accurate definition and there is no agreement on this issue in specialist literature either. It can be explained by the fact that in different cultures – even within the same country – different aspects of health tourism are emphasized (Sziva 2010). On the other hand experts agree that health tourism is a branch of tourism in which the primary goal of travel is the preservation and/or the improvement of one's state of health (Michalkó 2004). The preservation of good health, mental and physical conditioning (recreation), prevention, medical therapy and rehabilitation play the most significant role in health tourism. It was in 1973 that The International Union of Tourist Organizations (IUTO) redefined health tourism saying that it is the provision of health facilities utilising the natural resources of the country, in particular mineral water and climate (Smith and Puczko 2010). The places, which provide health tourism services and generate economic activity, are called destinations. In a formal sense health tourism is the utilization of two kinds of services – health and tourism services – at the same time. In its functional sense it is a behaviour aimed at becoming or keeping healthy, through the use of tourism. It follows that a successful health promotion services can only be implemented by applying the results of behavioral research.

Depending on the motivation of travel – prevention of a disease or recovery from a disease – there are two different kinds of sub-categories: wellness-tourism and medical tourism.

The former one is also referred to in the literature as 'preventive, recreational' tourism (Kincses et al. 2009), which refers to its health aspect in relation to prevention. At the same time, there is a much broader interpretation of term 'recreation' in sports science. In terms of the health significance of recreation, it may include prevention, but it means much more (e.g., challenge, experience, adventure). Therefore, we are satisfied with the term 'wellness

tourism', which is very common in the Hungarian literature (Smith and Puczkó 2010, Laczkó 2015). Since all wellness services represent the cultured way of spending one's leisure time with health enhancing activities, wellness tourism can be considered as a form of recreational tourism.

By European data about 30% of all health tourism travels belonged to the sub-category of medical tourism, while 70% of them could be defined as wellness tourism in the year 2003.

The offers in the area of medical and wellness tourism are mostly – but not exclusively – related to natural factors and the services depending on them.

The therapy, using natural or artificial cures and the physical and chemical energies in them is called physiotherapy. The term itself comes from the Greek language. The word of Greek origin, „physis” means nature, while the word therapy means cure. The task of physiotherapy is the prevention of diseases, the prevention of a new attack of an earlier disease, specialized and symptomatic treatment (Csermely 2002). The subcategories of physiotherapy include spa treatment, balneotherapy, mud therapy, electrotherapy (small, medium and high frequency and electromagnetic treatments, phototherapy, thermotherapy, mechanotherapy, medical massage, climatic therapy, drinking cures, diets and inhalation therapy (Heim 2004).

Both in wellness and medical tourism the main attraction is water. Its physical qualities (pressure, bouyancy) as well as the absorption or the inhalation of the substances in it might aid the body's healing processes, boost the operation of bodily functions or the upkeeping of the body's optimum condition. In addition, staying in water or performing physical movements in water relax the human psyche and give bodily pleasures. Considering the fact that waters utilized in therapies and wellness programmes are most often warm (thermal waters), the so-called thermal tourism is an outstanding component of medical and wellness tourism.

Actually, it depends on the strategic choice of the individual – the potential tourist – which form of tourism or what combination of these categories he or she chooses to utilize: medical tourism, thermal tourism or one of their versions, combined with some sport or hobby activity (Tasnádi 1998). Today health tourism is naturally not just water or some water-related treatment, but its main appeal is its diversity, a holistic, multi-faceted and complex solution of patients' health problems.

2.1. Wellness tourism

The primary goal of wellness tourism is keeping one healthy. First it emerged in the developed countries as a counter reaction to a situation in which citizens were more and more aware of their exposition to dangerous diseases. The word wellness – which was first used in its modern sense overseas in the late 1950s – is a mosaic word consisting of the words well-being and wholeness. According to another opinion it was coined from the words well-being and fitness, as an opposite of the word illness. The word in the form 'wealnesse', meaning 'good health', was first recorded as early 1654 (Hegedűs 2006). If we accept the idea that the word was used as the opposite of the word illness, that is, its meaning is health, then wellness primarily represents lifestyle, the optimal harmony of body, soul and mind. Wellness is actually a life philosophy and it is relevant in everyday life, too. In a holistic sense it is a synonym for the harmony of physical, spiritual and mental abilities, thus it means the complexity of prevention, regeneration, relaxation and fitness. The American view sees wellness as an everyday health promotion concept based on its own initiative and responsibility, while in Europe it refers more to the vitalizing and relaxing opportunities for physical, mental and spiritual well-being used in purpose-built centers (Laczkó 2015). In specialist literature the kind of lifestyle, which is based on the

philosophy of wellness, and which aims to create harmony between body, soul and mind and intends to foster a positive self-image, is called selfness, while mental fitness is known as mindness.

In summary, wellness means that people strive to live a health-conscious life, in addition, they are able to improve or preserve their own physical and mental health. It is very difficult to keep to these principles in everyday life and situations, accordingly, there is an increased demand on the part of patients to use occasionally the services of animators, recreators and tourism experts. In tourism it has been recognized that all these features have to be provided for patients in a complex, as well as spatially and temporarily concentrated form. “This is why wellness hotels sprang up fast, where patients spend 3-7 days in luxurious setting with the aim of changing their lifestyle, concentrating on the preservation of their health, doing exercises on a regular basis, eating healthily and avoiding health damaging habits” says Michalkó (2004, 154).

The literature distinguishes between the holistic and leisure/recreational trends of wellness, the former one of which tend to be more of the mental (e.g. spiritual, meditative, new age) dominance, while the latter one is more of the physical (fitness, health, pampering, beauty) dominance emphasizes. Medical wellness tourism can be seen as a combination of wellness and medical tourism, in the sense that in this case wellness methods and tools are typically used in wellness facilities, under the supervision and management of the medical profession.

Tourists’ demand is provoked by their desire to change environment, their discretionary income that makes it possible to use the services, as well as their leisure time. On the demand side of wellness tourism one can find healthy individuals who, using their own money and leisure time, take advantage of a tourism package comprising health care elements and at the same time

they are occasionally enjoying the support of private health insurance companies.

The preservation of health, prevention, beauty care and keeping the harmony of body and soul will gain an increasing significance in the future, too, as the main motivation for travel. Initially families, and later – due to the expansion of one's social space – schoolmates and colleagues play an increasingly significant role in the formulation of a health-conscious lifestyle. Employers may also contribute to the preservation of health (worksite wellness) and they may provide their employees with fringe benefits to contribute to their travel costs (e.g. holiday vouchers) (Molnár 2011).

The main goal of guests who use wellness services on a voluntary basis is the creation and the preservation of harmony (physical, mental, emotional) necessary for health. Those people who primarily go for spa or wellness experiences are relatively young, or middle-aged. In specialist literature the kind of lifestyle, which is based on the philosophy of wellness, and which aims to create harmony between body, soul and mind and intends to foster a positive self-image, is called selfness, while mental fitness is known as mindness.

Consequently, on the demand side tourists are increasingly health-conscious, meaning, that on the market of health tourism today it is absolutely necessary to offer medically-based wellness services with long-term health benefits. This is the main reason why the so-called medical wellness, combining the elements of medical and wellness tourism, has lately gained extraordinary importance. The guests of medical wellness are people, who are in need of treatment, but who want health improvement by adopting wellness philosophy and using its medically-based tools. It is worth noting here the expansion of medical wellness in Hungary is due to a general German-Hungarian cooperation; Germany is our primary sending market, and Hungary needs to

meet its needs (3). Other important sending countries in Europe include Austria and the United Kingdom.

Hungarian researchers have also noted that when considering people's motivation in wellness tourism the desire to follow fashionable trends is occasionally more important in our country than pure health consciousness (4). In addition to health tourism services there is a notable demand, too, to explore cultural and intellectual experience opportunities and enjoy recreational programmes. When improving wellness tourism services it is an important factor to consider that the needs of different co-travelling generations need to be satisfied (e.g. children-friendly swimming pools, anti-ageing programmes). However, wellness tourism is an extremely complex family of tourism products, as travel motivations can vary greatly from individual to individual, from one stage of life to another, or even from one life situation to another (Laczkó 2015).

Wellness tourists generally stay for a 3-day–1 week period. They usually prefer accommodation of higher quality (3-5 star hotels). Seasonality does not play a significant role in wellness tourism, but weekly fluctuation may be noticeable (e.g. weekend tourists). When considering the basic trends it can be seen that there is a considerable difference between the needs of tourists who come from Central and Eastern Europe, from Western or Northern Europe, or from North America.

Service providers, who represent the supply side of wellness tourism, offer attractive environment and leisure time activities, complex health preservation and prevention programmes and, at the same time they give an opportunity for their guests to learn about health issues. There is a difference between active (e.g. sport) and passive (e.g. beauty programmes) wellness, but in both groups there are varied services including traditional medical treatments as well as spiritual programmes. The most significant principles include health-conscious behaviour, regular exercises,

healthy eating, refraining from health damaging habits, avoidance of stress, relaxation, mental and spiritual harmony, beauty care, and, at last but not least, environmental awareness (Albel and Tokaji 2006). The convergence of wellness tourism with other tourism products is clearly visible both in the world and in Hungary. There is a particularly close link between certain types of professional tourism (mainly conference tourism) and wellness tourism (Laczkó 2009).

Wellness hotels are establishments with a minimum of one pool and one sauna or steam bath. In addition they provide a minimum of 5 different ‘beauty and style’ services, eleven different therapeutic services and relaxation programmes. It is also one of the basic requirements of wellness hotels to support nutrition reform and to provide guests with opportunities not only to work out using cardio – and muscle – building machines but also to do different kinds of sports (min. three) and to enable guests to participate in a variety of (at least two) community building programmes (5).

Due to environmental characteristics and innovations new success factors have been identified in the supply of wellness tourism today. These new trends include for example local authentic treatments (e.g. alpine wellness), several unique services including fitotherapy, vinotherapy, and the ‘male segment’ (Smith and Puczkó 2010). Unfortunately, at the same time there are cases when using wellness as a buzz word, several providers promote themselves even if their services do not belong to the category of wellness (Hojcska and Szabó 2010).

2.1.1. Spa and wellness

‘Spa’ has become a wellknown word to describe a place where wellness programmes are organized. On the other hand it is difficult to define its meaning because it is very complex and also because it may vary from country to country. As far as the origin

of the word is concerned, there are two ideas. One concept is that the word derives from the Latin phrase ‘sanus per aquam’ or ‘salus per aquam’, that is ‘health from water’. The other idea is that the word comes from the geographical name of Spa, a famous Belgian town, known for its medicinal baths (Albel and Tokaji 2006). Specialist literature in the English-speaking countries first used the term to describe the preservation of health by using water. The International Spa Association (ISPA) defined it differently. Spas are places devoted to overall well-being through a variety of professional services that encourage the renewal of mind, body and spirit. The spa-experience basically comprises four areas, i.e. relaxation,, reflection, revitalization, and rejoicing. It is usually referred to as the complexity of the 4Rs that is relax, reflect, revitalise, rejoice (Smith and Jenner 2000). Considering the tipology of the International Spa Association there are several types of spas including club spas, daily spas, holistic spas etc.

In Europe spas as health service providers are mostly associated with the provision of services related to medicinal waters, but in today’s spas different fitness programmes and beauty care treatments also play an increasingly significant role. Thermal water treatments are not among the compulsory spa services in America or Asia. The American-type spa is increasingly becoming a health-centered institution because service providers pay a special attention to healthy eating, exercising, beauty and body treatments and meditation. In addition to conventional western treatments American spas also utilize ancient cures deriving from North America or the Far East. “The two processes point to the same direction: due to these characteristics wellness-orientation has strengthened both in Europe and the United States” (6).

The terms ‘spa industry’ or ‘wellness industry’, which is mostly used in English terminology, is similar to the term we use in

Hungary to describe health tourism. The difference is that the English term has a broader meaning, and it emphasizes the economic significance of health tourism as well. This approach can be justified by the fact that spa and wellness services can be used not only by tourists but by local residents as well. An additional fact in this respect is that the term ‘Health care industry’ is also in use, and it incorporates all those elements, which are necessary for the operation of the health care system (e.g. pharmaceutical industry, herb industry, the production of therapeutical and medical equipment). At the same time it is necessary to note that the term ‘industry’ is not relevant in the Hungarian context, since here we emphasize the ‘service’ element of it.

Participation in health promotion or health enhancing programs could only be successful when that is ready to change certain elements of the guests’ lifestyle with taking into account the behavior and the specificities of that specific subpopulation. For some tourists, health does not appear as a motivation. It can also be seen that in this case there is an overlap between the fitness trend of wellness tourism and recreational motivated sports tourism. Leisure and recreation wellness tourism focuses on the goal of preserving and improving health, primarily through vitalizing, relaxing, pampering, fitness, beauty and community development tools and programs.

2.1.2. Recreation and wellness

According to the current academic terminology the notion of recreation means the culture of spending one’s leisure time, active recreation, wellbeing, joy, the regeneration of one’s working capability, the preservation and improvement of one’s health. Recreation is a kind of positive behavior – individual and social – which is aimed at the formation of people’s somatic, psychological and social wellbeing (Pigram 1983, Harsányi 1991,

Cushman and Laidler 1990, Kovács 2002, Szabó 2006, Bánhidi 2012) (1). As an essence of several of its definitions it can be stated that recreation goes back to people's natural needs, it is related to culture and leisure time, and it gives experience, and joy. Recreation results in improved physical and psychological conditions. The classification of recreation is based on its main objectives. Its most important categories include outdoor, health preserving, and adventure seeking recreation. Within this, wellness activities belong to the health-preserving type (1).

Recreational physical activities have beneficial effects on general fitness and health, reduction of overweight and obesity, healthy functioning of the cardiovascular and cardiorespiratory system, skeletal system, hormonal system. Exercise improves the ability to think clearly and consistently, improves cognitive functions, and has been proven to be an effective tool in the prevention of Alzheimer's disease and Parkinson's disease (Radak et al. 2010; Radák 2016, Radak et al. 2019). It develops and strengthens the ability to cope successfully, encourages ever-increasing challenges. Recreational sports, whether for intact or disabled people, presuppose the work of coaches, physical educators and recreationists who are well versed in the field and have up-to-date knowledge.

Another feature of recreation that needs to be emphasized is the presence of recreational experience. Its components- among many others - include (Gray 1978) novelty, originality, self-discovery, timeliness, sense of freedom, identification with the activity, rewarding efforts, pleasurable memories and the unity of body and mind. The majority of recreational activities is organized within a group of friends, family members and they are less related to external organizations or facilities (Kiss 2009a).

It is easy to see that wellness and recreation come in contact on a large surface. While the health tourism literature views certain recreational activities as part of wellness, the sports science

literature interprets wellness as part of recreation. At the same time, leisure and recreational wellness tourism is one of the most controversial areas of health tourism. Is anybody motivated to maintain or improve his health in time spent in adventure baths or aquaparks? To what extent do weekends spent in wellness hotels focusing on exclusive consumption contribute to health? asks Laczkó (2015).

2.1.3. Medical wellness

It has for over a decade been increasingly evident that wellness tourism and medical tourism, the two main branches of health tourism go a long way towards each other. This fact can be explained with two reasons. On the one hand there is a growing number of developments which incorporate wellness services in medical establishments, and where medical treatments and wellness services complement each other. On the other hand as it was stated before, these days it is an important market requirement that – apart from being pleasurable pastime activities –, wellness services offer long-term, scientifically approved health programmes.

As a result of all the above factors a new health tourism product appeared on the market, the so-called medical wellness, an area, which combines the benefits of both wellness- and medical tourism. It is the combination of services, which are provided in wellness-centres by physicians and other trained medical staff and where, after assessing the patients' status personalized treatments are selected and offered for them. So, medical wellness is a link between wellness-, and medical tourism. Its new features are the assessment of the patient's status, planning and control by medical staff.

One of the trends in medical wellness tourism is the field of workplace wellness. Interest in work-related wellness is growing on the part of both employees and employers to maintain health

and reduce absenteeism on the one hand, and to build teams, reduce stress, or develop personality on the other.

2.2. Medical tourism

Medical tourism means the travel of people to resorts other than their own place of residence for the purpose of obtaining medical treatment and using other tourism and recreation services. Both the treatment of the concrete disease or the patients' follow-up care are linked to natural resources including thermal waters, medicinal caves, medicinal clay or a unique microclimate. All these factors are available within the framework of spas, health care institutions and sanatoria. So, medical tourism is the provision of health tourism services with the aim of the concrete improvement of one's health conditions, including recovery, the reduction of complaints, the stabilization of one's state or the restoration of lost capabilities (Kincses et al. 2009).

On the demand side of medical tourism one can find patients who suffer from chronic diseases, or those who want to have their pain relieved; simply, those people who are in need of some kind of medical treatment. It is mainly the medical effects of some natural resources and the therapies that these people expect the improvement of their health conditions, while, at the same time, they also use other tourism services. In Hungary the treatments are often prescribed by physicians and they are partially or fully financed by the national health insurance. Although the share of self-financed treatments is growing. It is also typical of medical tourism that the people concerned primarily consider themselves patients and in their opinion they do not qualify as tourists (Hojcska and Szabó 2010).

Primarily it is the group of the elderly who use the services of traditional spas. Compared with other social groups they have less money to spend on wellness services and the services offered to

them are often subsidized by the state or some state or private insurance company. In spite of these features specific spending on hotels in Hungary has increased by over 1.5% (Bodnár 2000).

In the market of medical tourism the development of the so-called clinical, or, with other words, healing or health tourism services have gained impetus. These services – so as to distinguish them from those which are built on the use of natural resources – primarily use high-tech-based medical services and treatments. Examples include dental treatments, laser procedures, cardiological treatments and plastic surgery. These procedures may be complemented by other alternative and therapeutical treatments.

In clinical tourism there are in-patients and outpatients as well, but they can only be considered health tourists in case they also spend money on tourism services. Patterns of travel between source and destination countries are well-established: e.g. those accessing medical treatment in Hungary tend to be from Western Europe and some countries exploit longstanding historical ties, e.g. between the UK and Cyprus (7).

This form of tourism originally gained significance in Hungary's border zone areas, which are easily accessible, and the prices of health care services are cheaper than in the patients' home countries. Patients primarily came to use the services offered by Hungarian dentists, oculists and plastic surgeons.

In addition to the traditional Austrian patients today there are patients from more distant countries as well, including Switzerland, Germany and the United Kingdom. EU regulations as of 2004 have made it possible for EU citizens to use health care services in EU countries other than their home country in urgent cases and if care cannot be provided to them in their own country within a reasonable period of time. In order to grant the basic principle of the 'free movement of services', the EU regulations concerning patient mobility permit the choice of

cross-border health care institutions, that is, it allows people to use services other than emergency services in other countries (Kincses et al. 2009).

There is a growth of demand for health care worldwide if health insurance in the given country is based on business principles (e.g. U.S.A.) This is why insurance companies themselves are interested in purchasing cheaper services abroad. The situation, when the patient does only have a partial health insurance, or does not have an insurance at all, would also generate patient mobility. Today the number of Americans who travel abroad to have medical treatments or be operated on, exceeds 10 million annually. (There are about 45 million people who have no insurance and there are further millions underinsured.) “These people are better-off if they pay for occasional health care services abroad themselves than paying the high insurance fee regularly in their home country” (Kincses et al. 2009, 36). Their target countries include Italy, Thailand, Malaysia, and Singapore (8). Annually about 150,000 American patients are treated in India only.

Clinical tourism is such a sub-category of tourism which generates higher- than- average income. It is due to the fact that ‘clinical tourists’ spend more time at their destination than average tourists. By recent statistical figures instead of the average 4 nights, ‘clinical tourists’ spend an average of 13 nights at their destination. When assessing the annual distribution of tourists it can be stated that there are no drastic seasonal differences, albeit some growth of demand can be seen in the spring and fall seasons.

Traditional (therapeutical) medical tourism is related to natural resources including thermal waters, medicinal waters, mineral waters, medicinal clay, medicinal gases, sea water, special climatic conditions and cave microclimates. It is a general tendency that physican-prescribed medical programmes are

complemented by different physiotherapeutical treatments as well as lifestyle and nutritional counselling and/or the organization of cultural programmes. Considering international markets the redefinition of medical tourism services is gaining importance according to which traditional therapies (cures) co-exist with modern methods and philosophies, offering a holistic state of well-being.

2.2.1. Healing places, healing landscapes

The kind of medical tourism, which is based on natural resources, offers spatial-specific tourism products, meaning, that the characteristics, attraction and infrastructure of these products mainly depend on the geographical features of the given space (Michalkó 2004). The problem of healing places and healing landscapes was first investigated by researchers within the topic of the geography of health (Gesler 1993, Williams 1998, Wilson 2003). The categories of healing places and healing landscapes include a wide range of localities, taken together with their physical and spiritual environments, all of which have traditionally been famous for their healing qualities in treating illnesses of the mind and the body. Spas, mineral springs also belong here, which have always been visited by people with the aim of recovering from a disease, washing and cleaning, relaxing and revitalizing. Many of these places – thought to have been the scenes of miraculous healings – have become destinations for pilgrims (e.g. Bethesda-Lake, Lourdes). “The most important aim of pilgrimages, typical of Catholic religion, is penitence, but this aim is often complemented by the wish to recover from a disease. The statue or the picture of the patron saint of the place, the local spring or well is thought to have miraculous healing powers (Juhász 1998, 156-157)”.

The basic factors, leading to the emergence of spas and places of pilgrimages were very similar. Capitalist development, leisure

time at people's disposal opened up new dimensions for the development of spas. On the one hand holiday-making and entertainment also appeared as activities of importance, while on the other hand, due to changes in people's views of nature, it was thought that recovery did not directly come from God, but it did come from natural resources, for example from medicinal waters, which were considered as gifts from God (Kósa 1993).

When visiting spas people's emotions, their love of a certain (healing) place (the so-called topophilia) also played a role. The mere thought that they could directly experience the place and its atmosphere had a beneficial effect on people's physical health and psychological well-being (Curtis 2004). This aspect has a special importance when visiting certain natural landscapes or man-made destinations which offer nature-related experience, for example recreational parks or therapeutical gardens. These places, due to their beauty, varied features, their quietness or wildness, may become a refuge for the modern man, who wants to get away from stress, noise and the ugliness of his industrial environment. Consequently, a place, a locality is much more than a simple symbol. Place, landscape and health are interrelated and the relationship between them is to be interpreted holistically, and in their culture-specific dimension.

In the developed countries the criteria for officially becoming a spa are very strict. In Hungary a spa can be a settlement, or part of a settlement which can take pride in one or another healing factor and an institution which is used for treatments (medicinal baths, hotels, or sanatoria). It is one of the basic requirements from this point of view that the environmental conditions, granting the undisturbed healing process, be also given. These factors include the cleanliness of the air, low noise level and well-tended, nice green areas. Infrastructure also plays a role in the process, including public utilities, transport, mass communication, communal and public services.

Some of these healing places have been functioning traditionally, without radical changes in profile, but there are some others, the functions of which got complemented or changed with time. Davos in Switzerland can be quoted as an example, which used to be a spa, but today it is known as a ski resort (Tasnádi 1998).

‘Spa region’ is a relatively new term in specialist literature; it is “an area with a diameter of about 20-40 kilometres, which comprises a variety of medical and wellness components – natural resources, natural surroundings, cultural heritage – and elaborates competitive programmes and offers and operates them for wellness and medical tourists (Várhelyi 2011/12, 16)”.

Thermal baths, spas and climatic sanatoria are establishments which treat or rehabilitate patients by exploring some of the natural resources in their surroundings. In order to function properly they need quality specialist staff and experience, primarily in the areas of rehabilitation, cardiology, rheumatology, and geriatrics.

2.2.2. Natural healing resources

Natural healing resources – as it was mentioned before – include natural phenomena such as thermal and medicinal waters, mineral waters, sea water, medicinal clay, gases, unique climatic conditions or cave microclimate. First of all underground waters need to be surveyed.

2.2.2.1. Thermal and medicinal waters

Considering their location and structure underground waters can be grouped into categories as follows: soil moisture, subterranean water, layer (stratification) water and crack water. Considering our topic the last two groups are of special significance. Layer water, or stratification water can be found between two impermeable layers of rock. Crack water (in limestones it is

called karst water) is water which can be found in the cracks of rocks.

Those underground waters can be called mineral waters which do not contain harmful substances and their mineral content is a minimum of 1 g/1,000 mg.

Acknowledged by Hungarian regulations mineral waters:

- a) derive from naturally or artificially protected underground water sources,
- b) at their place of origin they are pure, free of anthropogenic pollution,
- c) In their natural form they are harmless for humans from microbiological and chemical point of view,
- d) their composition and dissolved mineral content when measured at the source is nearly constant,
- e) their dissolved mineral content is at least 1,000 mg/l, or their dissolved solid mineral content is between 500-1000 mg/l and they contain one of the following biologically active substances (Table 1).

Table 1. The lowest end value of biologically active substances in acknowledged mineral waters. Source: Amendment No2. to decree 74/1999. (XII. 25.) EüM. Source: (9)

a) External use	Quantity
Litium-ion	min. 5 mg/l
Sulfid-ion or titrable sulphur	min. 1 mg/l
Bromid-ion	min. 5 mg/l
Iodid-ion	min. 1 mg/l
Silicate acid	min. 50 mg/l
Radon-activity	min. 37 Bq/l
Free carbon-dioxide	min. 1000 mg/l
b) Internal use	
Sodium-ion	less than 200 mg/l
Magnesium- ion	min. 20 mg/l
Calcium-ion	min. 60 mg/l
Fluoride-ion	0,8-1,2 mg/l
Free carbon-dioxide	min. 1000 mg/l.

The above criteria meet the requirements of external use. If mineral waters are used internally, they may be consumed without any restriction if their mineral content is optimal or near optimal for humans, that is, they are suitable to meet fully or partially our biological needs for water. They can be consumed with some restrictions if their mineral or biologically active substances content in smaller quantities is beneficial for health, but their effect is undesirable if they are consumed excessively. Those sparkling waters which come to the surface as a result of post-volcanic activities, are called acidic waters. They include 'borvíz' in Transylvania, or 'csevice' in Hungary's Cserhát and Mátra regions (e.g. Tar, Maconka, Mátraszöllös, Parádsasvár, Bükkszék) (Jakucs 1999).

Medicinal waters are natural mineral waters with proven therapeutical effect. Their therapeutical application in treating certain diseases has been identified using strict medical tests and thus officially these waters are allowed to be called 'medicinal waters'.

When using medicinal waters externally as bathing water, they have to meet the general criteria of mineral waters when used externally and, their dissolved mineral content and chemical characteristics should not contain substances which could have a harmful effect on health (10). The testing of medicinal waters in Hungary is done by the National Medical Office, General Directorate for Spas and Medicinal Baths. The first step – following a series of chemical analyses – is to acknowledge the water in question as mineral water. Then the medicinal effect is being tested with the so-called 'double blind test'. In the testing process 10 patients have baths in the chosen thermal water, while another group of 10 patients have baths in heated tap water. Neither participant knows which group he or she belongs to. The results of the test enable the Office to present a suggestion for the acknowledgement of the water in question as medicinal water.

When used as bathing water it should be noted that the water temperature and the appropriate water treatment technology should be selected carefully not to damage the biologically active components of the water. In most cases – but not always – medicinal waters are hot, that is they are thermal waters. It is not typical in Hungary, but in other countries the medicinal waters are common with a temperature below 20 °C. The temperature of these waters need to be raised in order to make them suitable for bathing.

Medicinal baths are usually opened in the vicinity of hot springs, driver wells and mineral springs. It is in these establishments that a full range of physiotherapy treatments is offered to patients while utilizing the beneficial effects of medicinal waters, medicinal clay, or other natural substances. In many cases swimming pools, steam baths, pleasure baths and hotels are also parts of the medicinal complex.

When used internally medicinal waters should meet mineral water criteria and they should be suitable for drinking and/or inhaling and they should have a medically proven beneficial effect on health. When medicinal waters are used for the purpose of drinking cures the medically proven indications and counter indications as well as suggestions for consumption need to be noted on the label. When used externally as bathing water information should be given near the pool area for patients on what diseases and symptoms the water has beneficial effect and in what conditions it is not recommended for use. These are called indications and counter (contra) indications. If patients do not have a referral given by their doctor, they should carefully study the components and the therapeutic effects of the water and the list of indications and counter indications.

Geothermally heated groundwaters with a temperature higher than a given value and which erupt or are brought up artificially from underground are called thermal waters or hot waters. Due to

the heating effect of geothermal energy the deeper the water derives from the higher its temperature is. The deeper we go, on average the temperature rises 3°C, but it might vary depending on the geological structure of the place. In Hungary this value is 5-8°C. The thinner crust of the earth and the volcanic activities may raise the temperature. Due to varied geological features the lower values of the temperature of thermal waters are different from country to country. The lowest value might depend on the area of use as well. Low values are as follows:

From a hydrogeological point of view the temperature of thermal water exceeds the value of the annual mean temperature (In Hungary it is cca 0°C); From a balneological point of view waters with a temperature above 20°C are considered thermal waters (General definition in Europe). Considering Hungary's favourable geological features (the higher value of geothermal gradient), in Hungary those waters are considered thermal waters, the temperature of which reaches or exceeds 30°C.

The mineral content of the deep layers of the earth's crust are also dissolved in thermal waters, so they are also considered mineral waters as well in many cases with considerable healing effects. The geothermal energy of thermal waters is used in many ways. Thermal waters can be used to heat pools, homes, greenhouses, or they can be used to generate energy.

Variations of the word 'hot springs' (hévíz in Hungarian) may often appear in geographical names. Examples include Galgahévíz (Pest County), Hőlak (a settlement northeast of Trenčín in Slovakia). The town of Tapolca (Veszprém County), Teplice (a town in the Czech Republic) Toplica (a river in Croatia).

In the northern part of Europe (e.g. in Sweden, Denmark, Holland and Belgium) there are no hot springs with temperatures over 25-30°C. Even in countries of well established bathing culture, like

Germany, Austria, the Czech republic and Slovakia, they are rare, while in Hungary we have got quite many of them (Bodnár 2000). Medicinal and thermal baths are places for pilgrimages in European health tourism. The best known places include Spa, Budapest, Karlovy Vary, Vichy and Baden. The bathing water erupting from underground at these places can be utilized with the help of different bathing establishments. By European Spa Association statistics the number of annual guest nights spent by a total of 20 million guests is the highest in Germany, Austria, Italy, France and Switzerland. On the other hand new areas and service providers are actively joining health tourism by offering more and more services. Competition is being very intense in this area (Sándor 2011).

A branch of science that deals with the effects and the utilization of medicinal waters is called balneology (11). Balneotherapy is built on the knowledge of balneology and this therapy is to be applied by a trained medical expert, called balneotherapist. Balneotherapeutical treatments are not prescribed in themselves, but they are usually combined with other cures including mudpack, medical massage, physiotherapy, or electrotherapy. Hydrotherapy is also a water-related treatment and it utilizes the physical properties of water to have a beneficial effect on health. These physical properties are temperature, pressure and buoyancy.

a) The therapeutic effects of physical properties of water:

Temperature: Hot (32-37°C) – blood vessels dilate, heart rate and breathing are faster. Circulation speeds up, blood pressure changeable. Warm (21-31°C) – relaxing, pain relieving, analgesic effect. Blood vessels dilate, blood pressure goes down. Cold (below 21°C) – blood vessels constrict, metabolism speeds up.

Buoyancy (larger in salty water!): easy movements, injured or worn out joints are easier to move.

Hydrostatic pressure: difference in pressure – boosts circulation and metabolism. In standing position the blood vessels in the leg are pressed, pressure increases in the abdomen and circulation toward the heart fastens.

Friction, flow: massages and relaxes muscles.

b) Therapeutic effects of chemical properties of water:

Bathing cure: Minerals which are dissolved in thermal and medicinal waters have a beneficial effect because they get absorbed easily through the dilated pores of the skin.

Absorption through the skin into the blood circulation and the lymphatic vessels. Increased secretion, regenerating and immunity-boosting effect. Diffusion helps the body to get rid of roughage. Metabolism depends on the temperature of water as well as on microclimate as well. Water can be beneficial for patients who suffer from diseases of the skin (disinfecting and anti-inflammatory effect of iodine and salty waters). Inhaling ions from the air relieves stress and has a tranquilizing effect.

A bathing cure is effective if the patient takes a series of at least 15 treatments, and each session lasts at least for a min. of 15 minutes, a length of time, which is then gradually increased to 45 minutes (11).

Drinking cure: it may relieve different symptoms depending on the chemical composition of water. (For further details see Point g!)

c) Therapeutic effects of medicinal waters:

The most frequently used applications of balneotherapy are as follows (10): Chronic arthritis, Arthritic sclerosis, Worn-out joints, spinal degenerations, rheumatism, gout discitis, osteoporosis, developmental and postural problems of the locomotor system, injuries and/or post-operative rehabilitation (e.g. orthopaedic surgery), post-operative treatment following neurosurgery, gynaecological diseases (chronic ovaritis, infertility), diseases of the upper respiratory system, certain diseases of the digestive and metabolic systems, certain diseases of the heart and of the

circulatory system, pain in the nervous system, chronic skin diseases (psoriasis, papulas, surgical scars).

The therapeutic utilization of medicinal waters is dependent on their chemical composition (12):

Alcalic waters: gastric catarrh, excess gastric acid, tracheal catarrh;

Bromic-iodic waters: rheumatic complaints, gynaecological diseases, skin problems, diseases of the thyroid gland (drinking cure);

Calcic waters (calcium-, magnesium, hydrocarbonate content): Rheumatic, heart and gastric diseases;

Sulphuric waters: rheumatic diseases, certain skin diseases;

Salty waters: rheumatism, diseases of the female reproductive organs, diseases of the mucous membrane;

Radon and sulphuric waters: pain relief, effect on the operation of endocrine glands and metabolism;

Carbonated waters: Rheumatic diseases;

Sulfate waters (aperiant waters): as drinking cure: gastric and intestinal diseases, diseases of the liver, and gall bladder. Intestinal cleanser;

Iron waters: drinking cure. Beneficiary for several organs. Anaemia.

d) Bath reaction

When doing a bathing cure the patients' complaints may rise and it is a natural reaction. This group of symptoms is called bath reaction and it usually appears after the 3rd - 5th treatment. It may occur earlier or later than that as well. Usually there is an improvement within a few days but the condition may last into the second week of the treatment as well. It is the specialist (balneologist) who should decide whether the condition is a simple bath reaction or something else. If there are other reasons in the background, complementary treatment may become necessary (Albel and Tokaji 2006).

e) Counter indications of balneotherapy

In case of certain health conditions the application of hot waters might be dangerous.

Counter indications for hot (thermal baths) are as follows:

Irregular heartbeat, fast pulse, severe heart coronary diseases, cardiac failure, untreated or untreatable high blood pressure, severe arteriosclerosis, large size venous dilation, untreated hyperthyreosis, chronic nephritis, tumorous diseases, scars and fresh wounds, infectious diseases, conditions with fever, menstruation, inflammatory phase of locomotor diseases, diseases with the likelihood of collapse, pregnancy.

It is also important to consider the sources of infection which might be extremely dangerous for the patients suffering from the above diseases.

f) General rules for medicinal bathing

The morning hours are the best for having a medicinal bath. The time is prescribed by a doctor, its maximum can be about 40-45 minutes. Hot water, but even water with a temperature lower than 36-38 °C may be heavy for the heart. It is the best to avoid a full or an empty stomach. Alcohol consumption is not allowed. Bathing should be followed by a shower of lukewarm water, then patients are supposed to relax (13). Massaging is to follow bathing. Pain or indisposition need to be reported to the doctor. General hygienic rules are also to be kept (14). When these rules are not kept and bathing is 'overdone', it may lead to general tiredness, fatigue, weakness, and reduced performance.

g) Effects of medicinal drinking cures, their counter indications and the places of occurrence of waters in Hungary (12):

Alcalic medicinal water (Containing Na-, K-, H-carbonates): mucokinetic, antibilious and gastric acid reducing effect. Counter indication: nephrolithiasis and coli infection.

Calcic medicinal water (Containing Ca-, Mg-, H-carbonates): anti-inflammatory effect, circulatory diseases (Carbonated

waters), treatment of osteoporosis, gynecological diseases, with its diuretic effect it helps to get rid of kidney stones and sand. Counter indication: constipation.

Salty medicinal waters: (Containing Na- and chloride ions): They dissolve slowly in the stomach, and this is why they have an anti-inflammatory effect and they are beneficial for patients with rheumatic and gynecological diseases. Counter indication: high blood pressure and oedema.

Saline purgative waters (Containing sulphate ions, Na-Glauber's salt and Mg- Epsom salt): After consumption gall bladder contracts more frequently and thus it reduces its stasis; cleanses the intestinal tract, dissolves mucous and removes bacteria and their decomposing parts. This water is beneficial for gastric and intestinal catarrh, problems of the gall bladder. It has a purgative effect. Counter indication: gastric ulcer, gastric acid deficiency, vomiting, diarrhoea.

Iron water: It has been in use for long to treat anaemia and gynecological diseases. Counter indication: none.

Iodic bromic water: Used to prevent iodine deficiency disorders of the thyroid gland, treat high blood pressure, prevent osteoporosis, treat climacteric and menstrual disorders, inflammatory diseases of the prostate and of the gastrointestinal tract, to boost the gall bladder and pancreas functions and to reduce the level of urea and sugar in blood.

2.2.2.2. Medical gases

Like thermal waters, different steams and gases (fumarolas, solfataras and mofettas) which came into being millions and millions of years ago due to post-volcanic activities, also can be linked to the operation of the inner powers of the Earth. They can be beneficial for mankind, too. From a medical point of view it is primarily the dry gases, the so-called mofettas containing carbon-dioxide are of special importance. The best known example is the

so-called Cave of Dogs of the Solfatara crater, near Naples, Italy, where the CO₂ gas, which is heavier than air can be found near the ground. A similar phenomenon can be seen in Transylvanian Hargita, where the ‘Torjai Büdösbarlang’ has H₂S and water at a temperature of 11-12,5°C (Jakucs 1990).

The balneotherapeutic application of carbon dioxide goes back to a past of 2,000 years. In the medical practice of Ancient Rome, later in popular medicine practitioners recognized the healing and recreational effect of baths containing carbon dioxide. Initially they used natural holes, later they made pits (similar to amfitheatres) for treatments (Gyetvai 2011). Today medical gases, as physiotherapeutic medical tools have a role of utmost significance in treating the diseases of civilization, including high blood pressure, diabetes, chronic diseases of blood and lymphatic vessels and angiopathic diseases of the heart and brain.

Medical gases get into the body through the pores of the skin as well as through inhalation into the blood stream. The composition of the gas may vary depending on its source’s geological features. The gas might have multiple effects. High CO₂ concentration for example dilates the blood vessels, and, in addition the healing effects of sulphur and radon are also significant.

Medical gas treatments – similar to treatments with water – are organized in a series of cures. The length of a cure is 15 days and the treatment takes 15-20 minutes every day. The presence of trained medical staff is obligatory during treatments. The counter indications of mofetta treatment are identical with the counter indications of thermal water treatments.

2.2.2.3. Climatic resorts

It is an old observation that the residents of certain geographical locations are rarely ill; what is more, in general they can be characterized by more vitality and happiness. It is easy to find an explanation considering the fact that the natural environment,

especially the climate may have a stimulative effect on the human body and the climate may play a significant role in the preservation or the restoration of physical and mental health.

Climate therapy has been known since Ancient times. It was Hippocrates who first wrote about it explaining that the appearance or the worsening of certain diseases might be linked to certain weather-related phenomena. Avicenna, the famous scientist of the Arab world is said to have sent his tuberculous patients to the mountains of Crete to recover (15). It is another well-known fact that before antibiotics were discovered tuberculous patients had primarily been treated in the sanatoria of climatic resorts. At these places the clean air, the healthy environment, the relaxation and the appropriate food strengthened the patients' immune systems and made it possible for them to win the battle against their illness.

It is not by accident either that climatic resorts are gaining a special significance in the modern era as well. This revived interest is due to the recognition that the air in the cities is poisonous, full of allergens, there is not enough sunshine and city dwellers are also exposed to heat exhaustion, factors, all of which can cause severe diseases.

The healing climate of climatic resorts, primarily the fresh air is beneficial for patients who suffer from respiratory problems, allergies, diseases of the thyroid gland and exhaustion. The cleanliness and the therapeutic effect of the air at those places which have been officially acknowledged as climatic resorts, need to be regularly checked from a medical-meteorological point of view. The German Meteorological Service for example regularly publishes its reports on bioclimate and air quality in relation to climatic resorts. It is on the basis of these reports that the medical experts of the climatic resorts determine the exposure of the patients to certain climatic factors including temperature, and radiation (16). In Hungary it is the website of the Hungarian

Meteorological Service where one can find information on the meteorological effects of the weather.

In relation to climate therapy it is a common expectation that the climate itself should have a healing effect on the illness in question, or, it should at least relieve the symptoms. This is why when applying climate therapy it is to be considered which features of the given climate need to be utilized.

Stimulating factors (e.g. cold air currents, significant daily fluctuation in temperature, strong wind, intense sunshine, low partial pressure of oxygen): These stimuli provoke adaptation and thus they are able to strengthen the body.

Soothing factors (e.g. well-balanced temperatures, slightly growing radiation, cleanliness of air, low concentration of allergens): These factors result in stress reduction, ambience, relaxation and regeneration.

On the other hand the notions of stimulating and soothing climates are not absolute notions; factors which appear as stimuli under certain conditions may have soothing effect under different conditions. By the classification of the Hungarian Meteorological Service the climate of climatic resorts can be divided into six bioclimate groups as follows (15):

a) Seaside climate

Intensely stimulating climate. Its main features from climatic therapeutical point of view include the cleanliness of air, the low number of microorganisms, permanent wind, strong radiation, balanced temperature, relatively high humidity of air and the presence of salt crystals (aerosols) in the air. Seaside climate is beneficial for patients with respiratory problems as well as with diseases of the skin.

b) Lakeside climate

This kind of climate is typical in areas in the vicinity of larger fresh water surfaces. In many ways it is similar to the lakeside climate, but the salt content of the air is much lower, and the

climate change is less obvious. Local winds, which are so typical of seaside resorts, are less significant in lakeside areas. These winds occur only in the summer months and in appropriate synoptic situations (lack of weather fronts, period of anticyclons). Instead of curing certain diseases lakeside climate is more suitable for the prevention of diseases, recreation and holiday making.

c) High Mountain climate

High mountain climate represents strong stimuli for people. In the temperate climate zone this type of climates is typical of mountainous areas higher than 1,000 m above sea level. At this altitude the effect of air pollution cannot be perceived, pollen concentration is minimal as well. This climate is beneficial for patients with chronic respiratory diseases and it seems to be ideal to relieve symptoms which are caused by urban or industrial dust. Significant improvement can be achieved in the treatment of anaemia, nervous breakdown and Basedow disease. Counter indications include coronary heart diseases and the early stage of pregnancy. Relatively high ultraviolet radiation is effective in treating diseases of the skin, too. From the point of view of landscape aesthetics and sports tourism the nice surroundings in high mountainous regions may improve the patients' psychological and physical conditions.

In Hungary there is no high mountain climate, but the so-called sub-Alpine climate of places located at 800 m or higher above sea level is very similar. Examples of mountain resorts of this kind in Hungary include Mátraháza, Galyatető and Bükkzentkereszt.

d) Medium-height Mountain Climate

The medium-height mountain bioclimate can be found in the temperate zone at places located between 300 and 1,000 m above seal level. Its effect on the human body is more moderate than the influence of high mountain climate. Mountains of medium height are usually covered with forests and this condition reduces

radiation. Due to this feature temperatures are more balanced, relative humidity is higher. This type has multiple effects because on hillsides the microclimate can be very special. On northern hillsides the climate may be similar to the high mountain bioclimate, while on the southern, sunny hillsides in most cases one can encounter a soothing climate. The weather on those hillsides which are more exposed to winds is cloudy and there is more precipitation, while the windless areas are dry and sunny. Since both the stimulating and the soothing factors are present in medium-height mountainous areas, this type of climate is suitable to offer a complementary treatment for most diseases. It is especially beneficial for patients suffering from anaemia, metabolic disturbances, trachitis, irritability, and neurasthenia. The green forests that cover the mountain slopes in themselves have a soothing and relaxing effect on the nervous system.

e) Plain climate

The characteristic features of the so-called 'plain climate' in the temperate zone are that the number of sunny hours is high, humidity of the air is low and precipitation is usually low, too. The annual fluctuation in temperature – the difference between mean temperatures in the coldest and the warmest month – is high, as well as the daily fluctuation. Consequently, plain climate is a stimulating climate which helps the human body to regenerate. It is also beneficial for treating tuberculous symptoms, as well as anaemia. It may relieve the symptoms of skeletal tuberculosis. Counter indications include irritability and hyperthyreosis (15).

2.2.2.4. *Cave climate, medical caves*

Medical caves have special therapeutic effects and they represent unique possibilities in medical tourism. The germ-free air of these natural and artificial underground pits are beneficial for patients who suffer from respiratory and locomotor diseases.

These caves can be found in karstic areas. They were formed underground from the dissolution of soluble rocks by aerated water, which had filtered through slits and sinkholes. The slits and passages were then widened by the grinding effect of sand and debris, which were washed underground from the surface by subterranean streams (Bona 1988).

The therapeutic utilization of caves (speleotherapy) goes back to ancient times. Before the Middle Ages their healing effect was considered a miracle and this is why many of them became places for pilgrimages. But it was only in the 20th century that the beneficial effect of cave air on the respiratory system was scientifically investigated and analyzed.

Actually it was only by chance that caves got into the centre of attention of researchers. In the middle of the 19th century a physician, working in the salt mine of Wieliczka (Poland) noticed, that there was no occurrence of lungs disease in the group of miners working there. During the second world war the salt mine was used as shelter and during this time many people who had been hiding there for months recovered from their asthma (17). The cave Klutter in Westfalia also served as a shelter during the second world war. Those people who had been hiding there and at the same time they were sufferers from trachitis after a time could experience that their health had significantly improved (15).

Each cave has a different and unique microclimate. The temperature in these caves is permanent and it is usually identical with the annual mean temperature, but it may depend on the depth, ventilation, the temperature and quantity of its waters as well. The annual mean fluctuation in temperature is usually low, less than 1°C. In warm caves, where the mean temperature is higher than 20°C mostly patients with locomotor diseases are treated, while the colder caves with a mean temperature of 10-

13°C are beneficial for patients suffering from respiratory diseases (18).

The therapeutic effect of cave air depends on its geological features, strength of ventilation, and the chemical composition of its waters and air. Cave air is usually characterized by cleanliness, (free of dust, germs and allergens), relatively high humidity (often 100%), beneficial chemical composition of vapour (e.g. anti-inflammatory effect, rich in Ca, Mg, ions), beneficial chemical composition of air (e.g. high CO₂ level that stimulates the activity of the respiratory system.), permanent temperature. Due to the dominance of negative ions cave air also has a considerable self-cleaning effect.

There are places, too, (e.g. Béke cave in Hungary) where the antibiotics, produced by the spores of the mould fungi in the air has a multiplication effect in the treatment of patients suffering from asthma and bronchitis. In other caves there is a low-level radioactivity which may speed up cellular metabolism and strengthen the immune system. Deserted salt mines are used to practice halotherapy (treatment with salty air).

Staying in the underground ‘sanatoria’ of natural caves or deserted salt mines is beneficial in itself, but when combined with other types of therapies (breathing therapy, exercising, relaxing, meditating, Kneipp cure, psychotherapy, dietetic therapy), it can be extremely good for health. Usually referrals are needed to get treatments. The most effective treatments last three weeks, but usually there is a considerable improvement after the 1st week of therapy. On a daily basis 3-5 hours of stay is needed for maximum benefit.

The counter indications of warm caves are identical with the counter indications of balneotherapy (heart diseases, malignant tumors, acute inflammation, pregnancy). In cold caves counter indications include emphysema, pulmonary congestion, heart failure and rheumatic problems (Hojcska and Szabó 2010).

The most famous medical caves in Europe are as follows: Parajd (Transylvania), Aknaszlatina (Sub-Carpathia), Wieliczka (Poland), Berchtesgaden (Germany), Bad-Gastein (Austria).

2.2.2.5. Thalassotherapy

Thalassotherapy, one of the traditional form of therapies, utilizes the healing effects of sea water and sea climate combined. Thalassotherapy has long traditions in France and Great Britain. It was in the 1960s in France that the first modern therapeutic centre of this kind was opened (Smith and Puczkó 2014).

The salt content of sea water is on average about 35 g (35 ‰) per litre, its density is higher than that of fresh water (1020-1030 kg/m³), it is slightly alkaline (pH-value 7.4-8.4) (Table 2).

Table 2 The composition of salt content in sea water. Source: (19)

	Salt content in sea water	(g/l)	(‰)	Total (‰)
Chlorides	NaCl	27-35	77,76	88,64
	MgCl ₂	3,8	10,88	
Sulfates	MgSO ₄	1,6	4,74	10,80
	CaSO ₄	1,2	3,6	
	K ₂ SO ₄	0,9	2,46	
Carbonates	CaCO ₂	0,1	0,34	0,34
Other	MgBr ₂	0,1	0,22	0,22
Total		34,7	100	100

The areas of application of thalassotherapy might vary, but in general it can be stated that it is beneficial for treating stress- and exhaustion-related conditions, cardiovascular diseases, bone- and rheumatic pain and other diseases, varicose veins, skin problems like psoriasis, eczema, diseases of the digestive system and sports injuries. It is also used to strengthen the immune system. Due to the high salt content of sea water (it contains almost all trace

elements) thalassotherapy might contribute to the mineral supply of the body. Mineral salts, having absorbed through the skin (going through ion exchange) raise the mineral level of the blood within two hours (19). The salty air of seaside areas reduces inflammation, and dilutes mucus, so it is beneficial for diseases of the respiratory system. The counter indications of thalassotherapy include asthmatic conditions, tumors, high blood pressure and the risk of heart attack.

These days it is primarily the seaside resorts of France (e.g. St. Malo) Greece (e.g. Crete) Spain (e.g. Andalusia, Costa del Sol) Croatia (e.g. Zadar) and the North African coast (e.g. Tunisia) where thalassotherapeutic treatments are available. These treatments also consider wellness factors. Thus the range of sea water treatments has been widened by a spectrum of wellness services, including algae and fango packs, algae and mud baths as well as climate therapeutic treatments. The medical centres – in optimal case – are located at a distance of max. 500 metres from the sea.

2.2.2.6. Healing gardens and therapeutic landscapes

Despite the fact that the therapeutic role of natural environment has been known since ancient times, it is only in more recent times that landscape architecture became interested in the relationship between tended green areas and the preservation of health. The fascinating harmony of landscape factors (e.g. a botanical garden or the park of a sanatorium) can be very attractive for potential health tourists.

It was in the ancient Asian, Greek and Roman cultures that people recognized the healing effect of gardens (20). The term ‘healing garden’ is a general notion and it is used to describe a garden which is destined for improving patients’ health condition, or rehabilitating their physical, mental or emotional health after an illness. Healing gardens are parks, memorial places, war

monuments, or monuments, which were erected to commemorate epidemics or other tragic events. The task of a healing garden is to offer a home and a possibility for renewing the human spirit, be it a bench under a tree, or a carefully designed complex landscape. Examples include the National AIDS Memorial Grove in San Francisco, the Golden Gate Park and the Dora Efthim Healing Garden.

It is obvious that all gardens have an innate possibility for healing, consequently the well tended city parks and community green areas might also fulfil this role. Gardens with a variety of carefully and creatively designed artistic elements, such as special light effects, rocks, streams, groves, are exceptionally attractive for people (20).

The design of therapeutic landscapes is professionally more challenging than this. The landscape is designed in a way so as to have a measurable positive effect on a certain disease, groups of diseases, or a group or several groups of patients. The landscape can be designed to meet the needs of a special group of patients, i.e. people with other disabilities, blind, paralyzed persons, or, rheumatic patients. From this point of view healing gardens can be considered one of the many therapeutic possibilities.

2.2.3. In-patient services

As the number of ageing population increases, there is a raising demand for medical services. This demand can not often be met under the public healthcare service in many western countries. For many, private healthcare services are too expensive and sometimes patients are placed onto public waiting lists for medical treatment. It seems logical that patients are look for alternative solutions, which can serve this necessary demand (Lee and Spisto 2007).

Mobility of people with the aim of taking advantage of medical services has lately been a dynamically growing market and its

annual growth is about 9-10% (Kincses et al. 2009). As it was said above the direction of the most intense mobility is from the developed countries to the developing countries offering high-tech medical services and markets. The target countries are primarily located on three continents, that is Asia, America and Europe. The most significant receiving countries are Thailand, India and Singapore. The distance between the two end points of medical tourism is growing. The most attractive factors in the selection of destinations are as follows (based on the research done by Kincses et al. 2009)

- a) Lower fees than in the patients' home countries;
- b) Faster provision of services;
- c) The use of different, more up-to-date technology;
- d) Differences in the legal regulation of health care;
- e) Services offer a complex and pleasurable experience.

The developed countries including the USA, Germany and Belgium may become the target countries for those patients, who come from Latin America or the Middle East and who look for the most modern medical technologies regardless of their price. The clinics and hospitals of Central and Eastern Europe primarily receive patients who are in need of dental, ophthalmological treatments, or plastic surgery. "The developments in information technology have largely contributed to the growth in patients' numbers because by using IT services any prospective patient can easily get information on possibilities, safety issues, quality of service and the success factors of treatments" (Kincses et al. 2009, 11). In Europe as well as in several countries overseas there is a number of businesses, agencies, insurance companies specializing in health tourism which play the role of mediators between patients and institutions.

2.2.4. Infra- and suprastructure of health tourism

The infrastructure of tourism includes those establishments which serve the purposes of exploring factors of attractiveness, selling services and making them competitive (Michalkó 2012). A medicinal factor, for example thermal water, may become a tourist attraction only if certain establishments are constructed in order to market it. For example in the case of a thermal spring as an attraction the infrastructure would be a thermal bath (Michalkó 2004). Considering the infra- and suprastructure of health tourism there are complex health tourism centres and clusters as well (e.g. Monterrey in Mexico).

Those establishments also belong to the category of the infrastructure of health tourism which serve the purpose of the medical utilization of health touristic factors. Examples include drinking pavilions, promenades, healing gardens, thermal baths, gas- and mudbaths, as well as the establishments of climatic resorts such as parks, gardens and forests. All these establishments and resources may be used by local residents as well.

Patients' catering and accommodation are provided by the establishments of touristic suprastructure. Medical and wellness hotels, medicinal baths and hospitals, sanatoria, climatic health care institutions, holiday homes, institutions with a medical cave and a variety of catering establishments belong to the category of primary suprastructural establishments of health tourism. The aim of the secondary suprastructure of health tourism is to provide the basic conditions for the reception of guests including retail shops, banking and other personal services.

2.3. Specific economic role of health tourism

The current state and development prospects of the world economy, as well as the regional economy, always have a

fundamental impact on the situation and possible future of tourism, including health tourism. In times of global economic downturn or crisis, several segments of health tourism slow down or are at a standstill, but in times of economic recovery, similar to the average conditions of tourism, tourists go on health trips more often and spend more (Laczkó 2015).

In the opinion of Hustiné (6) the economic role of health tourism can be investigated using different approaches. First of all, health tourism - similar to other economic branches - influences the economy of places (resorts, towns, regions, countries), where it receives guests and patients. The effect of health tourism destinations on the economy can be examined from various points of view.

a) By the main areas of economic impact: income, employment/creation of jobs, impact on the administration of public revenue, stimulation of investment, support of enterprises, impact on the balance of payments.

b) By destination types: national, regional, local impact.

c) By impact features (levels): indirect, direct, generated (multiplier).

d) By income owners: entrepreneur, employee, local government, state budget.

All the above factors – except for the impact on the balance of payments – can be investigated from the point of view of macroeconomics and microeconomics as well.

The economical operation of health tourism centres –compared with other tourist destinations – is based on the following:

Services in both medicinal and wellness tourism are not dependent on weather and seasonal changes. The average length of stay is longer (8-10 days) than in other branches of tourism (3-5 days) (Hojcska and Szabó 2010). Creates jobs locally for the whole year for qualified work force. Per unit costs are 1/3 higher than in other branches of tourism.

In health tourism guests tend to spend more, a situation, which generates the creation of complementary services. This way the given destination can be used in many ways. Quoting an example from the health tourism of Hungary: each 100 forint income generates 167 forints of additional production, while every 100 job creates 214 new jobs for the national economy (Hegedűs 2006).

Local impact /income, creation of jobs, stimulation of investment and entrepreneurship, balance of payments, employees, entrepreneurs, government, local government, quantity, quality, forces of attraction, accomodation, catering, other, revenue, income in foreign currency, income of suppliers and other tourism-related businesses, outsourcing, suppliers, general infrastructure, tourism-related businesses, state budgetary income, reduced number of health tourists going abroad.

Health tourism is one of the most significant export products of the country. It is one of its characteristic features that it is not the service provider who gets the product to the buyer (tourist), but it is the latter person who travels, thus saving on transport costs. During his or her stay at the chosen destination the tourist purchases products and services, which would not be exportable otherwise (Molnár 2011). It is not by chance that products of health tourism as well as their future role are considered economic factors of utmost importance. The future is not only about the preservation of good mental and physical health, but also about the growing sensitivity of people towards natural cures and therapies. At the same time any health tourism product can only be successful in the market if the marketing of health tourism is also emphasized. When developing a marketing plan it is important to note that the primary emphasis should be placed on the target groups: customers intend to buy complex products and quality services, while at the same time they also want to

satisfy their own individual needs. The more people spend on their health, the better services they expect to get (18).

The uniqueness of health tourism products can be explained by the fact that on the one hand they can be considered tourism products, since people use them on a voluntary basis, and, on the other hand, they are part of the health care system, since many health tourists use these services with their doctor's referral. Medical services – in Hungary and also abroad – are most often covered by some health insurance policy, but self-financing is becoming more and more common. More recently state insurance is withdrawing and private insurance companies are gaining ground. This is why self-financing is becoming more and more important (6). Self-financing foreign patients have appeared in public health care institutions, too. In several medicinal baths the main source of income is not the entrance fees but the fees paid for the individual medical services. These services and the individual treatments are the most profitable activities (Várhelyi 2011/12).

Due to its multiplication effect the emergence of health tourism at a given place might give rise to the development of other areas as well (Molnár 2011). This is why developments in health tourism need to be coordinated with developments in other branches of the economy so as to achieve optimum prosperity. So as to reach this goal instead of supporting traditional investments, a special emphasis should be put on the complex development of resorts, baths and spas. This work requires professional marketing activities. Other factors include the consideration of local characteristics, the elaboration of special offers and an innovative product development.

Health tourism as a system of tourism can operate efficiently only if supply and demand meet. When investigating the demand side of health tourism it is very important for researchers to familiarize themselves with the target groups of this tourism product (active

youth, young people in search for entertainment, health-conscious young people, middle-aged people with families, health-conscious middle-aged people, the health-conscious elderly, post-operational patients who are in need of rehabilitation, the elderly who want to recover from a condition) (Budai and Székács 2001). In addition to health tourism offers the maximum utilization of the attractions of a given destination might generate further income, as well as jobs. Health tourism can also be linked to rural tourism, equestrian tourism, ecotourism, conference tourism, sports tourism, culinary tourism, wine tourism or religious tourism. In addition, the potential customers need to be attracted by a wide range of other offers, including beauty treatments, manager healthcare, team building programmes, family reunions, sports programmes so as to create the possibility for longer, higher quality stays, use the capacity more rationalistically, and to assure competitiveness.

In order to build the local capacities for better use, the groups of enterprizes, the so-called clusters are becoming more important, because they can better adopt to global competition conditions. In health tourism members of a cluster include those enterprizes which provide direct services (e.g. baths, places of accomodation, hospitals, sanatoria) as well as economic, legal, and marketing businesses, local governments and educational institutions (Molnár 2011).

2.4. General development trends in health tourism

It was in the last decades that health tourism became a mass phenomenon, what is more, it acquired a global dimension. The inhabitants of developed countries tend to live with their health in the centre of attention and they are able to spend an increasing length of time and amount of money on the preservation of their own physical, mental and emotional strength and well-being. All

these characteristics have been made possible by the fact that the income of the active age group of society makes it possible for the people by their discretionary income (Portion of a person's income available for saving, or spending on non-essentials. It is what remains after expenses for basics.) The demand for services is also boosted by a changing view of life: most people prefer the acquisition of existential goods to founding a family. The health conditions of human resources, the sustainability of their value-creating abilities and the avoidance of substitution costs in case of illnesses are facts which are increasingly in the centre of attention of business leaders.

In addition to the above factors the ageing population in the developed countries is also an important stimulant. The elderly inhabitants of developed countries possess their own income or savings which makes it possible for them to spend their leisure time freely (Kátay 2010). In addition, when choosing treatments for their own health problems in general they prefer natural cures. Due to these facts the number of traditional health tourists is still on the increase, who, in addition to the classical medicinal services, want to use complementary services and programs, depending on their health conditions and interests (Molnár 2011). At the same time younger generations are also present on the health market, and this fact is primarily due to the popularity of wellness. The demand for family-, and children-friendly services both in infrastuctural (baths and pools) and in suprastructural (accomodation and catering) sense is typical of health tourism nowadays. The space of the growth of health tourism exceeds the growth in traditional tourism. This fact can primarily be explained by the role of wellness as a main driving force.

The most important trends in modern health tourism include the significant role of health, the growing importance of design and its complexity. This last feature means that in order to achieve the goal, that is good health, several services are used simultaneously.

On the one hand the unity of these factors can only achieve the desirable goal, on the other hand the coexistence of several services means business success. A new trend in health tourism is that patients do not only expect special treatments, but they want pleasurable experiences, too, and, at the same time, they aim at the long-term improvement of their health. Due to these features the significance of cures and treatments recommended by medical experts are on the rise.

Health tourism is a significant area for development in most countries, which are rich in natural resources. In other countries the same growth can be achieved by utilizing innovative solutions and this is why today those countries also go for the division of the global market, which do not have an abundance of natural resources, but which develop their own health tourism products in an innovative way.

Those researchers who investigate the initial trends of health tourism agree that traditional therapies have gradually been pushed into the background and a complex wellness therapy is the new aim nowadays (Smith and Puczkó 2010). The above statement, of course, does not mean that traditional cures are not needed, since in ageing and economically prospering societies the different types of medical tourism are upgraded. The more demanding customers, who have enough money to pay for quality services, are in need of complex products in the medical institutions as well. It is the active experience and the wellness programmes which are needed by the younger generation. The selection of the group of target customers is a good strategy for health tourism and wellness programmes.

Due to the these trends the combination of health tourism products with other tourism products (e.g. conference, career, incentive, golf or ski tourism) have become increasingly popular. “The utilization of several products at the same venue is a definite advantage, since the requirement of the adaptability to customers’

needs is moving towards the ‘all inclusive’ services” (3). Tourists intend to have as many experiences as possible in the shortest time and want to return to their homes with many of unforgettable experiences.

In summary it can be stated that due to health consciousness, the appreciation and the expansion of healthy lifestyles, health tourism has gained a special significance worldwide. “The main driving force of the economic growth of the future is seen in health tourism by economists as well. As health tourism supply is growing new services will appear on the market. The dynamism of growth will determine the position of the given country on the tourism market (Sándor 2011)”.

Health tourism in itself is not able to make the negative consequences (e.g. the lack of exercise, stressful life, obesity, diabetes, cardiovascular diseases) of modern civilization (e.g. the lack of exercise, stressful life). The indirect impact of social environment, healthy lifestyle, regular exercises, professional and infrastuctural factors including sports experts, recreational parks, sports clubs, fitness centres, recreationan possibilites will play a significant role in the future, too, in keeping our societies fit and healthy.

3. IN THE ATTRACTION OF HUNGARY'S HEALTH RESORTS

Health tourism is one of the leading tourism products in Hungary. Based on the size and extent of their clientele, there are several settlements in Hungary that can be characterized by international, regional and local health tourism attractions (Laczkó and Rébék 2008). Our traditions in the sphere of health culture and medicine are rooted in Hungary's natural resources as well as the country's abundant natural healing factors. These features are unique health potentials in the world, too. Due to their physical and spiritual milieu, their efficiency in various therapies, rehabilitation and prevention, Hungary's health resorts and medical institutions have earned the country compelling admiration since early times. The majority of our health resorts is actually a settlement with a thermal bath in it, but there are a number of other places, too, which offer a variety of additional services (e.g. Hévíz, Hajdúszoboszló, Miskolc), and places with a variety of healing factors (e.g. Paráds, Gyöngyös) (Michalkó 2011). The most significant attractive force in Hungarian health tourism are as follows: thermal and medical baths, climatic resorts, medical caves, medical gas baths.

Not all places that claim to have healing properties officially qualify as health resorts of high prestige. Getting this title is a lengthy procedure and there are strict regulations prescribing how to obtain it. By the force of law a health resort is a settlement, or part of a settlement, which has at least one natural medical factor, and/or institutions making it possible for patients to get treatments (e.g. thermal bath, hotel and sanatoria). It is also one of the expectations that the environmental conditions should assure the relaxation of guests.

At the moment there are 17 settlements or groups of settlements on the list of Hungary's official health resorts. These settlements are

are as follows: Miskolc-Lillafüred, Harkány, Sopron-Balf, Gyöngyös-Kékestető, Hévíz, Balatonfüred, Parád, Hajdúszoboszló, Zalakaros, Bük, Eger, Debrecen, Gyula, Sárvár (Botanical gardens and Gyógyvarázs), Mezőkövesd (Zsóry bath), Nyíregyháza-Sóstó (medical bath) Szigetvár.

In addition to the places on the list of official health resorts, there are other settlements in Hungary – their number is relatively high – which can boast a variety of health tourism offers and which are also target areas for traditional or new health tourists. Those touristic places, regions, which are coherently related by medical factors (e.g. medicinal water, climate), the existence of professional-medical staff, health and health tourism services and capacities, making them competitive, are called health tourism regions. Health tourism region is such a functional region, which concertedly develops health care services, specific and general tourism services as well as the elements of destination management with the aim of better utilizing one or another natural or artificial medical factor (21).

The presently formulating, potential health tourism regions in Hungary are as follows (using data by Kincses et al. 2009, Laczkó and Ács 2009):

Budapest and its environs: Its bases and natural resources include medicinal water, medical cave and climate. The examples are the medical baths of Budapest, the Szemlőhegyi cave, Dobogókő. Its professional centres are: National Institute of Medical Rehabilitation, National Institute of Rheumatology and Physiotherapy, Cardiological Institute of Semmelweis University, a number of dental centres and private hospitals.

Hajdúság-Nyírség: Its bases and natural resources include medicinal waters – e.g. Hajdúszoboszló, Debrecen, Nyíregyháza Sóstógyógyfürdő. Its professional centre is the University of Debrecen.

Mátra-Bükk: Its bases and natural resources include medicinal waters, medical gas, climate, medical cave. Examples include Egerszalók, Mátraderecske, Mezőkövesd, Miskolc-Tapolca, Paráds, Kékestető. This region does not have a direct professional centre, but the hospital of Eger can be considered as a solid background institution. Other institutions, which are potential professional leaders, are the Mátra Health Care Centre in Paráds, backed by the University of Debrecen.

Western Transdanubia: Its bases and natural resources include medicinal waters and climate. Examples are Sopron-Balf, Bük, Sárvár. Professional centres: Sopron, Győr, Szombathely.

Health tourism regions of Lake Balaton and County Zala: Its bases and natural resources include medicinal waters, climate, medical cave. Examples are Balatonfüred, Hévíz, Keszthely, Zalakaros, Tapolca. Professional centres are the Cardiological Hospital of Balatonfüred, County Hospital Veszprém, County Hospital Zala and the St. Andrew's Rheumatology Hospital in Hévíz.

Pécs and environs (Southern Transdanubia): Its bases and natural resources include medicinal waters, climate, medical cave. Examples are Szigetvár, Harkány, Abaliget, Magyarhertelend, Sikonda. Professional centre: University of Pécs.

Southern Great Plain region: Its bases and natural resources include medicinal waters. Examples are Gyula, Mórahalom, Kiskunmajsa, Szeged, Cserkeszölő, Orosháza-Gyopárosfürdő. Professional centre: University of Szeged.

3.1. Medicinal and thermal baths, medicinal gas baths

In this respect Hungary can be considered a world power. Our underground water stock is of great significance from the point of view of health tourism, especially when considering its volume, environmental and use-value. Nowhere else can one find thermal

and medicinal waters of such high quality, which would be suitable for curing this many diseases. Medicinal waters in Hungary are unique in their diversity and their therapeutic effects have been well known for long (Borszéki 1998). Our medicinal waters in general, but not necessarily, are warm or hot waters with a temperature of higher than 30°C. After Iceland, Japan, the United States, France, Italy, China and New Zealand, Hungary can boast the largest thermal water stock in the world.

Considering the size of our thermal water stock we are in the group of the five richest countries in the world (Japan, Iceland, Italy, France, Hungary) When analyzing the circumstances in addition to the well known figures it can be concluded that in the group of the previously mentioned five countries the medicinal waters of Japan and Iceland are of high temperature but low in minerals, while in Italy and France the mineral content of medicinal waters is high, but their temperature is lower than the temperature of the waters of the Carpathian Basin. Thus it can be stated that our waters are of outstanding quality: both their temperature and their mineral content are high. These features are unique in the whole world (3).

A medicinal bath is an establishment which utilizes medicinal waters, mudbath, or other medical factor as balneotherapy, or by using officially acknowledged mineral water, or heated tap water for hydrotherapy or other therapeutic treatments they offer a full-scale of health services. As it was mentioned above in Hungary a thermal bath is such an establishment, where the temperature of water (measured on the surface at the discharge hole is 30°C or higher).

3.1.1. Geological and geothermal characteristics

In Hungary, surrounded by the mountains at the edge of the Carpathian Basin and located in the vicinity of a great number of fault lines, many mineral water and hot water springs erupt from

the underground. Due to post volcanic activities in the mountains of volcanic origin one can find a great number of hot water and mineral springs. Before the Peace Treaty of Trianon (1920) it was Transylvania and the region of Upper Hungary that had the largest number of mineral and hot water baths, since it was only after the First world war that in the plain areas of the basin geological drilling was performed in order to explore the thermal treasure (Beluszky 2006).

The unparalleled richness and the diversity of thermal waters in today's Hungary are due to the country's geological and hydrological characteristics. One such feature is that in the Carpathian Basin the Earth's crust is about 10 km thinner than elsewhere (24-26 km), thus the glowing substance inside the earth can be found nearer to the surface. On the other hand, the Basin is 'wrapped' in rocks, mud and sand, which are good 'insulators'.

Another reason for this unparalleled richness is that – due to the varied geographical structures of the Carpathian Basin – its waters have different mineral content, consequently, they can be utilized to prevent or cure many different types of diseases and they can be used in bathing and drinking cures as well. Similar to thermal waters, the steam- and gas eruptions from the underground can be related to post-volcanic activities as well. From a medical point of view it is primarily the so-called mofettas – a name applied to dry volcanic discharge consisting chiefly of carbon dioxide – which are of primary significance.

In the Carpathian Basin the places storing the subterranean (thermal) waters can be divided into two larger groups.

a) Carbonate, or, with another word, karstic reservoirs, which primarily can be found in limestone and dolomite rocks from the Trias, are typical in mountainous areas. The thermal springs of Hungary, which have been in use from the Roman times, then utilized in the Turkish baths of the age of the Ottoman conquest, too, broke to the surface at the edge of Hungary's limestone

mountains (e.g. Buda, Eger, Hévíz). Our first artificial wells of thermal water were also drilled in similar regions (e.g. Harkány 1866, Budapest: Margitsziget 1867, Városliget 1868-78).

By the results of geological analyses the so-called thermal karstic waters get their supply from precipitation water in remote open areas of karstic mountains, where the water filters into the rocks and gets enriched with carbon dioxide. After several thousand years of underground storage these waters, enriched with minerals from the rocks, erupt to the surface. Their chemical composition is determined by those carbonate rocks, the crevices and fissures of which these waters filtered through. This is why these waters are of calcium – magnesium – hydrocarbonate character.

“The chemical composition of the water flowing through the crevices and fissures can approach alkaline hydrocarbonate characteristics, due to its contact with mud (e.g. Hévíz, Harkány). This water can have sulfate content of significance, too; sulfur might be present in the form of sulfids, which are important medical factors. In closed and deeply lying water reservoirs the concentration of sodium chloride may be high; in certain cases it can reach the salt content of sea water (10 g/) e.g. Rábasömjén)” (22).

b) Deep water reservoirs consisting of porous rocks (going back to the Pannon and Pleistocene geological epochs) can be found in the Great Plain area and in deeper-lying regions of Hungary. These areas came into being 10-12 million years ago from mud and marlite sediments of inner seas and rivers. In the Small Plain and in the southern areas of the Great Plain the the thickness of the sediments is 2-2.5 km (22).

In the Earth’s underground belts the decay of radioactive isotopes (e.g. radium, uranium, torium) produces heat, and its flow towards the earth is called geothermal (earth’s heat) energy. The flow of heat going through a certain surface in a definite unit of time is called heat flux density unit (W/m^2). The average value in

Hungary is high (90.4 mW/m²), one and a half times higher than the European average (19).

A Geothermal gradient is the rate of increasing temperature with respect to increasing depth in the Earth's interior (°C/100 m). Its value in Hungary is 5-8°C, meaning, that when approaching the centre of the earth the temperature rises by 5-8°C every 100 metres. This value is 2-2.5 times higher than the world average. The value of the gradient is the highest in the Great Plain region and in Southern Transdanubia while it is the lowest in Hungary's mountainous regions. The same tendency can be experienced when we intend to find a place with given temperature underground (e.g. 200°C).

Thermal waters can be found at 70% of the country's area. The high underground temperature in itself would not be enough for the thermal waters to occur. Underground reservoirs and other conditions, including unique rock formations, are also needed. The geological development of the Carpathian Basin created unique conditions for the occurrence of thermal waters: practically there are no regions in Hungary without proper conditions for the thermal water to occur. These waters can be brought to the surface by drilling.

Three fourths of Hungary's thermal water sources producing water with a temperature higher than 30°C can be found in the country's Great Plain region. Approximately 200 thermal baths can be found here, many of which can boast radioactive sulfuric-acid, salty-bromic, iodine waters with medicinal proportions (23). The best known baths are located along the Buda fault line, including the following baths: Gellért-, Rudas-, Lukács-baths, Bükkfürdő, Sárvár, Hévíz, Harkány, Zalakaros, Hajdúszoboszló, Gyula. Budapest is the only big city in the world with several hundred thermal springs and wells and more than fifty baths.

3.1.2. The past and present of Hungary's medicinal baths

3.1.2.1. Bathing culture before and at the age of Austro-Hungarian Monarchy

The utilization of thermal and medicinal baths in the area of Hungary goes back to a history of 2,000 years. The ruins of buildings of former baths, ancient mosaics prove that the building of 'thermae' was one of the significant characteristics of Roman urbanization in the province of Pannonia. The Roman baths served multiple purposes: one of these was hygienic, but, in addition, they represented favourite meeting places for the Romans as well (24). In the area of today's Budapest alone the ruins of 19 Roman baths have so far been excavated. Ruins of private and public baths from the age of the Roman Empire can be seen in Nemesvámos-Balácapusztá, Balatongyörök, Örvényes and Balatonfüred.

The first settlements founded by our conquering ancestors were located in the vicinity of the hot water springs of Buda. As it is attested by contemporary documents, there were popular baths in Hungary as early as the age of Árpád, as well as of kings Sigismund and Mathias (Pécsvárad, Esztergom, Buda, Balf, Eger). The Turkish baths of the age of the Ottoman Conquest were parts of building complexes including mosques, hospitals, schools and residential areas. The baths in the Ottoman Empire played a unique role in social life since they were the centres of 'beauty care' and schools, too (25). In the 16th century several Turkish baths were built in regions which had been occupied by the Ottoman army. Examples include Pécs, Szeged, Esztergom, Szolnok and Eger, but only the baths in Eger and some in Budapest are still in use. It is also to be noted that many of these baths got destroyed, and only some of them were rebuilt after the expulsion of the Turks (e.g. Váradszentmárton, Herkulesfürdő) (Beluszky 2006).

Medical tourism in the 'modern' sense of the word goes back to the 16-17th centuries in Hungary, when people began to frequent these medicinal baths. The first documents describing Hungary's medicinal baths also go back to the same period. From these descriptions it can be learnt that Stubnyafürdő, Pöstyén, Bajmóc, or Trencsénteplic were favourite meeting places for Hungary's higher ranking nobiliaries and their escorts (Beluszky 2006).

Hungarian bathing culture gained new impetus at the turn of the 18th and 19th centuries. Resorts built in idyllic surroundings also became meeting places for Hungary's artists and politicians (26). It was in Balatonfüred that a wooden bathhouse was built as early as 1743 in the vicinity of the settlement's thermal springs. (People did not bathe in Lake Balaton at that time!) By the end of the 18th century medical service was added to the establishment and soon a whole bathing complex was born, complete with inns, promenades, medical halls, restaurants, ballrooms and parks. Balatonfüred became the best known health resort in Hungary, frequented by the dignitaries of the Pest-Buda region and Transdanubia in the Reform age (Beluszky 2006).

After the Austro-Hungarian Compromise of 1867 a period of the strengthening of the middle class and a process of urbanization followed. Due to lifestyle changes in this period, which also meant the appearance of leisure time in the modern sense of the word, a new impetus was given to the development of bathing culture. By the second half of the 19th century it was real masses that visited these places, consisting of intellectuals, tradesmen, and government officials (Kósa 1999).

In the period of the Austro-Hungarian Monarchy several resorts became extremely fashionable, some of which are deservedly well known today as well (e.g.. Herkulesfürdő, Búziásfürdő, Harkány, Félixfürdő). This is also the period when the new forms of leisure time activities also came into existence, i.e. baths became parts of mass tourism. Lakeside, riverside resorts and baths emerged and

became popular areas for recreation including the shores of Lake Balaton, the Római-beach in Buda, Palicsfürdő and Ruzsanda-bath. It is interesting to note that it was as early as 1913 that Földvár and Lelle, and in 1914 Siófok, all located on the shores of Lake Balaton, were raised to the rank of health resorts.

It was also in this period that balneology began to emerge as an academic discipline. It aims to examine the effects of hot water therapies and physiotherapies. Balneotherapy was used successfully to treat an increasing number of diseases including locomotor, upper respiratory, metabolic, circulatory and neurotic problems. Medical experts usually prescribed 20-40 day therapies (26). The foundation of the National Balneological Association in 1891 was also an event to emphasize the increasingly significant role of balneology in medicine.

In Hungary the exploration of underground waters by drilling began in the second half of the 19th century. It was engineer Vilmos Zsigmondy (1821-1888) who pioneered the exploration of the hot water springs of several famous resorts including Félixfürdő and Széchenyi-fürdő. In the period of the Austro-Hungarian Monarchy more than 1500 wells were drilled in the area of historical Hungary (Lorberer 2010). At the beginning of the 20th century 139 resorts qualified as medicinal baths. On the other hand contemporary guide books offered a list of 300+ places in Hungary where balneological services were available. Considering the annual number of guests (more than 16,000 guests per year), as well as the number and quality of its establishments, undoubtedly it was Pöstyén of Upper Hungary that was the best known place in 1911. Pöstyén was followed by Trencsénepölcs, Herkulesfürdő, Félixfürdő, Hévíz, Harkány and Balatonfüred (Beluszky 2006).

3.1.2.2. Bathing culture after the age of Austro-Hungarian Monarchy

As one of the consequences of the First World War, Hungary lost a considerable part of its former area and due to this loss Hungarian bathing culture also suffered considerable damage. Hungarian resorts of international fame were now outside of Hungary's borders. The loss of the country's mineral resources turned the attention of experts to the remaining natural resources, including the country's hot water springs.

The intensive exploration of hot water springs began in the 1920s: first it was Hajdúszoboszló where hot water springs were found (1925); it was followed by Szeged (1927), Berekfüdő and Szolnok (1928), as well as Eger (1932). At the same time the search for healthy drinking water often led to the exploration of waters of higher temperature, especially in the Great Plain area, where they could not find good water resources near the surface. It was also in this period that the heat of these waters was utilized to give energy (Lorberer 2010).

In the 1930s it was Ferenc Pávai Vajna (1886-1964) who pioneered the search for hydrocarbons. This research occasionally led to finding new thermal water springs. Examples include among many others the baths of Mezőkövesd, Csokonyavisonta, Bükkszék, Cserkeszőlő, Nagyszénás, Tótkomlós, Túrkeve, Kiskőrös and Kecskemét. A grand-scale development started in Budapest with the aim of turning Hungary's capital into the leader of modern bathing culture. It is not by accident that the International Spa Association came into being in 1937 in the Gellért Spa and Hotel in Budapest (22).

The development in Hungary's exploration of its thermal waters was given a new impetus in the 1960s. It was in this period that the Hungarian government financially supported the utilization of thermal waters for heating and agricultural purposes. In addition, the individual settlements were also permitted to drill wells and

thus they opened local baths and swimming pools (e.g. Gyula, Mórahalom). The Hungarian hotel enterprise, the Danubius Szálloda-, és Gyógyüdülő Vállalat started to operate in 1972 and its activities were also based on Hungary's thermal tourism. The country's leading hotels today are the legal successors of that tourism enterprise.

During the last one and a half decade several Hungarian settlements had thermal wells drilled, in order to meet the newly arising needs for balneological therapies and wellness services. Having recognized the country's unique endowments and possibilities, the development of health tourism gained new impetus in the post-millennial years. The driving force of this new development is the Health Tourism Sub-project of the Tourism Project within Hungary's Széchenyi Plan launched in the year of 2000. Under the influence of the developments of this project the average length of the tourist season, as well as the size of the water surface of the pools increased by one and a half times.

The number of registered thermal wells recently exceeds 1,000. About 50% of them has water with temperature lower than 40°C, one quarter of wells supplies water with temperature over 60°C. The number of wells supplying water with 90°C is about 4%. The VITUKI Hydrological Institute has a list of Hungary's thermal wells (National Thermal Well Cataster) (27).

By the register of The National Directorate for Spas and Medicinal Baths there are 220 settlements in Hungary with thermal water that qualify as medicinal water (Kátay 2010). In the year 2007 the number of operating medicinal and thermal baths was 187 (22). The therapeutic utilization of Hungary's medicinal waters is dependent on their chemical composition (Table 3).

Table 3: The typical chemical composition of medicinal waters, their therapeutic effects and their places of occurrence in Hungary. Source: (12)

Chemical composition	Therapeutic effect	Place of occurrence
Alkaline waters	Gastrointestinal catarrh, hyperacidity of the stomach, respiratory tract catarrh.	Bükkszék, Gyopárosfürdő, Gyula, Mezőtúr, Szeged, Szécsény, Szolnok
Bromide-iodide	Rheuma, gynecological and skin diseases, diseases of the thyroid gland as drinking cure	Debrecen, Hajdúszoboszló, Pesterzsébet, Sósartyán
Calcium- magnesium- hydrocarbonate	Rheumatic-, heart- and stomach diseases.	Budai baths (Gellért, Lukács, Rudas), Esztergom, Mohács, Székesfehérvár
sulfuric	Rheumatic- and certain types of skin diseases	Balf, Bogács, Harkány, Mezőkövesd
Chloride (salty)	Rheumatological diseases, diseases of the female reproductive organs, catarrhic diseases of	Debrecen, Eger, Hajdúszoboszló, Karcag, Sárvár, Gyopáros, Nyíregyháza-sóstó
Radon, sulfuric	Pain reducing effect, influence endocrine glands and metabolism	Budai baths(Imre, Gellért, Rudas) Eger, Hévízi-lake, Miskolctapolca
carbonated	Rheumatic diseases	Balatonfüred, Bükkszék, Csupak, Kékkút, Répcelak
Sulfate (aperiant water)	Drinking cure for patients with stomach,- intestinal- liver and gall bladder diseases, treat constipation	Kelenföld, Budaörs
Iron	Drinking cure, effect on several organs.	Parád, Moha

Today the thermal waters and the medicinal waters in Hungary are used not only in therapies but they are also utilized in recreational and wellness programmes, which aim at preventing diseases. Considering the fact that the majority of hotels in our medicinal baths function as wellness hotels, too, the new trend of medical-wellness could easily develop and gain significance.

By Michalkó (2011) if a Hungarian tourist wants to spend a long weekend and regenerate in nice surroundings, 18.2% would choose Hévíz and 17.1% Hajdúszoboszló. The other resorts would be far behind them, because the market is very competitive and the interest of tourists in less known spas is considerably lower. The

spas of Miskolctapolca (6.3%), Zalakaros (5.3%), Harkány (3.7%), Gyula (3.5%) and Bük (3.2%) are relatively interesting for tourists, but in case of Mezőkövesd (2.0%), Sárvár (1.7%), Budapest-Gellért-fürdő (1.6%), Budapest-Széchenyi-fürdő (1.5%), Kehidakustány (1.4%), Pápa (1.2%), Kiskunmajsa (1.1%), Orosháza-Gyopárosfürdő (1.0%), when summarizing the demand and quality indicators, it can be concluded, that the preferences of Hungarian tourists are undeservedly low.

Several of Hungary's spas await guests with creatively designed aquaparks and adventure baths, all of which serve several generations of guests. These water complexes today can be found all over Hungary, including Kristályfürdő, Ajka; Aquapolis, Szeged; Aquapalace, Hajdúszoboszló; Kecskemét, Élmenyfürdő és csúszdapark; Aquaworld, Budapest.

51 Hungarian settlements can boast baths with excellent qualifications. The number of internationally favoured medicinal and thermal baths is 17. The spas of Western Transdanubia, Central Hungary and, of course, the baths of Budapest, the capital are the most attractive. In the Great Plain area of Hungary it is Hajdúszoboszló, Gyula and Szeged, which are the most popular destinations with health and wellness tourists (Albel 2012).

When introducing the beneficial effects of thermal- and medicinal waters, the environmental risks of their production are rarely mentioned. The subterranean water base is endangered by many risks: pollution, overproduction and exhaustion of resources, unprofessional drilling and operational problems. Overproduction of thermal waters may reduce the quantity of water resources which form a unified hydraulic system. Unfortunately it is quite obvious that the production in several places exceeds the quantity that would be desirable from the point of view of sustainability (Szűcs 2012). In addition, the excess water that remains on the surface and the used thermal water, due to its high temperature and considerable salt and organic material content, increase the

level of pollution of underground and ground waters and of the soil, thus endanger the delicate balance of the natural ecosystem. High salt content is extremely dangerous if thermal water, mixed with plain water is used for irrigation. It leads to salinification. The best way to store used thermal waters is by storing them in special closed tanks and then by pumping them back to their sources.

The protection of our underground waters should take priority over local economic interests. Due to the previously described hydrogeological reasons the overproduction in Hungary's thermal water systems may unfavourably effect the quality of mineral and thermal waters. On the other hand it provokes undesirable changes in the uppermost layers of the ground, which produce our drinking water (Szűcs 2012).

The medicinal mud used in physiotherapeutic treatments can only be found at a few places in Hungary. Its production and utilization for medical purposes are related to spa activities in Hévíz, Hajdúszoboszló and Harkány, while in Makó, Tiszasüly and Alsópáhok its utilization is independent of bath treatments. The therapeutic effect of medicinal mud varies. The medicinal mud of Hévíz, for example, stimulates metabolism and the endocrine glands, the medicinal mud of Hajdúszoboszló is used to treat problems of the lesser pelvis and infertility; the mud from the Maros River reduces pain and improves locomotor conditions, the mud of Kolop (Tiszasüly) is good for sports injuries, gout, rheumatic diseases and spinal complaints. The so-called Georgikon mud of Alsópáhok is recommended for treating rheumatic diseases. It also has a disinfecting effect (28).

The healing effect of natural medical gas baths has been well known for long. The so-called mofettas, that came into being as a result of post-volcanic activities, have high CO₂ content. In addition, they contain other gases as well in a concentrated form, which may also have beneficial effects. These gases get into the

body through the pores of the skin and through the respiratory system. Having got into the blood stream they will have beneficial effect on bodily functions. In Hungary the natural gas streams used for medical purposes can be found in the Mátra region in Mátraderecske and Parádfürdő. (Elsewhere, for example in Balatonfüred and Kapuvár, the medical gas with CO₂ is produced artificially.) The unique feature of the gas from Mátraderecske is its Radon content, which has a beneficial effect on circulatory diseases and the immune system (29). The mofetta of Parádfürdő is used to treat cardiovascular- locomotor-gynaecological diseases and infertility (30).

Treatments with medical gas – similar to bathing cures – are offered in a series of cures. Medical supervision and the presence of trained medical staff are absolutely necessary. Counter indications are almost identical with the counter indications of bathing cures. They include inflammatory diseases, high blood pressure, pregnancy and heart failure.

3.2. Climatic resorts and medical caves in Hungary

3.2.1. Climatic resorts

The somewhat delayed emergence of Hungary's mountain resorts although on a smaller scale, was similar to the emergence of spas. First it was the High Tatras that attracted tourists, hikers, climbers and, later, skiers. Due to the recognition of the beneficial effects of the specific mountain climate in the 1870s and 1880s, Újtátrafüred and Alsótátrafüred already came into being as mountain resorts. (The first Hungarian tuberculosis sanatorium opened in Újtátrafüred in 1876 and it operated uninterruptedly all-year-round.) The operation of the sanatoria in the Tátra mountains was coordinated, thus they formed a zone of mountain resorts. The sanatoria in Tátrafüred, Lomnic, Széplak, Tarpatátrafüred,

Csorbató, Matlárháza played a significant role in the treatment of tuberculous patients (Beluszky 2006).

After the Peace Treaty of Trianon (1920) Hungary's mountain climatic resorts were outside the national borders, consequently, their role had to be taken over by resorts located in the mountainous resorts at medium height. The sub-Alpine climate, unpolluted air, the altitude, and sunny peaks of these regions had favourable healing climate. In addition, they offered wonderful opportunities for combining the therapeutic effect of the climate with some moderate physical activity. Our climatic regions and their spas are as follows:

The Mátra Mountains are one of Hungary's best known climatic health resorts, which incorporates Kékestető (1014 m), the highest peak and the only true high mountain resort of Hungary. Kékestető was officially declared a climatic resort in 1963. It is beneficial for patients with chronic diseases of the respiratory system and of endocrine glands. It is also favoured by patients with cardiovascular problems. The first tuberculosis sanatorium of after-Trianon Hungary opened in 1932 in Mátraháza (710 m). Galyatető (965 m) is one of the sunniest resorts; its climate helps to defeat the symptoms of exhaustion and fatigue. Mátrafüred (370 m) is located at the southern foot of the Mátra mountain. Its natural environment and microclimate is offered for patients suffering from exhaustion, fatigue and pulmonary asthma.

The Bükk Mountains are Hungary's highest mountains when considering their average height. They are also rich in caves. The Bükk's highest regions are under protection, consequently, ecotourism and active tourism are connected at this place. Its highest-lying regions are under the protection of the National Park and, at the same time, patients may get a variety of health services at this place. A favourite health resort of the mountain region is Bükkszentkereszt, one of the highest-lying settlements in Hungary (600 m). Due to its specific location the temperatures

in the village are well-balanced, free of extremities. Its crystal-clear air helps to treat many diseases including hyperthyreosis, Basedow disease, anaemia, respiratory diseases and exhaustion, or nervousness. The popular resorts located at lower altitudes include Lillafüred (300 m), Szilvásvár (345 m). These settlements have mild weather and thus they are extremely suitable for recreation and sports (15).

The Soproni Mountains – due to the proximity of the Alps – have got a pleasant and well-balanced sub-Alpine climate with much sunshine and ozone-rich air for those people who wish to relax and recharge their energies. In the medical institutions of Sopron's Lővérek those patients are treated who suffer from heart problems, anaemia, hyperthyreosis, chronic respiratory diseases, high blood pressure and problems of the digestive system (Németh 2008).

Kőszegi Mountains are the easternmost part of the Alps, and these mountains represent the rainiest and the most humid region of Hungary. The absolute humidity of the air is high, consequently, this region is ideal for patients who suffer from asthma, allergies, and other respiratory diseases. Its most famous climatic resort is Velem (300 m).

Dunazug Mountains: It is the northeastern part of the mountain range of Transdanubia, and it comprises the mountains of Gerecse, Pilis and the Budai-hills. This is where the highest point of the whole range of mountains can be found: Pilis (757 m). The best known and most favoured climatic resort of the region is Dobogókő (699 m), which has a very pleasant climate both in summer and winter. Its popularity is due to its nice surroundings and the proximity of Budapest, Hungary's capital. The climate is beneficial for patients with vegetative lability, sleeplessness and high blood pressure (Németh 2008).

In the Mecsek Mountains Pécs (360 m) and its environs feature pleasant Mediterranean climate which can be characterized with

much sunshine. This climate is good for patients who suffer from cardiovascular diseases.

3.2.2. Medical caves

In medical caves there are treatments (speleotherapy) which qualify as special climatic therapies. The microclimate in these caves is dependent on the annual mean temperature of the place, the depth of the cave, its ventilation and the quantity and temperature of cave waters. The composition of air is dependent on the geological features of the cave, the flow of air in it, as well as its water supply. Cave air can usually be characterized by cleanliness, high relative humidity, favourable chemical composition, the favourable chemical composition of its vapour condensation, stable temperature and its abilities for self-purification.

Since cave air is absolutely free of dust, germs and allergens, there is high CO₂ content in it, which intensifies the operation of the respiratory centre, and, in addition, there are anti-inflammatory Ca, Mg and I ions in it, primarily it is the patients suffering from respiratory diseases who can utilize cave air with the most benefit. The effectiveness of cave climate, especially, when complemented with other therapies, is by far better than the efficiency of the sanatoria of high mountain resorts (Horváth 1992).

In Hungary's karstic areas there are several caves, but only a few of them qualify as medical cave. These are as follows:

Abaligeti-cave (Mecsek): The annual mean temperature of the cave is relatively high: (12.6°C). The relative humidity is 97%, the flow of air is minimal. Its vapour-rich air, due to the presence of anti-inflammatory Calcium-ions in it, the air reduces the complaints of patients suffering from a variety of respiratory diseases, asthma and allergies. In the Abaligeti-cave patients are

also exposed to mild radioactivity and this is beneficiary for people with silicosis and other similar respiratory diseases.

Béke-cave in Jósvalő (Aggteleki-karst): The Béke-cave is Hungary's second largest cave. The therapeutic effect of its climate was recognized long time ago and this is why in 1965 it became the first medical cave not only in Hungary, but in the world, too. The length of the corridors of the cave is 9 km, and an area of about. 340 m² is used for therapeutic purposes. The air in the cave is dust-free, its vapour and salt content are very high. Its therapeutic effect is complemented by antibiotics, produced by the spores of mould fungi, thus the air in this cave is ideal for people who suffer from bronchitis and asthma (31).

The medical cave of the Hospital of Tapolca (Tapolca-basin): The cave with a lake, which is located in the town of Tapolca is a unique phenomenon in Central Europe. Its special beneficial climate was known to people in the past, too. Its permanent temperature of 18°C, its humid, clean air make it possible to treat patients with asthma, allergies and other diseases of the respiratory system effectively. The dry corridors of the cave are used for therapeutic purposes; this part of the cave is called 'hospital cave' and it was explored as early as 1925.

Budapest (District II.) Szemlőhegyi cave, 'Corridor of Giants' (Budai-hills): It is one of Budapest's most valued natural resources. 2.2 km of the cave system was explored and it is an extensively protected site. Its air is free of dust and germs and this is why the cave is suitable to treat patients with asthma and other respiratory problems. The temperature of the cave is the same throughout the year (12°C). The cave can be visited by people who use wheelchairs, too.

Miskolc-Lillafüredi Szent István-cave; 'Black Hall' (Bükk): This cave is 340 m long and 55 m deep. Its temperature is permanent, its air is cold, humid and exceptionally clean and free of

allergens. In 1988 part of the cave was redesigned for the treatment of patients suffering from respiratory diseases (31).

Hungary has got reserves as far as cave therapy is concerned. Cave therapy is still of low intensity and capacity, so they primarily treat local patients with doctors' referrals. It is the Béke cave which can receive a relatively large number of people, but it has only a sanatorium next to it. The proper infrastructure, a health complex of considerable size, which would be necessary for health tourists, is still non-existent. Another problematic area would be the peaceful coexistence of health tourists and 'plain' tourists within the same cave (Horváth 1992).

3.3. Socio-economic significance of Hungary's health resorts

Hungary wishes to become the number one health tourism destination of Europe, and this aspiration is promoted by the dynamic and significant flare experienced in recent years in Hungarian wellness tourism (Laczkó and Ács 2009). By estimates all health tourism branches produce at least 100 billion forints in foreign currency and this amount can considerably be increased with some investments and government subsidy (Kincses et al. 2009). Our natural resources and the health tourism services built on them are Hungary's most valuable tourism attractions. Due to these characteristics the future prospects are reassuring. At present there are about 50 medical hotels and 100 wellness hotels with nearly 30,000 beds awaiting potential guests.

By figures of the Hungarian Tourism Ltd. (28) in 2012 it was nearly 8% of commercial accommodation and more than 10% of all guest nights (2.2 million nights) that were related to medical hotels. These figures meant a 10% increase when compared with data from the previous year. The guests were both Hungarian and foreign guests, but the increase was primarily due to a growth in

the number of foreign tourists. Sending countries included Germany (28%), Russia (16%) and Austria (11%). The significance of wellness hotels has been on the rise, too. Their share in commercial accommodation was 17% (1.4 million guests), in the number of guest nights 16% (3.5 million nights). In wellness hotels it was the tourists from Hungary who dominated (three fourths of all guests and two thirds of guests nights). The rise in the number of Hungarian guests was one and a half times higher (12%) than in the number of foreign tourists.

Our offers in medical-, thermal-, and wellness tourism – similar to international trends – are increasingly interrelated. Important developments contributing greatly to the growth are the so-called holiday vouchers, ‘Erzsébet’ vouchers and the ‘Széchenyi’ card, which are increasingly used by employers as fringe benefits in Hungary.

As it was mentioned above Hungary has excellent geographical features for the development of health tourism. Hungary is one of the richest countries of the world considering its thermal water and medicinal water resources. Hungary is internationally famous for its traditions and establishments in treating certain medical-factors-based diseases and in patient rehabilitation. Hungary’s health care system, health care industry and the training of health care professionals are well known all over the world. Health tourism services offered by Hungarian institutions internationally represent very good price-value ratio and are competitive in the European market. In the last decade the capacity of health tourism establishments and the range of health tourism services have considerably improved. The most notable change in this respect is the dynamism of the infrastructural development of wellness tourism. An advantage is that seasonality does not play a significant role in the area of health tourism, although the utilization of the capacity of wellness hotel rooms is not higher than average (Kátay 2010). However the average length of stay –

as opposed to 3-5 days, typical in traditional tourism – is 10+ days in health tourism (33). In the year 2010 it was an average of 6 days in lakeside resorts (18). Specific expenditure – due to the use of costly medical services – was generally by 30-35% higher than in other areas of tourism. Health tourism has a beneficial effect on the national economy: in medical and thermal tourism every 100 forints spent by guests increases income with another 75 forints (multiplication effect). Every 100 new jobs in medical and thermal tourism will create another 214 new jobs in the national economy (multiplication effect) (32). A breakthrough of great significance can be seen in tourism, based on medical services. It produces more income than our traditional health tourism, which is based on medicinal waters and recreation (Kincses et al. 2009).

At the same time, there are problems disadvantages that need to be resolved. Hungary's achievement in health tourism concentrates on a narrow circle of places, despite the fact that the geographical distribution of natural resources is not restricted to a few areas (Molnár 2011). Several of our destinations are difficult to access. Infrastructurally and suprastructurally they are outdated and the plans for development are uncoordinated. The level of the provision of services is low and human resources are also insufficient: properly trained professionals (animators, recreators) are not always at the disposal of guests.

The marketing activities of spas do not necessarily aim at addressing the relevant target groups. The introduction of complementary medical and thermal tourism services is slow, although they would make it possible for several generations to spend quality time together at the resorts. There are difficulties in settling bills with health insurance companies. The project approach and the regional approach are not present in developmental and marketing plans (32).

Concerning the offers in adventure and wellness tourism, Hungary is falling behind other countries, especially nearby Austria (Albel 2012). Health tourism developments in a certain settlement bring about changes only in the life of the given settlement and they do not lead to larger-scale improvements.

Considering the above, the task is to create a specific tourism product which is sustainable and competitive in the international tourism market on a medium- and long-term basis as well, and, at the same time it is environmentally friendly. One of the basic requirements is openness, the reception of players from international markets and the appreciation of their financial and professional needs. The achievement of these goals can be aided by the complex development of already existing medical institutions and services. If a variety of services is provided within the same institution (e.g. medical treatments and fitness) they need to be separated, otherwise they would disturb each other. All this requires a qualitative and quantitative infrastructural development of resorts. Basic and tourism infrastructure as well as suprastructure need to be improved with the general development of the settlements with tourism in the focus. Development of human resources and the settlement of the income factor is also an important element.

Planning and the promotion of the already explored but not yet utilized natural resources (e.g. medical cave, medicinal water) is also a pivotal point. (Permits can be given only if utilization does not represent an environmental risk, not even on a long term basis.) Further improvement in the area of the marketing of health tourism could be recommended, with a special emphasis on medical services-based tourism.

The needs of foreign and Hungarian guests need to be explored, analysed and appreciated. More attention should be paid to the creation and introduction of innovative tourism products and services (33).

It is a significant part of Hungary's national strategy to make health care and its subsidiaries, health industry and health tourism a priority. The long-term significance of the sector is underlined by the fact that the sustainable development of health tourism became part of the National Tourism Development Strategy and Spatial Development Concept of 2005 as well as part of the New Hungary Programme, the Széchenyi Plan and the New Széchenyi Plan of 2011.

The implementation of the New Széchenyi Plan has 7 priority programmes, among which the programme 'Healing Hungary-Health Programme' is of utmost importance. Within the framework of this programme there are 23 projects and the funds available are 31 billion forints. The main goal of the programme is to make Hungary a leading power in Europe in the market of thermal and medicinal water-based health tourism. The projects are aimed at founding organizations for destination management and improving health tourism –related health care and rehabilitation services (Albel 2012).

The main trends in the above described developmental plans include the rise of competitiveness, which can be realized by eventually creating health tourism regions through utilizing and coordinating international patient mobility, cross border cooperation, local resources, health care services, cultural and tourist attractions and commercial accommodation (Albel 2012). For the efficient development of medical tourism, the different stakeholders need to come out with a comprehensive policy to regulate the market to get better patients' safety and outcomes (Singh 2019).

SPORT TOURISM

4. MODERN INTERPRETATION OF SPORT TOURISM

Travelling in order to gain new experiences has always been present in societies, although at varying degree. Examples include travels aimed at getting acquainted with other cultures, ‘miracles’, travels with the aim of treating certain medical conditions. In the Middle Ages young apprentices also travelled a lot. The origin of sport tourism goes back to the Ancient times, the time of the first Olympic Games, when the given city-state was visited by sportsmen or spectators with the aim of participating in the Games or watching its events (Kiss 2013). Today, due to the modern technological development, social space has enlarged and the spatial mobility of people has greatly increased.

At the same time technological development – it is a well-known fact – influenced people’s natural surroundings and health in a negative way. Paradoxically, it makes a modern person to leave his place of residence and seek the long-lost features of his surroundings elsewhere. He has to become a tourist in order to enjoy nature’s beauty, wealth and challenges and all these experiences make it possible for him to return home enriched and refreshed.

The word ‘tourism’ was first mentioned in 1811 by the Oxford English Dictionary, as a derivative of the English word ‘tour’, meaning journey, travel in a specific area. The first official definition of the word goes back to 1937 (League of Nations): it was then used to mean a visit to a place other than one’s place of residence for longer than 24 hours. Later those people who went for a period shorter than 24 hours were called hikers. Our modern definition is much stricter and the length of time of visit plays a less significant role in it, but it is important, that the travel as well as the activities must be chosen by the individual tourist. Another

important motivation is looking for novel experiences and adventures.

The World Tourism Organization and the Interparliamentary Union in 1989 approved of the so-called Hague Declaration on Tourism. It defines tourism as follows. “It encompasses all free movements of persons away from their places of residence and work, as well as the service industries created to satisfy the needs resulting from these movements; (b) It constitutes an activity essential to the lives of human beings and modern societies, having become an important form of using the free time of individuals and the main vehicle for interpersonal relations and political, economic and cultural contact made necessary by the internationalization of all sectors of the life of nation”. Tourism can be divided into two parts: professional tourism, which is related to one’s own work, and leisure time tourism which is based on free time activities.

By the second half of the 20th century people’s leisure time behavior has changed significantly. While physical activity played a decisive role in the development of human genetics, due to the spread of physical inactivity, disharmony developed between genetics and lifestyle, which led to the development of lifestyle-dependent diseases and a decrease in life expectancy in modern age of humans (Radak 2018). Physical inactivity – taking into account its health risk – is a serious problem in developed countries (Ács et al. 2016a), so every opportunity should be taken to increase activity, the social and economic effects of which are also significant (Ács et al. 2011, Stocker and Ács 2012, Ács et al. 2016b).

The number of travels aimed at doing/being engaged in some sport activity has dramatically increased since the early 1980s. Sport has become a term of complexity rather than simply the sum of physical activities. The time people spend on money making activity has decreased, discretionary incomes have been on

the rise, recreational habits have changed, people have become more and more health conscious, and the idea of 'sport for all' has become increasingly popular. These features – as a response to the harmful effects of urbanization – have contributed to the growth in the number of people doing sport, especially health-related types of sport. As we have seen, due to an increase in free time, a form of sport has emerged, which is aimed at preserving health and promoting fitness and exercise. It has become clear that people's control over their health is undoubtedly ensured by gaining control over their lifestyle (Pikó 2003). From that time sport accomplishments became not as important as the recreational aim (health preserving, having fun, well-being) for many (34).

On the other hand, in the opinion of Hinch and Higham (2001) competition has become decisive in all segments of sport including recreational and first-class sport as well. Sport events related to amateur and professional sport are tourism products as well and as such, they have become very important, too. The number of supporters, present at exhibition-type mega – events, continental championships, leagues and cups have been steadily on the rise. There is also a demand for mass events including street running events, bicycle tours, lake swims etc. In addition to the above, extreme sports are becoming more and more popular, too (Hall 1992).

As a result of these new tendencies by the 1990s certain governments started to elaborate strategies in the area of sport tourism and they organized mega – events, too. Due to these developments, as it was stated by the WTO, sport tourism was the most rapidly developing branch of tourism, occasionally producing 8-10% growth annually (Kiss 2013). This development was supported by some technological development, which made transport faster and easier. Thus the spatial mobility of the population intensified., a trend, which can be seen in the

growth of travels aimed at some sport activity. This tendency was only experienced in countries and regions with the most developed economy, in welfare societies, where the most significant challenge was not related to life from hand to mouth, but where people aim at living an interesting and rewarding life.

4.1. Importance of sport tourism

Sport – according to the European Sports Charter (1992) means all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels (35). Sports is an outstanding area of body culture, which has a beneficial influence on people's personality as a whole, on their intellectual, social, ethical and emotional characteristics and abilities (Rétsági 2004). Sports is a physical and emotional defense factor (Pikó and Keresztes 2007, Morvay-Sey et al 2020). It presupposes and formulates adequate psychomotor abilities, it has regulatory functions. In many cases – but not necessarily always – it is based on competition and requires stamina, risk-taking, playfulness or skilfulness. The systematization of the different types of sports is a difficult task; it can be done on the basis of its medium, the sports equipment, its aim, the number of people, or the traditions. It is fact of interest that the word 'sport' was 'imported' from England by Count István Széchenyi and it was originally used in Hungary to denote some entertaining pastime (Takács 2009).

Tourism means the movement of people to places other than their place of residence and it includes services to meet their needs. There are several different motivations, models and styles, tourism might mean different things for different people (Kollarik 1991, Fejős 1998). Leisure time tourism is based on the free choice of people; their aim is to be at a place which is different

from their homes. They want different experiences, they want to face different challenges, or, on the contrary they need a quite place., or, want to experience some kind of spirituality. These desires – similar to all spatial mobility within society – are induced by some push and pull factors between people’s homes and the chosen destination. The most significant socio-cultural effects of tourism are manifested in the increase of social and regional mobility as well as in the increasing prestige of regional and national heritage (Csordás 2006).

The definition and the academic implications of sports tourism have lately become the centre of attention (e.g. Hinch and Higham 2001, Turco et al. 2002, Bánhidi 2007, Bokor 2009, Yannakis 2012, Györi 2014). Due to the up-to-dateness of the topic it is to become a question of importance in educational curricula as well. The timeliness of the topic is underlined by the dynamism of spatial and temporary changes in leisure time. which are related to the quality of life as well as to the health, the social, intellectual and emotional conditions of individuals, making up our societies.

From the last few decades of the 20th century travel and sports represented the two most sought-after activities of people in the developed countries (Dávid et al. 2006). Both activities stem from the desire to break out of the duties and the monotony of everyday life and, the strengthening of the intention to find new possibilities and dimensions of life. It is especially true in those situations when sports becomes the target for travel (Yannakis 2012). Tourist destinations and holiday activities are increasingly chosen with sports events and sporting possibilities in mind.

Sport and tourism have a lot of common characteristics. Their emergence is related to the spending of one’s free time and both of them can be described as cultural phenomena. They can be done individually or in teams, and both of them have a significant impact on economy. They are closely related to the quality of life,

level of income. Social, health intellectual and emotional state of the individual members of a given society. Both of them can be characterized by spatial and temporary dimensions.

Sport is an important activity within the group of tourism activities, while tourism is an important feature of sport (Hinch and Higham 2001). Sport tourism is a type of tourism, in which the primary goal and motivation for travel is some kind of sport. It means travelling from one's place of residence to destinations, where one can be actively engaged in some kind of competitive or recreational sport or can experience its atmosphere or social impact. Hall (1992) relates three inseparable areas to the notion of sport tourism: hallmark events; outdoor recreation; health and fitness-related activities.

Another aim in sport tourism can be visiting special sport-related sights and attractions, seeing sport relics, such as sport museums, stadiums, halls of fame. In a broader sense those activities can be included here, in which, spontaneously or purposefully, tourists make use of sport-related events and sights a destination can offer to them, even when it was not their primary goal.

Sport tourists are those individual persons or groups of people, who, actively or passively participate in some kind of competitive or recreational sport when staying away from their place of residence or work. Sport, physical exercise, tourism mean experiencing time and space. In sport tourism there are three elements of key importance: its rules, competition, playfulness; its spatial characteristics include geographical components, environment, landscape, regional and local characteristics; and its temporary components include the length of sport activity, seasonality and its temporary development (Hinch and Higham 2001).

Tourism activity, which is based on physical activity, Hungarian terminology before adopting the term sport tourism, used to call active tourism. "Active tourism is a form of tourism, in which the

tourists' motivation is some recreational or leisure time physical activity" (36). These two definitions mostly overlap. It is thought that active sport tourism is their cross section. The remaining parts, those activities which do not qualify as sport activities (e.g. walking, picking something, sunbathing, camping, boating, pleasure bathing etc.) belong to the category of passive sport tourism.

The definition of sport tourism is very complicated, because it is a multidisciplinary notion and it is inseparable from the notions of recreational and non-recreational tourism. It can be stated that sport tourism is not only part of tourism, but it is related to the notion of recreation as well (1).

4.1.1. Types of sport tourism

By the goal of sport tourism we can differentiate between professional and leisure-time (recreational) sport. This duality can be detected in the goals of sport tourism, too. Professional sport is not a leisure time activity, but it is an activity that leads to an income. Sportspeople, coaches and their clubs all make a living from professional sport. Professional sportspeople are first-class athletes who participate in national, international sport events including European and world championships, Olympic Games and World Cups, as well as professionals who are engaged in extreme sport. Their travels are part of professional – or business – tourism.

Sportspeople who do leisure time activities do it as a hobby, or, in case of extreme sport, as do their sport as an adventure. They attend amateur championships, weekend events, mass sport events, more or less regularly. They participate in sport events both in their home countries and abroad. They are most often evaluated by age. They are sometimes members of a sport club but most often not. Their goals include recreation, looking for something new and special. Finally, there are people who

participate in sport events only occasionally or seasonally. These sportspeople include kayakers, skiers, hikers, horseback riders, joggers.

By the activity of the sport tourist they can be active or passive. Active sport tourists are regular or occasional active participants of professional or amateur sport events, championships mass sport events, training camps, recreational camps and hikes. Passive sport tourists are those people who accompany the active sportspeople (coaches, physicians, massage therapists, husbands/wives), reporters, or supporters. Events of the highest rank, including the Olympic Games, Football World Cups, Formula 1 races, attract huge masses of these passive tourists. Similar to these we can identify passive tourists (family members, relatives, friends etc.) in the area of recreational sport as well.

Passive sport tourism is most often related to professional sport and the main motivation of tourists is the enthusiasm for a particular team or sport person, club, or a nation. Sometimes it is related to nostalgic feelings as well (Fairley and Gammon 2006, Smith and Stewart 2007). The supporter feels that the success of the team or of the sportsperson is his own success. On the other hand, the desire to get away from everyday problems, positive stress, entertainment, the beauty of the given sport or the quality time spent with family members or friends also play a role. When examining supporters from the point of view of social studies, there is a considerable difference between individual and team sports. Collective identification varies by age, region, type of sport and even club (Bali 1998). 'Supporter' tourism is one of the most complex areas concerning the relationship between sport and tourism.

The 'passivity' of supporters is relative when compared to the main attraction. In events, the 'accompanying' persons at major sport events can even play an active role or, they can be engaged

in certain sport activities themselves. The Tour de France can be quoted as an example, when, after the cyclists pass, supporters also ride their own bicycles.

Gammon and Robinson (1997), considering the goal of travel and the type of sport activity, identified the following categories:

Hard Sports Tourism: travel and activities, related to active participation in a given sport event or training camp (competitor or organizer) or, being a spectator there.

Hard Tourism Sports: sport activity is not the primary aim of these tourists, but the tourist may use the opportunity accidentally or on purpose to be engaged in some sport activity.

Soft Sports Tourism: the primary aim of travel and activities is participation in a recreational sport activity.

Soft Tourism Sports: the tourists, whose aim is not sport, randomly uses sport tourism offers.

Bánhidi's (2007) sport tourism model, based on geographical foundations was adapted by Tóth (1981) when elaborating his theoretical model. Tóth emphasized the complexity of the geographical environment (nature, social characteristics, economy and infrastructure). He also differentiated between active (personal presence) and passive forms (travelling by a vehicle) in relation to travel as well. The fact that recreational exercise and sport have become popular led to the situation, that these physical activities improve the quality of life and they are increasingly important aspects during travel (Kiss and Rátz 2007).

Sport tourism activities can be classified by the venue of the activity (e.g. outdoor or indoor activities, natural surroundings or, artificial surroundings, land, water and air sports), by the season of activity (e.g. winter and summer sport, season-independent sport), by equipment (e.g. Some sports need equipment, some do not, technical and non-technical sports), by investment (e.g. cheap or expensive). By types of sport there are many variations including bicycle sport, equestrian sport, water sports, nature

walking, skiing (1) emphasizes the importance of fitness tourism and training tourism as well.

4.1.2. Sports tourism as a subject of scientific research

Before the 1990s sport was discussed by researchers only in very general terms and in fragmentary contexts. The role of sport science was negligible even in the organization of major sport events, like the Olympic Games. The situation was the same in relation to sport recreational and health-, and fitness related activities (Hinch and Higham 2001).

The academic research into tourism as well as sport science has a common area, that is sport tourism research. It investigates sport – that also involved recreational sports and sport recreation - in its role as primary tourist attraction, so it can be viewed as a new multidisciplinary research area. Sport science integrates certain areas of science and social studies, and it has its own research problems, study areas, terminology and methodology (Frenkl 2003). Its research topics include the phenomena of body culture and it also focuses on the persons, who are engaged in some body-culture-related activity. Since humans, who are engaged in some sport, are investigated from a variety of aspects, sport science has several subsidiary branches, e.g. recreology, sport physiology, sport psychology and sport history.

Tourism, due to its complexity, can also be investigated from different points of view. This is why tourism research is also very complex and it includes destination research, the study of larger or smaller regions and settlements, the processes of planning, tourism development, image building, needs analysis and many other research areas (Aubert ed. 2007). It is primarily the disciplines of economics, sociology, and geography which can be related to the research of tourism, as an independent academic discipline (Aubert 2005). Most recently it is also called ‘tourismology’ (Michalkó 2012).

The identification of the exact place taxonomy of sport tourism research is not an easy task, considering the fact, that it used to develop within the framework of geography, examining the mutual relationship between natural and social environments and their spatial structures (Győri 2015).

4.2. Physical geographical factors influencing sport tourism

Sport tourism often requires special venues and these are often unevenly distributed in space. Natural surroundings on the one hand represent a basic requirement for doing sport, on the other hand sport activities would also influence the natural surroundings. The mutual relationship between sport tourism and natural surroundings is the most evident in the case of outdoor sports (climate, terrain, hydrology, flora, environmental problems). The features below will have considerable impact:

- Terrain: (e.g. skiing, mountaineering, mountain running and bicycle events, cross country running),
- Climate (e.g. sailing, winter sports),
- Hydrological conditions (e.g. kayaking, canoeing, rowing, sailing, rafting),
- Flora and features of the terrain (e.g. orienteering, cross-country running, cycling, hiking).
- Beauty of the landscape, or the extremity of circumstances (e.g. mountaineering, desert races).

Geographical factors influence outdoor activities. On the other hand, the destination itself (the receiving environment) also has its impact. If there are several different offers ('Sportfolio') the sport season can be longer (Kiss 2013). In leisure time sport rural places, healthy environment can play a role. The relationship between various sport activities and the natural environment are further detailed by Bánhidi's publication (2011).

4.2.1. Example 1. The role of physical geographical environment in skiing

Winter sports mean doing some sport activity in cold weather and snow and ice play the most important role in them (Bánhidi 2011). They are pleasurable and a source of joy in winter, when most people are inactive. Skiing is the most popular winter sport worldwide. It depends on the weather and the terrain. In the area of supply and demand, skiing tourism has lately produced a never – before – seen growth. Since 2000 the number of classical skiers (Alpine skiing and cross country skiing) has gone down a little, but this tendency is being compensated by the growing popularity of snowboarding (Müller et al. 2008).

In mountaineous regions natural surroundings might considerably differ even within a relatively small area. If the snow conditions are proper, the height of 1000-2000 m above sea level provides the best opportunities for skiing (Kollarik 1991). At the same time, during snowy winters these destinations might be difficult to access, and avalanches are also a threat (The Alps and the Carpathian mountains). In these regions the passes represent suitable routes. A pass is a location in a range of mountains that is lower than the surrounding peaks, so it is suitable for travel (e.g. Simpson Pass).

It is obvious that the various types of skiing need different terrain. Alpine skiing and ski jump require areas with higher relief energies, and differences in altitude, while cross-country skiing requires relatively flat surfaces. The former types of sport are mostly pursued in high mountains (e.g. The Alps), while the latter one is mainly done in the north of Europe (in Finland, for example).

The slopes, suitable for Alpine skiing and ski jumps have a gradient of 12-25%. In the Alps, due to the erosion of the former surface, the so-called miocene-age mountain footsteps and the pleistocene.age valley edges offer the best opportunities for

skiing. The rocky surfaces in higher mountains are practically unsuitable for skiing (Herlicska 2000). The slope itself has an important role in the thickness of the snow cover. If the slope is too steep, the thick layer of snow can easily move down, causing an avalanche. In addition, at higher altitudes the wind is stronger, too, and it can blow the snow away.

The beauty of mountain peaks and valleys have a very important aesthetic role, too for a skier. The high mountains have peaks which came into being in the Ice-age. Their jagged edges, steep slopes, ravines, deep valleys and glacial lakes offer an unforgettable view to skiers. The plants are also part of the beauty of the landscape. The flora changes with the altitude: the beech woods of lower altitudes give way to pine forests and then to high-altitude plant communities.

The seasonality of skiing sports is influenced by the climatic conditions of ski tourism destinations (Kollarik 1991). In the mountains the higher an area is, the lower is its temperature, its pressure and its oxygen content. On the other hand, radiation levels, the daily fluctuation in temperature and the amount of precipitation, all rise. From the point of view of our topic, the temperature of the air, the snow as a form of precipitation and the wind conditions play a significant role.

At places, where the snow cover does not last long, ski tourism is not very well developed. There is a close relationship between the formation of the snow cover and the altitude. But it is difficult to say whether or not the snow cover will last. That feature also depends on several other factors including the orientation of the slopes (in the northern hemisphere melting is faster on southern slopes), the influence of the foehn winds (snow eaters). When evaluating the factors influencing the formation and the disappearance of the snow cover from the point of view of tourism, it can be stated that the beginning of the winter skiing season can be determined quite easily on the basis of altitude

figures. Its end is more unpredictable (Herlicska 2000). Fake snow – which is used when not enough natural snow is available – can be risky for the environment (Rixen et al. 2003).

In the mountains at higher altitudes the annual mean temperature decreases by 0.5 °C every 100 m. In connection with temperatures some harmful phenomena need to be mentioned. One of these is the change when the temperature is nearing the freezing point. It may spoil the quality of the snow. The other factor is an inversion in air temperature, meaning that it does not go down at higher altitudes, but it rises, instead. It is quite common in winter that basins in the mountainous areas are for days covered with fog, while the surrounding peaks are sunny (Futó 1988). Reverse temperatures may result in the melting of the snow in higher regions, and this phenomenon is not good for skiing sport.

Snow, as a result of a fall in temperature, is precipitation in the form of flakes of crystalline water ice that falls from clouds. In order to have snow the temperature needs to be below freezing point at higher altitudes and near the ground at around 0 °C. Snow conditions are very important factors in skiing from the point of view of the skiers' physical condition and technique. The so-called 'new snow' is soft, 'old snow' is 'hard', because snow flakes lying next to each other have already had mutual impact on one another. The end-product, when old snow has turned into ice, is called firn (icy snow). The powder snow, which comes into being at very low temperatures, is the most enjoyable substance for skiers (Bánhidi 2011).

The speed, direction and microregional dispersion of the wind are determined by the terrain. In the Alps for example, above 1400-1500 m the speed of the wind rises dramatically (below this altitude the terrain is able to moderate it) (Herlicska 2000). The most frequent types of wind are the foehn and the mountain-valley wind.

The low temperatures, the sun, and the high altitudes have a very beneficial physiological effect on people. In addition to the fact that the environment itself has a recreational effect on them. At the same time it is also important to consider the harmful environmental impact of skiing as well.

The construction of ski resorts and ski centres in itself is harmful for the environment and these effects are turning for the worse as the number of skiers rise. The delicate balance between the natural flora and fauna easily breaks down at ski resorts (Wipf et al. 2005). In relation to this point two problematic issues need to be mentioned from the point of view of the protection of the environment. One of these is the use of snow cannons, the other one is the construction of ski slopes (Herlicska 2000). New ski slopes go higher and higher and in order to build them a lot of trees and forests need to be cut down in the lower regions. In addition, new ski lifts, hotels, catering establishments are needed and the terrain goes through a total transformation (e.g. surface works, ramps and platforms built).

Snow cannons, which are used to make fake snow to substitute for natural snow, use a lot of water and energy. When the snow is melting, the extra water causes harmful erosion and, in addition, the minerals, which come from the fake snow, the remains of oil and other harmful substances from the machinery, get into the soil. Pollution also gets into the ground waters, and, in many places ground waters represent the only water source for the entire region.

In the opinion of Dosek (2007, 74) ski slope operators need to keep the following rules:

- The protection of basic ecological factors.
- The preservation of local flora and fauna.
- The protection of the landscape.
- Environmentally friendly technological development.

- The support of scientific research.
- Improved communication and information systems.
- Cooperation between experts representing diverse areas in the interests of sustainable development.

In addition, the consumption habits of skiers, as well as the appearance of crowds of supporters at major sport events create a lot of extra environmental problems (e.g. extra heating systems, transport systems, rise in the amount of communal sewage and waste, increased noise levels). In the last two decades of the 20th century skiing became a big business and it means that the main attraction in it is not skiing itself, but the services, organized to accompany this sport. It creates jobs and means employment for local residents on the one hand, but on the other, serving new crowds every week is an enormous burden for the environment. The behaviour of sportspeople and sport tourists may significantly influence the environmental impact, meaning, that their environmental awareness is the key to our future.

4.2.2. Example 2. The role of physical geographical environment in water touring in Hungary

Water tourism is a type of recreational sport and free time activity, the target area of which is a natural or artificial water surface, riverside or lakeside and its environs. Its emergence goes back to the development of vehicles suitable for water transport, as well as man's various leisure time activities done in the vicinity of a water surface (Bánhidi 2013). Various types of water tourism exist depending on the water, including river tourism, lake tourism and nautical tourism. By the activity there are spa tourism, water tourism (kayaking, canoeing, boating, sailing), angling tourism water adventure tourism and extreme water sport tourism. The individual types of water tourism may intertwine with each other, or with other trends of tourism. Examples include ecotourism, rural tourism, youth tourism.

The areas, which are suitable for water tourism, including rivers, lakes, ponds are considered of exceptional importance in Hungarian tourism. Near Hungary's shallow lakes, backwaters and those sections of our rivers, where the current is not very strong, there are sandy beaches and the temperatures make it possible to enjoy a relatively long bathing/swimming season (Kollarik 1991).

Water tours are part of water tourism. Its active participants use their own physical strength to move their vehicles from camp site to camp site, or they stay at one place as base camp and organize tours from there. The kayaks and the canoes are the most frequently used vehicles, and sport equipment. Water touring is a very complex form of tourism, since sport and recreational activities are done in water, on water, and on land, too. It is not by accident that water tourism has become the most rapidly developing type of sport tourism. The challenge and experience of a sport activity is combined in it with man's natural desire to spend his free time in or near water. In addition to the fact that waters represent basic conditions for this type of tourism, their natural environment serves as the main attraction and motivation for tourists' sport and recreational activities.

There are some people among water lovers who are happy with what the water and its natural environment can offer them. They are those people who would do activities there even if they could not take hot showers every day or could not do any shopping in the local shop or would not be able to arrange the delivery of their baggage. A certain degree of determination and preparedness are needed for this kind of 'nomadic' life on water. But there is an increasing number of those people, who, in addition to adoring nature and seeking adventures, need the convenience of a well-equipped camp site, tourist facilities and a range of supplementary services (Barna et al. 2012). It is especially true today that basic touristic infrastructure and superstructure are

needed in water tourism as well. Suprastructure is what a destination can offer in the area of accomodation and catering, and, the sum of all services tourists may use (Michalkó 1999).

The whole area of Hungary is part of the Danube's watershed area. The Danube collects all the waters that come from the neighbouring mountains and run toward the inner areas of the Carpathian basin. Due to these geographical features Hungary offers excellent opportunities for water tourism. Our waters are clean, they run slowly and these features are very good for water tourism. A stream, a river, a big river, wild waters, lakes or the floodzones of rivers offer different experiences when canoeing, kayaking, or rowing there (Németh and Némethné 1997). Classical tours are usually organized in the upper section of the Tisza River and on the rivers Bodrog and Körös.

In order to fully utilize Hungary's waters and have a complex experience, it is also important to know as much as possible about them, their environment and those spatial and temporary changes, which are typical of them. For us, teachers, participating in or leading tours on waters and camping by them is a serious and responsible job and it has numerous educational benefits. On the one hand we have the opportunity to teach about healthy life and can organize free time activities accordingly. On the other hand, by teaching technical schools necessary for water travel, camping and traffic rules, social norms we can also convey significant subject knowledge. Water and its man-made environment represent an interactive and reflective learning environment, though which children can playfully learn about geography, physics and biology. This knowledge serves as foundation for more complex interdisciplinary material (e.g. hydrology, environmental science).

In the next chapter those basic notions and phenomena will be surveyed which are of utmost importance for those who are engaged in one form or another of water tourism. Water sports

and touring on water are based on these phenomena (Bánhidi 2011). This material concentrates only on rivers, since in Hungary they play the most decisive role in water tourism. considering the markets of supply and demand (Ujvári 2009).

Rivers are fed by springs, precipitation, and melted snow and ice. The hierarchical system of rivers, which eventually unite into one big river is called river system or river network. There are streams and tributaries of different size that make up a big river. The denseness of a river system depends on the climate, the flora of the given area, as well as the structure of its surface and the quality of its rocks. Watershed is an area, the waters of which are drained by a river. This area is surrounded by divides, which are usually topographically high places.

The flood zone of a river is part of the river's valley, which may be flooded. If the river has been regulated, then it is an area, which used to be flooded. The river dams divide this area into two parts: the flood plain and the flood-free zone.

The 'site' of tours on water is varied. The width, depth and speed of the rivers are varied, too, and these features may also change depending on the season and weather conditions. The riverbed is actually a long uneven ditch, which was brought about by flowing water. Its deepest part is called riverbottom, its side is the bank. The intersection between the bank and the side is the edge. If we face the direction of the flow the right bank is on our right and the left bank is on our left.

The geometry of the riverbed does not have a major influence on water tourism, still it can be stated that smaller or medium-size rivers are ideal for tours. Wide rivers with large water surface, including the section of the Danube on the Great Plain offers fewer experiences visually. Narrower rivers represent a more beautiful sight for people. The depth of the water is significant only when it is too shallow and represents a physical obstacle.

The Hernád River can be taken as an example during the dry summer months.

The shape of the cross section of the river bed is influenced by the mechanical energy of the water current and the hardness of rocks on the surface. In straight sections of the river the riverbed is symmetrical, while in bends it is asymmetrical. Due to the centrifugal force in the bends the water is pushed toward the concave side and this is why the current, the speediest part of the moving water deepens the riverbed. The bank is steeper at places like this. In winding rivers this line is rarely identical with the line dividing the river into two.

The longitudinal section of the river shows changes of the depth. The depth of rivers, compared to their length is not significant. Shorter rivers are usually 2-3 m deep, while the depth of longer rivers can be about 10 m (Zseni and Bulla 2002).

The summer temperature of the water of Hungary's rivers is ideal for tours. The temperature of the water itself is not significant from the point of view of boating, but it may influence accompanying recreational activities including swimming, or playing in water. Water temperature changes depending on insolation and heat emission, but, due to water mixture it is nearly the same at each point of the river's cross section. Daily changes in temperature rarely exceed 1°C. An interesting fact in connection with winter temperature is, that freezing can take place in the depth as well. Since the specific weight of ice is less than that of the water, the ice slush located at the bottom of the river comes up to the surface and forms an ice-floe. Clear-water and fast rivers take longer to freeze (Moholi 1988).

Rate of flow and water level represent very significant data for travellers on water. Rate of flow represents how much water flows through the cross section of the river during a given period of time (1s). The rate of flow of the Danube is for example in summer 1000-1500 m³/s. The rate of flow depends on the size of

the watershed area, the amount of precipitation, the intensity of evaporation, and also on how much water the rocks of the riverbottom can absorb. An increase in the rate of flow leads to an increase in water level (flooding), while its decrease means a decrease in water level, that is recession. The regularity of these processes depends on precipitation, the annual distribution of precipitation and the periods when snow and glaciers melt. Rivers in Hungary – due to our wet continental climate – are characterized by floods in springs and in early summers, and minimum water levels in autumns and in early winters.

Water level is identified in relation to point 0 of the fluviometer (e.g. in Szeged point 0 is at 73.67 m above the level of the Baltic Sea). Fluviometers can be found in certain parts of riverbeds, or, on embankments, bridges or floodgates. Water level can be high, of medium height, low and flooding, if the water runs out of the riverbed. Monitoring water levels is very important from the point of view of boating trips, The National Water Level Observation Service publishes data on a daily basis on water levels of Hungary's rivers. Water levels are reported in relation to certain settlements. It is given in centimeters and means the height of water compared to the 0 point of the local fluviometer. The % value relates it to the highest water level value ever measured (100%). The water level report informs us on floods and recessions.

Floods can be real obstacles in water tourism. Streams and small rivers (e.g. Sajó, Hernád, Rába) flood very quickly, but water level goes down very quickly, too. Rivers of large flat areas flood very slowly. When rivers are flooding the process is faster in the beginning while the receding period is slower. Due to the possible danger of floods very careful planning is needed when organizing boating tours. Flooding waters mean that water flows quickly, currents change, more alluvial deposit is carried and thus tourists are to face underwater obstacles unexpectedly and they also have

to struggle with poorer water quality. Since the majority of riverside areas get flooded, many of the former campsites and peaceful harbours get underwater now. Higher water levels might reduce the attraction of the river, which may flood riverside beaches, restaurants and other tourist facilities.

It is due to the gravitation that rivers move along the banks. Their speed depends on their fall and rate of actual water flow. Fall means that in a section of 1 km how many metres the level of the river bread falls (e.g. the fall of the Tisza River in Szeged is 0.03‰, which means 3 centimetres). The speed of the water current is the lowest in the bottom and by the two banks and it is the highest in the current. Water speed is higher on the concave side of bends; in the inner side it might even stop or might flow backwards. The direction of the drifting objects on the surface shows where the current is. Flooding water flows rapidly, receding water flows slowly. These are points to consider when planning a tour (Bánhidi 2013).

Fast rivers are not suitable for tours: it is difficult to anchor boats near their banks, and their water level might also change very quickly. These rivers are more popular with lovers of extreme sports. Slow moving rivers do not pose a risk for people, they are more likely to become target areas for water tourism. On the other hand, they are not very popular either, because sometimes people like to move with their boats without having to row, they want to move down with the 'stream' and they like to become passive tourists every now and then (Donka 2012).

Waves come into being under the influence of wind, some obstacle in the water, and as a result of moving vehicles. The lateral forces of waves may turn up smaller boats unless they are turned to face the waves (Bánhidi 2013).

The kinetic energy of water is proportionately increasing with its volume and fall. Its speed is reduced by the inner friction between its own particles (the viscosity of water at 0°C is twice as much as

at 25°C), as well as its external friction, that is the friction between its own particles and the wall of the riverbed (e.g. detrital or shallow riverbed). The power of the water in the river may dislocate some looser parts of the riverbed and the particles drift on in the water. The river has a deepening force (linear) and a lateral force, directed at the walls. This erosion depends on the speed, the volume of the water and the quality of the rocks of the riverbed.

The alluvium is carried by the river either in a dissolved form, or, its particles are rolling (saltation) or floating (flotation) in the water. If the speed of the river decreases, it will deposit its larger-size alluvium. At places where the fall of the river is more significant, or at places where the riverbed is narrowing, energy increases and erosion becomes more significant. When the river is flooding it carries more alluvium (Moholi 1988). During transport larger size rocks break up into smaller rocks and pebbles, eventually sand. Alluvium is the 'chisel' of the river. It performs corrosive tasks with the help of rough rocks and pebbles.

Fast rivers with much water in them work more. The triple rule of destruction-transport-accumulation is valid in this case, too. Depending on these features different sections of rivers can be identified.

The Upper course is the steepest part of land in the river. It is usually small, but flows very fast. The energies are high and the river cuts away at its bed. As it does, it quickly deepens its valley through down cutting. This creates a steep sided V- shaped valley. Downward erosion is the dominant process. Waterfalls are typical in this area.

If the work of the river is as much as the amount of alluvium it carries, it becomes Middle course. In the middle course the rivers starts to flow slowly, because it transports a lot of sediment. The river moves down its wide asymmetrical valley in a meandering way. The meanders can be very attractive in water tourism. The

river gets wider, the river begins to erode sideways, the valley side becomes less steep, a flood plain starts to develop. Erosion and deposition occur.

When arriving at a flat area the river slows down and its energy is not enough to transport the sediments. Deposition occurs. The U-shape is wide. The river approaches its mouth and it winds its way slowly across a large floodplain. Deposition is now the dominant process. And the river builds sand beds, sand banks, small islands. This section of the river is called Lower course. This is how large plain areas came into being in the geological past. When rivers leave mountaineous areas they build large alluvial cones (e.g. Szigetköz, Csallóköz). When the courses of rivers change in time and space river terraces come into being.

Although all river sections have their own values from the point of view of water tourism, the most ideal of the three is the Middle course: The speed of the water is in the ideal zone, travelling is safe, its water warms up quickly thus it provides an appropriate environment for holiday makers and sportspeople alike (Donka 2012).

Water tourism is extremely popular because its proximity to nature makes it an outstanding recreational activity. Our rivers are accompanied by the green ribbons of flood zone forests, many of which are protected areas. In natural surroundings, on the riverbanks, and on sandbanks there are various shrubs. Behind them one can find groves of soft-wood willows and poplars, These areas are under water for 2-4 months every year (Cseh 2013). There is an increasing number of invasive species, including the American ash trees and elm trees. It is also possible to see lianes, climbing up the trees. The hardwood groves, which were to have been found in higher areas, have unfortunately disappeared, due to construction works. There are some – very few - oak groves around.

Sometimes there are smaller rivers and canals which, do not have forests near them. They offer only an aesthetic experience of lesser value to tourists (e.g. Zagyva). The lush vegetation in the riverbed, or the partially wooded areas (e.g. River Túr or the Szigetköz area) are of exceptional value for tourists. Occasionally, the vegetation makes it impossible to use the river for water tourism (e.g. Zala River) (Donka 2012). A Hungarian study dealt with the mapping of tourist-attractive aesthetic sections of the river bank (Tisza) as well as less attractive sections that embody visual conflicts (Karancsi et al. 2019).

Nowadays flood zones are also utilized by experts of hunting and silviculture, considering the aspects of environmental protection.

4.3. Social factors influencing sport tourism

4.3.1. Global economic trends

Considering the social implications of sport tourism, it is primarily the global trends that play a significant role. Both sport and tourism have become globalized, worldwide socio-cultural activities. Both are related to (leisure time industries and have a beneficial influence on the economy. The contribution of sport to the GDP is 1-2%, that of tourism is 4-6%. The growth of tourism today (more than 7%) is more intensive than that of car or oil industry. Sport tourism expanded even more rapidly by an annual 10 % (Hudson ed. 2003). At the same time it is not only the number of travels that showed considerable growth, but travels also expanded spatially. By data published in a survey in North America (North American Federal Tourism Office 1997), 32% of total income in the area of tourism originated in sport tourism. During the last 50 years the number of international arrivals and income rose exuberantly. By data of WTO if economic growth reaches 4%, tourism performs better. If it falls below 2%, it will be a lower figure. It means that tourism declines if the sending

countries struggle with an economic crisis, and it does not decline if the receiving countries face problems (e.g. Greece in the summer of 2010).

Sport and tourism are related in many ways to the global economy. European countries on average spend 2% of their consumption expenditure on sport (rental, equipment purchase, club membership fees). This proportion in Hungary is one tenth of the European expenditure! Those types of sport make the biggest profit from the production of sport equipment, which are done both as mass and as professional sport. Examples include football, running, skiing, cycling. Companies produce functional sport clothing and equipment. Sport stores and specialized department stores today await an increasing number of sport tourists.

Due to media attention elite competitions and races of high rank (e.g. Formula 1, Tour, Vuelta, Giro, Champions' league, Grand Slam, World cup events and Olympic Games) as well as mass sport events attracting huge crowds of amateur and professional sportspeople (e.g. New York City Marathon, Hawaii Ironman, northern ski running events) have become business ventures making a considerable profit. We can say that sport tourism has become very popular because TV broadcasts and sport programs on TV represent big business. First general sport papers and periodicals as well as sport programs on various TV channels (Eurosport, Sport TV) became popular, later there were thematized periodicals and specialized pay-TV's (Kiss 2013).

Famous sport venues, the so-called 'sport sanctuaries' are also marketable. Examples include the Olympic Museum in Lausanne, the Basketball Hall of Fame in Springfield, USA, Wembley and Wimbledon. It is also remarkable that the stadiums of famous sport clubs and teams increasingly become tourist attractions (Puczkó and Rátz 2011). It means on the one hand the opening of special exhibitions, museums and gift shops, and, on the other

hand, the expansion of services on offer (the building of multifunctional plazas, for example).

In general it can be stated that elite sport makes its primary profit from spectators, supporters and fans, while in recreational sport it is the participants who pay. Sport tourism represents 10% of the global tourism market.

4.3.2. Global demographic trends

The absolute number of the world's population is exponentially growing (from 3 billion to 7 billion in a 50-year period!). In addition, the distribution by age is changing, too. In the developed countries, which play the most important role in sending (exporting) sport tourists, the number and proportion of the elderly is on the growth. About one fifth of the total population in developed countries, like Italy, Germany and Japan are older than 65. By 2040 the proportion of the 50+ group will have reached 50 %.

How does this trend affect sport tourism? According to data taken from surveys active sport tourists are mostly young and middle-aged people (Bartolucci 2005). At the same time it can be seen that the sport activity of seniors is on the rise, too. Seniors have and will have an increasingly important role in the sport tourism market. They travel more frequently, spend more money per trip, and consider sport as an activity of utmost importance. It can be concluded from the above that offers need to be based on the health care and activity needs of this age group.

4.3.3. Regional trends

Sport tourism is part of the expansion of the space in modern life. It is not by chance that in general sport tourism is considered one of the most significant branches of the economy in the 21st century. In addition, it is a factor of utmost significance in regional and local development, too, since it contributes to local and national incomes, creates jobs, increases income from taxes

and contributes to the improvement of other branches in the economy. The various sport events, as well as the opportunities for doing sport, attract tens of thousands of tourists to a specific place, a geographical region, and this fact may give impetus to economic development in general.

At the same time it is also obvious that the increases interest in sport tourism is present only in the more developed and urbanized societies in North America, Europe and Australia. In addition to this feature cultural history, traditions and customs also play a role. By a survey of 2001, 55% of Germans, 52% of the Dutch, 23 % of the French and 20% of the British people take part in sport-motivated travels. According to a survey, conducted in Croatia, the motives of incoming sport was the 5th in the group of motivators, when incoming tourists were asked.

4.3.4. Market conditions

On the demand side of sport tourism there are the active sportspeople, sport managers, coaches, supporters, spectators, and all those persons, who do sport only occasionally. Their demands are related to those destinations, where they can pursue their activity. In order to accomplish their aims – considering the given type of sport – there are other conditions to be met, too. These extra conditions include the professional context, the work of coaches, physicians, specialists of recreation. Safety issues and good organization are also important. Not counting professional sport tourism the most important aims of sport tourism are joy and entertainment (Bokor 2009).

On the supply side of sport tourism there are the active sportspeople, too (as spectacle, or, adversary), the active participants (managers, promoters), tour operators, producers and suppliers of sport equipment, and other related businesses on the peripheries (hotel owners, caterers etc.). The infrastructural supply (e.g. sport facilities, vehicles for transport, information

offices), the suprastructure, as well as the various human and natural resources also play significant roles (Turco et al. 2002).

The most important feature of the tourism product is that it includes a variety of services. Sport tourism products, depending on the aim, might also vary. They include competitions, training camps, sport excursions, hikes, cycling tours, water cruises, caving, nordic walking or geocaching. There are cases when sport tourism offers are 'pre-packaged', for example they are parts of a health tourism package (Michalkó 2011). In the market of sport tourism the product to be purchased and to be sold is distinctive from the one we can find in spectacle or recreational sports. Spectacle sport is based on the idea of watching other people's sport achievements, that is the supporter is willing to pay for being able to see other people run, swim or play tennis. In recreational sport, on the contrary, participants pay to experience the joy of doing sport, the joy of exercising, exhaustion or of scoring a goal (Kiss 2009b).

Having examined the demand and supply side of tourism it can be stated that the demand for sport can exist independently of the main goal of travel. This is why sport infrastructure, to be found in the vicinity of the destination of travel, can influence tourists when choosing a place to go to. For this reason swimming pools, fitness centres, wellness services are important in those regions, too, which are popular with business people (1).

4.3.5. Sociological aspects

Sport tourism, as recreational activity is dependent on social conditions, which may determine its form as well. There are more expensive forms including sport hunting, golf, tennis and cheaper ones including football, running or hiking. Social groups with similar background have a lot in common when considering their leisure time activities or consumption. Sport tourism is also related to family income. The higher the family income, the more

active the children and the parents are in the family. They travel more frequently and to more distant destinations.

The types of the so-called nature tourism, which require some physical activity, like rural tourism ecotourism, hiking, nature walking, cycling tourism, horseback riding tourism, golf, angling tourism, hunting tourism, safaris, theme parks, attraction tourism, water tourism, have social-strata specificities, since they represent a wide variety.

Those men who have higher income and are more educated are more active in sports and in sport tourism as well. In the more developed societies in each social group there is a growing demand for being fit and healthy, and, at the same time – under media influence – there is a growing interest on the part of people in participating in sport events as spectators. In general, people spend more time and money on sport.

4.3.6. Psychological aspects

Those people who do sport or who are sport tourists have a lot of common motivators, including for example the preservation of health, physical and mental wellbeing and adventure seeking.

Everybody may experience the ‘flow’, which gives a feeling of optimal contentedness in exchange for the efforts done, whatever the aim of the sport is (Jackson and Csíkszentmihályi 2001). In sport there is a reversed relationship between risk and lifestyle. Those people who live extremely busy lives, usually look for quieter, low-intensity sport activities, while those people, who live monotonous lives, go for ‘adventures’ in sport. It is obvious, too, that, when travelling, the majority of sport tourists intend to pursue the type of sport they do when they are at home. The new environment, the new experiences have a motivating effect, so, when being away from home, people tend to be more active (Haggett 2006)

It is quite natural, too, that self-realization is one of the important factors in sport tourism (self-expression, self-development). People like to be assessed, to compete and to acquire a kind of rank or status. Examples include the acquisition of the title of a champion, or travelling to distant, high-orestige sport events. Accomplishments also play a role. People want to reach the peak, achieve something special, have as many achievements, as possible (e.g. run the marathon, ironman competititons), or, they want to see as many sport venues as possible.

5. THE POTENTIALS OF SPORTS TOURISM IN HUNGARY

By the report of the World Tourism Organization it is the outdoor activities exploring natural resources that are the most popular kinds of sports, pursued during travels. These activities include skiing, snowboarding, mountaineering, hiking, cycling and water sports (Dávid et al. 2006). With some geographical knowledge it can be stated that Hungary's potentials in this respect – apart from mountaineering – are relatively good. In the next part of this study these kinds of activities and their Hungarian potentials will be overviewed.

At the same time it is distressing that the relationship between sports and people in Hungary is different. While Hungary is one of the most successful nations in competitive sports, the three fourths of Hungary's inhabitants do not do any exercises, they live sedentary life, consequently, their health condition is extremely poor. "In Hungary people's active participation in sports is much lower than in other European countries. When considering the nations of Eastern and Central Europe, Hungary is only in the middle of the list (37)". The same trend is detectable when analyzing Hungary's sports tourism indicators. By a survey of 2005 the motivation of doing sports or another sports-related activity was only the goal of 2 (!) people in a group of 100, while attending a sports event was only 1 (!) in a group of 1,000 travellers.

The strengths of Hungary in sports tourism include those places, which are suitable for trekking, running, cycling, horseback riding, lakes and rivers which offer excellent opportunities for water sports and the country's national parks, protected areas, thermal waters and medicinal waters, which are linked to ecotourism and health tourism. In domestic tourism, similar to the trends in developed countries, there is a growing demand for

healthy environment and active recreation, which make it possible to combine rural tourism and sports tourism. The new, trendy forms of activity have lately attracted new target groups (e.g. surfing, snowboarding, mountain-biking). There are new kinds of activities in the market of sports tourism, including nordic walking, geocaching, wakeboarding, visiting adventure parks, playing paintball and doing extreme sports. Fashionable extreme sports are often built into the programmes of business travels and team building programmes (e.g. extreme sports, dragon boating). People can participate in an increasing number of mass sports events, which offer a challenge for participants (cross-lake swimming, street running events, triathlon). There is an increasing number of passive sports tourists, too, people who travel and watch significant international sports events (Formula-1, Olympic Games, Continental and world championships). Unfortunately, there are weaknesses in Hungary's sports tourism, too. These weaknesses include the lack of proper institutional background, the deficit of service providers' marketing and foreign language skills, the relatively low level of marketing and communication activities, and finally, poor infrastructure. These weaknesses might lead to the emmigration of specialists, the misuse of existing facilities and the decline in improvements. A welcome change is that due to the New Széchenyi Plan, a tourism development of several billion forints will be realized within the framework of the Regional Development Operational Programmes, the Healing Hungary – Hungarian Health–Industry sub-programme.

5.1. Hiking and caving

Touring in Hungary – the forerunner of modern hiking and recreation – goes back to the second half of the 19th century and it was typical in the region of the High Tatras. The Hungarian

Kárpát Association was the pioneering organization of hiking in Hungary, which came into being in 1873. It was the Hungarian Tourism Association (1891) that set the goal of popularizing this activity nationwide. From this period onwards several touring clubs were brought into existence within the framework of other sporting clubs. As a result, active tourism involved masses of people and it became an increasingly popular leisure time activity.

Hiking clubs have been able to preserve their original goals, namely, sports, recreation and learning, up to now. Today there are 250 clubs and nearly 12,000 registered members in the Hungarian Hiking Association, the coordinator of different kinds of hiking. This Association is also active in other kinds of sports, including cycling, water sports, tour skiing, mountaineering and caving. Hiking is not restricted to club members. By data of a questionnaire, 73% of adult people and 78% of the young people would choose hiking as their favourite pastime when travelling (Dobay and Bánhidi 2009).

The most popular destinations of hikers in Hungary are the country's mountains of medium height. By Michalkó (2011) if Hungarians would choose hiking as a weekend programme in the autumn, 38.7% would go to the Mátra hills, 15.6% to the Bükk, 6.7% to the Mecsek, 5.8% to the Bakony, 2.1% to the Börzsöny and 1.8% to the Pilis region.

In addition to the physical activity, occasionally these hikes are also used to commemorate famous events or people, to get certain awards or badges and to get acquainted with the country's beautiful places and culture. The best known hike is the National Blue Trail which was launched as early as 1938. This trail, together with Pál Rockenbauer's Southern Transdanubian Blue Trail and the Blue Trail of the Great Plain covers the whole area of the country. In addition, there are many thematic trails as well, which are related to the names of historical persons or, the great

figures a Hungarian literature. These trails also include famous castles, palaces, well known buildings and nature's rarities. One of the previously mentioned routes is the so-called Rákóczi Trail, introducing castles, estates, and settlements of Zemplén, all of which go back to the time of the great Prince. Other popular trails include the Mórícz Zsigmond Trail (Szabolcs-Szatmár-Bereg County), the Palóc Route of Nógrád and Heves counties, the St. Emerich and St. Martin Trails of Vas and Zala counties, the Rómer Flóris Memorial Trail in the Bakony region, the Foundrymen's Route in the vicinity of Salgótarján-Ózd-Diósgyőr, or the Kinizsi Test in Performance trail.

Hiking and caving are often interrelated. In Hungary there are about four thousand caves, most of which are located in the karstic regions of Aggtelek and Bükk. Hungary's caves are protected, but many of them can be visited when accompanied by a professional guide.

Caving is a real sports experience when it means hiking in an already explored but not yet built up parts of a cave system. Cavers have to struggle through narrow holes and gorges; in addition, underground streams and lakes also mean a challenge for them. Cave tours are of varying difficulties. Some of them are easy (e.g. the long tour of the Baradla cave) while others are more difficult, e.g. the Meteor cave. In most cases cavers get the necessary equipment from the tour organizers. Well known tours are organized to the cave system of Pálvölgy, the Ördögluk of Solymár, the caves of Mátyás-hegy and Sátorkőpuszta.

5.2. Water tourism

The areas which are suitable for pursuing water sports, Hungary's rivers and lakes are the most unique factors in the country's tourism offer. The Danube is Europe's waterway and the Tisza is Hungary's second important river. These rivers, together with

their tributaries offer very favourable conditions for water sports. Those sections of the rivers are suitable for water sports, where the current is not too strong, and where there are shallow waters and sandy beaches available, too. In addition, the temperature of the water is high enough to offer a relatively long season for bathers (Kollarik 1991). From this point of view it is primarily the rivers Danube, Rába and the Mosoni-Danube, the Tisza (together with the Szamos), the Dráva, the Rába and Répce, the Kőrös rivers, the Maros, the Sió-canal and the Bodrog which are the best for water tours. The difficulty of the tours is dependent on the hydrological characteristics of the river, as well as the length of the chosen section of the river (38).

Watertour is a typical ‘sport for all’ activity in Hungary, which is affordable for many people, and its participants consider it as a good value for money. The most popular water-tours are the ‘paddling’ tours, which basically requires a ‘sporty’ attitude. In respect of the organization of tours the most common is the private initiative. But most of the water tourists are not aware of the rules of waterways quite enough, but many of them do not take the preference of a qualified watertour expert. There is no correlation between the preparedness of the tourists and their need for a qualified watertour expert. Unfortunately, services of ports and camps are far from being capable in most cases. Water tourists would like to use better conditions of safe harboring, improve boat chartering and storage facilities, modernize campsites bathrooms, create community spaces and services, provide shopping opportunities, improve the floodplain road network, asphaltting the roads leading to the ports. It would also be worthwhile to make more recreational services of the sports with more colorful cultural, sports and other programs (Győri and Horváth 2018). Organized water tour programs on rivers connecting countries implemented in the framework of international cooperation could strengthen cross-border cultural

and socio-economic relationships and, it also serves as an incentive for the activities of local small- and medium-size enterprises (Győri et al. 2019, Győri 2020). In this case money spent on sports tourism generates a multiplier effect and this has a cross-border impact on the income and labour market situation of the municipalities along the river (Vida 2019).

The water of our lakes, since they warm up easily (e.g. Balaton, Velencei-Lake), our backwaters (e.g. Szelidi-Lake, Mártély) attract a lot of tourists because they offer an aesthetically beautiful and healthy environment. Lake Balaton is popular with sailors, but its coastal areas are also frequented by kayakers and canoers. The Tisza-Lake is awaiting the lovers of extreme sports including jet-skiers, water skiers and wakeboarders. There are 15 settlements in Hungary with cable water ski and wakeboard pathways (e.g. Budakalász, Dunaharaszti, Gyékényes, Szeged, Kecskemét, Győr.), which are increasingly popular.

Many tourists are interested in diving, too. The most popular target areas for divers are Hungary's clear-water mine lakes, for example in Gyékényes, Hegyeshalom, Szalkszentmárton, and Ecsédi-Lake, the thermal water lakes (e.g. Hévíz, Tata (Fényesforrás), or, as a unique place, artificially flooded places, for example the cellar system of the brewery in Kőbánya.

5.3. Equestrian tourism

Equestrian culture is an organic part of Hungarian national heritage and we have exceptionally good conditions to pursue this kind of sports. Today horse breeding and horse keeping serve sports- recreational and health tourism purposes and this is why horseback riding in riding schools, field riding, hunt riding, show jumping or coach driving, or, simply watching these events, represent special experiences for horse lovers. Due to our exceptionally good riding fields and reasonable prices Hungary

played a leading role in Europe in equestrian tourism until the mid- 1980s. There was a temporary recession in the 1990s, but luckily, on the part of domestic tourists, it was followed by a new demand for equestrian sports as part of leisure time activities.

The significance of horseback riding has since been increasing despite the fact that it is quite costly. Nevertheless, it pays well: the care for the horse as a living being and the proximity to nature, are both factors, which have beneficial physiological and psychological effect on people. There are a large number of riding schools near the big cities of Hungary. They offer possibilities for horseback riding as leisure time activity, for children, as well as for adults. They also organize equestrian events, they teach and offer care for other people's horses. Equestrian tourism has relatively high specific expenditure. "Equestrian tourists during field riding spend as much as 160 euros/day and the average length of an equestrian tour is 6-10 days" (39). It is very important to improve the quality of services offered in equestrian tourism and its territorial distribution is to be made more even. There are many things to do concerning the sports-, recreation-, management-, and marketing-centred training of equestrian specialists, too.

A question of special significance is the marking out of safe trails for riding. These days there is a number of trails available, especially in the Kiskunmajsa region (e.g. Tanyakör Zöldút Trail), but in order to be competitive in the international market of equestrian tourism these trails need to be linked with one another and to similar networks of trails in the neighbouring countries. It is also of utmost importance for service providers to join the information system of equestrian tourism and give up-to-date information on trail, terrain and weather conditions, risks, rest areas and accommodation.

5.4. Cycling tourism

In Hungary in the 1970s and 1980s the bicycle was considered as an old-fashioned vehicle and cyclists were also looked upon as troublesome and inconvenient travellers (4). With the appearance of separate bicycle paths and lanes this situation has changed. The length of bicycle paths and lanes has steadily been on the increase from the early 1990s onwards and it reached 1,300 km in the millennial year. In addition, an increasing number of minor roads and embankments are used today by cyclists. Despite these developments the length and the quality of bicycle paths in Hungary do not reach the desired indicators.

Cycling has become a significant and fast developing branch of recreation-, and sports tourism. It can be pursued in any age, protects the environment, and its lovers can pursue their sport either individually, or in groups. Roads, bicycle paths, mountain slopes are all suitable for it. Its difficulty ranges from the very easy to the extremely difficult, depending on the terrain, weather conditions, the length of the route, and the weight mounted on the bicycle. The terrain in Hungary is exceptionally good for cycling, but unfortunately there are many places in the country where there are no bicycle paths and services necessary for cycling tourism (repair services, eateries, accomodation).

Popular trails include the following: Lake Balaton Round Trip (231 km), paths along the Danube (457 km), along the Tisza River (549 km), at the foothills of the Alps (292 km), in Southern Baranya: Mecsek-Villányi-mountains (179 km), From Budapest to Lake Velencei (172 km), the Tour of Kiskunság (240 km), Hortobágy and its environs (133 km), The Körös rivers, Békés County (190 km), Castles and mansions in northern Hungary (Börzsöny-Cserhát (121 km), The Bükk Plateu-Aggteleki-karst-Zempléni-mountains (404 km) (41).

5.5. Mountaineering – rock climbing

Mountaineering (alpinism) is a leisure time or sports activity which aims at climbing peaks in high mountains. Although our mountaineeres are internationally well known for their success, in Hungary there are no high mountains, so rock climbing is more popular. Rock climbers either climb with the help of mountaineering tools, or without any equipment. The number of rock climbers has lately been on the increase in Hungary.

All Hungary's natural rock formations and the abandoned quarries, where rock climbers do their activity, are located in protected areas. This is why sportsmen need a permission by nature protection authorities or by national parks. The list of climbable rocks and rock climbing schools, which are permitted to climb by the Environmental protection-, Nature Protection- and Water Conservancy Authorities is can be found at:

'<http://www.massz.hu/maszohelyek/magyarorszagi-sziklamaszohelyek>'

5.6. Skiing, snowboarding

Hungary's natural endowments offer only seasonal possibilities for skiing and snowboarding, which cannot be compared with the possibilities available in the high mountains of the neighbouring countries. Hungary's ski slopes can be found in the northern part of the country, their number is about 30. The most significant of these is the ski park of Mátraszentistván, which offers skiing possibilities for whole families and its slopes are covered with artificial snow, if there is a need. The season lasts until mid-March. In Eplény, the northern region of the Bakony, tourists can find a ski arena, which, due to continuous improvements, can boast outstanding facilities and 7 – kilometre – long ski slopes.

Depending on weather conditions these slopes operate until the end of March.

5.7. A brief description of the developmental trends of Hungarian sports tourism

General development of tourism attractions: products and services, built on local attractions. It is important that all the attractions of a region appear simultaneously in the market. E.g. water sports services – bicycle paths – ports, railway stations – sights – catering establishments.

Active sports tourism can only be successful if its offers are not overstructured or business-like offers, but, instead, pleasurable and playful pastimes are needed which give people an opportunity for self – fulfilment (Yannakis 2012).

International riding trails and bicycle paths need to be built together with related services and check points.

It is inevitable to improve the conditions for receiving sports tourists. Locally it is of utmost importance to provide sports tourists with high quality accommodation, and to combine several services (e. g. special accommodation, offering possibilities for horseback riding, or cycling). At regional level it is important to combine sports tourism with other branches of tourism, including business tourism, professional tourism, and rural tourism. At regional level it is inevitable to reduce territorial concentration, since the most important target areas are those which are distant from the country's central regions (!).

Accommodation and catering establishments need to be enabled to offer sports tourism-friendly services, including the building of bicycle storage rooms, and introducing laundry and drying services.

An emphasis need to be laid on communication and the marketing of sports tourism products, both in Hungary and abroad.

Links need to be established between regional and local sports tourism organizations, non-profit organizations and non-governmental organizations in order to come up with the proper programmes and information on them.

It is inevitable to offer sports tourism specialists proper specialized higher education and training programmes.

CONCLUSION

Sports, recreation, health enhancing activities and tourism are the products of human cultures. Since their birth they have interacted with each. Like other cultural sub-systems they are characterised with distinctive spatiality whose elements are brought about through the relationships with their geographical and social environments. The impact of speeding social and urbanisation development generate more and more issues in connection of these intertwined cultural phenomena.

The modern, universal definitions of health enhancement, recreation, sports, and tourism could not cause any problems to understand their meanings when considered these notions' occasionally very tight connection to each other. In the introductory chapter, for a better understanding, I made an attempt to model the relationship system of this complex set of phenomena (Triangular prism model). My model undoubtedly simplifies and makes reality more digestible, but at the same time it is able to review and discover the phenomena that take place in parallel with each other.

In the following, I presented the two very important driving branches of the tourism sector according to the existing paradigms of health tourism and sports tourism, taking into account their geographical, social, economic and cultural context, with special regard to the conditions in Hungary.

I hope that my book will contribute to the expansion of the knowledge base in the fields of sports, health sciences and tourism, and that not only the experts in the field, but also the university students and those who want to immerse themselves in the topic, will benefit from reading it.

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