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KEY INDICATORS OF CLUSTERIZATION POTENTIAL IN REGIONAL TOURISM

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Abstract: The research is aimed at proposing a system of clustering the tourist potential of a territory. The results are of interest for experts dealing with regional tourism development from the point of view of cluster approach. The theoretical part defines a tourist cluster as a network of the subjects of the regional tourist market, formed to promote the competitive product between the businesses and to preserve the vertical and horizontal inter-cluster competition. The documents determining the tourism development strategy in the Russian Federation are analyzed, and the results show a range of cluster initiative support policy distributions with the development of the regional tourism.

Key words: tourist cluster, clusterization potential, cluster development evaluation, the Omsk region, inter-cluster competition.

* * * * *

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INTRODUCTION

Multi-sidedness of the tourist interests develops the tourist industry on the territories with different nature and culture resources, infrastructure and services.

The development of the tourist industry together with the science-based tools guarantees to a certain degree the rational exploration of the socio-economic potential of a territory. Cluster approach (with its methodological basis lying in the works of R. Coase, M. Porter, M. Kastels, K. Prakhalad and V. Ramasvami, M. V. Vinokurova, etc.) is the ground for the tourism development in the Russian Federation. The development of the iteration process theory in the economy is connected with the works of R. Coase, devoted to the transaction expenses (Coase, 1960). In 1980s M. Porter carried out a number of studies and proved that the economic growth had selective and territorial spacious nature. The concentration centers of the economic subjects differed in low transactional expenses, innovation diffusion, and cooperative phenomena activation (Porter, 2010).

M. Kastels, an American sociologist, established a global distribution principle of communication development (Kastels, 2000). Moreover, the communicative networks of various organizations differ from the traditional cartels since they are connected with particular markets, goods, time periods, processes and with competition in diverse economic areas. One can observe the process when the network structures turn into a multi-division union, thus contributing into the complementation of the enterprise's functions and resources. K. Prakhalad and V. Ramasvami arrived at the conclusion that the strategic cooperation of the enterprises with the suppliers and competitors became an additional value of production (Prakhalad, 2006).

Integration processes of the production participants are considered to be a factor of economic development. Cluster (being an integration-network economic system) is recognized as an efficient tool for the development of production industry. The formation and development of the tourist clusters are specific in comparison with the clusters in industries and other production spheres. For example, asynchronous compilation, purchasing and consuming of a tourist product, the necessary congruence of tourist industry enterprises, and support given to the tourist services, as well as the participation of the related enterprises in the business processes, and other peculiarities of the tourist product development call for scientific clarifications of cluster approach application to the tourist development of the region.

There is a need for developing methodological grounds for cluster formation for the efficient implementation of the cluster initiatives in the sphere of regional tourism.

Therefore, the study and improvement of the tourist cluster testing mechanism is a rather burning methodological issue, with the most critical part being the choice of the clusterization potential indicators and their evaluation. Moreover, many experts, including L. Markov, Yu. Ryabchenyuk, Yu. Lavrikova, see the testing problems as the key ones in cluster policy implementation in Russia (Bogolyubov, 2013; Lavrikova, 2009; Markov, 2007; Yakunin et al., 2016). The notion of clusterization potential was introduced in the economic scientific theory to designate the possibility of uniting the enterprises from different industries and infrastructure organizations on the region's territory into an efficient production (or innovative) chain, as well as the possibility to combine their competitive advantages and to use these advantages to increase the competitiveness of the region (Vinokurova, 2006). E. Bergman and E. Feser systematized the methods to study the clusters in foreign scientific literature (Bergman & Feser, 1999).

The same problem is reflected in the studies of A. Prazdnichnykh in national science (Prazdnichnykh, 2006). The main methods to evaluate the clusterization potential of a tourist region are as follows: expert evaluation, matrix analysis (in particular, SWOT-analysis), the theory of graphs as a way to visualize the results, inter-industry balance

analysis, and, finally, localization coefficients. However, the majority of the methods mentioned do not work for tourist cluster development from the very beginning.

MATERIALS AND METHODS

Research methods

The following methods were applied: theoretical (analysis; synthesis; specification; generalization; analogy; simulation; system and comprehensive approaches); diagnostic (questionnaire); empirical (analysis of the regulatory and methodological documentation; paired-comparison and numerical score as methods of expert evaluation); mathematical statistics and graphical representation of the results.

Empirical grounds

The Omsk Region as having a potential for the clusterization of regional tourism is taken to be the empirical ground of the research.

Research stages

The issue was analyzed at two stages:

- the first stage focused on the theoretical analysis of the existing methodological approaches to the understanding of the tourism clusters and to their studies in scientific works; the methodology was developed, and the subject area and the purpose of the research were articulated;
- the second stage concentrated on the development of the conceptual system of indicators for clusterization potential in a tourist region; the clusterization potential manifestation in the Omsk region was empirically studied with the help of expert evaluation methods, and the results obtained were processed and checked;
- theoretical and practical conclusions were specified at the third stage, and the obtained results were summarized and systematized.

RESULTS

Structure and content of the indicator system for clusterization potential in a tourist region

System approach helped develop a structural content model of key indicators for clusterization potential in a tourist region. The model includes the main and additional determinants of cluster development evaluation for a tourist region. The main determinants comprise beneficial geographic location of the region, availability of the tourist recreation resources (assets), and access to the tourist territories. The system of additional determinants includes actual demand on a regional tourist product, tourist interest to the region's territories, recognition of tourism and recreation in the region development strategy, businessmen and authorities interested in participating or at least in exploring this territory and developing a tourism business (Table 1).

Table 1. Consolidated indicators for the clusterization potential of a tourist region

Sources of competitive advantages	Expert evaluation
1. Favorable geographical location of the region	yes/no
2. Availability and access to the tourist recreational resources (assets)	enough/not enough accessible/inaccessible
3. Demand on the region's tourist product in the domestic (international) market	yes/no
4. Seeing tourism as 'an advantage for the region's development'	true/false
5. High socio-economic importance of regional tourism	true/false
6. Interest in cluster project implementation by the authorities	yes/no
7. Interest in cluster project implementation by businessmen	yes/no

The result of the structural content model functioning is the expressed potential of clusterization in a tourist region. Let us generally characterize the most critical combined indicators for clusterization potential of a tourist region. The advantage of geographical location can be evaluated with the following particular indicators: important transportation lines, climatic characteristics, hydrological resources, landscapes, etc.

The tourist recreation resources are relevantly evaluated by their types, while their accessibility, first of all, by the transport availability. Spheres for development declared in the Strategies and Development Programs are the indicators for the tourism to be considered as 'a pole of region development'. The indicators of socio-economic importance for the regional tourism are as follows: contribution of tourism industry into the development of the gross regional product, investment activity in the industry, population employment in the industry, living standards of people involved into the industry. The choice of the particular indicators is determined by the availability of the statistical information. The interests expressed by businessmen in cluster project implementation can be characterized by a degree of economic interests, including such indicators as possibility to increase the market value of cluster enterprise participants, receiving satisfactory (for a cluster participant) profit per invested capital, etc.

Organization of empirical research

The experts were chosen by the following criteria: at least a 10-year experience in the tourist industry; at least a 5-year experience in incoming and regional tourism; experience in designing and/or promoting the regional tourist product; participation in the business events in regional tourism development (conferences, round tables, business communicative platforms, etc.). The group of experts included 6 heads of the tourist firms and 20 managers of tourist firms, 5 employees of the Department in Tourism Development of the Ministry of Culture in the Omsk region, 6 representatives of the Culture Department of Administrations of the municipal districts of the Omsk region. The overall number of people involved was 31. The clusterization possibility in a tourist region can be generally evaluated by the experts during the analysis and in selecting from various types of enterprises (Table 1). Positive answers will prove the high degree of clusterization potential for a tourist region, and vice versa. The suggested list of indicators is quite convenient since it can be altered depending on the details in clusterization potential evaluation. Methodology can be easily modified by introducing a score system and a descriptive score band, as well as the indicators of the specific importance for the sources of the competitive advantages, which will account for the peculiarities of the particular region. For this purpose the work of experts was organized in two stages.

The purpose of the first stage was to evaluate the importance of the given indicators; the matrix of pair-wise indicator comparison served to be a tool here. Each expert stuck to the following rating band in filling in the matrix: 2 scores if the compared indicator was important; 1 score in case of equal importance; 0 score if the compared indicator was deemed less important. The obtained data identified the total score of importance for each indicator evaluated by each expert. The summary of the data gave the mean total score for the indicator importance by the formula of arithmetical mean. Finally, the total mean score of indicator importance was transformed into the relative value through its division on a sum of the same evaluations at the indicator combination.

The purpose of the second stage was to evaluate the availability (lack) of the evaluated indicator. Rating band is given in Table 2.

Summarizing the data, average expert assessment for the availability (lack) of the evaluated indicator in scores is defined with the formula of arithmetic mean.

Empirical introduction of the model for evaluating the clusterization potential of a tourist region (a case of the Omsk region)

Let us show the possible implementation for the suggested indicators in evaluating the clusterization potential for the Omsk region's tourist industry.

Table 2. Rating band

Source of competitive advantages	Score		
	0	1	2
1. Favorable geographical location of the region	not available	insufficiently available	available
2. Availability of tourist recreational resources	not available	not enough	enough
3. Access of the tourist recreational resources (assets)	not accessible	partially accessible	accessible
4. Demand on the region's tourist product in the domestic (international) market	not available	minor	high
5. Seeing tourism as 'an advantage in the region's development'	statement is false	statement is partially true	statement is true
6. High socio-economic importance of regional tourism	statement is false	statement is partially true	statement is true
7. Interest expressed by the authorities in cluster project implementation	no interest	interested, but of declarative nature	highly interested
8. Interest expressed by businessmen in cluster project implementation	no interest	available	highly interested

1. Geographical location of the Omsk region. The Omsk region is a subject in the Siberian Federal district. It has a very favorable geographical location and a developed network of highways, railways and seaways (the Irtysh river), international and Russian airlines. The Omsk region borders the Kazakhstan Republic; the territory of the region occupies 600 km from north to south and 300 km from east to west.

2. Availability and access to the tourist recreational resources. The Omsk region is characterized by high tourist recreation potential which is determined by a vast territory, rich historical and cultural heritage and the impressive natural diversity. There are 33 natural sites characterizing the tourist attractiveness of the region (including the specially protected natural sites of the federal and regional importance). The region's territory holds 10 sites of the cultural heritage of federal importance; 42 museums and 10 theaters work there as well. Tourist recreation resources contribute to the development of such types of tourism as cultural, educational, rural, ethnic, ecological, as well as active tourism (trekking and water trips).

3. Demand on the region's tourist product in the domestic (international) market. Federal Tourism Agency puts the Omsk region into Top 30 regions of Russia (24th place) where the number of tourists is more than 100 thousand annually. However, it should be noted that outbound tourism prevails in the Omsk region, as well as in most other regions in Russia.

4. Seeing tourism as a 'growth zone', a 'pole' of region development. Documents on tourism development in the Omsk region specified the promising territories: Tarskiy, Muromtsevkiy, Bolsherechenskiy, Odesskiy, Tyukalinskiy and Bolsheukovskiy districts. These tourist subcluster territories in the Omsk region were defined by the project-purpose development of the regional tourist industry.

5. Socio-economic importance of regional tourism. The analysis of the statistical data for the previous five years shows that in the overall amount of the chargeable services the specific amount of the tourist, health services and hotel services has a fixed value (about 4.7 %). As for the tourist services, the analyzed period shows a stable trend to increase the physical implementation amount. Overall, for the studied period an average yearly growth rate of the physical amount of tourist service sale was 5.2%, which contributed to the increase of the tourist service share in the overall amount of the chargeable services for the population from 2.2 to 2.4 %. Despite the increase in the consumer spending, the expenditure on rest and travel (that is, share of the tourism sphere in the consumer spending) remains rather low – less than 1 %. In the Omsk region (compared with other regions of the Siberian Federal District) the number of the sold tours and the increase in their price share in the gross domestic product is quite stable, ranging from 0.46 % to 0.57 %. In Russia the share of the tourism profit in GDP is less than 1%, while in the EU countries it is about 5.5 % [18]. Analyzing the population employment in the industry it should be noted that in the Russian economy about 4 working places out of 1000 are in the tourism sphere (to be compared with every 15th place in the world economy). As for the Omsk region, the figure is lower than the country's average. For instance, by the end of the analyzed period the average annual employment in tourism in the Omsk region was 3,395 people or 0.36 % of the average employment in the whole, and this indicator is displaying a tendency to grow. As for the investment attractiveness, the most capital-intensive is the hotel business.

The analysis of the statistical data for the previous five years shows the investment activity of the enterprises such as hotels and restaurants (not taking small businesses into account) in the Omsk region is low in comparison with the Siberian Federal District and Russia on the whole. Despite the fact that in 2012 the Omsk region was characterized by higher (with respect to the index of physical investment volume) level of investment activity than the Siberian Federal District and Russia on the whole, the last five years showed a stable trend to reduce the investments into the main capital. The negative effect of the situation is that the depreciation of fixed capital by type of economic activity (hotels and restaurants) at the end of the period under review exceeded the threshold level of 50% and amounted to 52.4 %. It is quite reasonable to characterize the living standards of the population employed in the industry on the basis of the statistical information, nominal and actual salaries and the minimum wage in the region.

The analysis of the nominal monthly (average) salary of the tourism employees for the previous five years reveals that it is lower than that of region on the whole and not more than two or three times as large as the minimum subsistence level. Tourism is characterized by the significant differentiation of the employees in the monthly salary level. For example, the monthly salary in hotels and tourist agencies is higher than in other places of temporary residence. The average annual salary growth for the hotels' employees was 28.8 % (while in the region for the same period this number increased by 14 %), yet for the tourist agencies it was lower – 12.9 %. At the same time, the monthly salary exceeded the minimum level not more than three times and was significantly less than the average salary in the region (for example, in 2012 the gap was almost 40 %). It should be noted that the Omsk region is characterized by an unchanged low salary level in the Siberian Federal District for the analyzed period. To sum up, it should be noted that comparing the relative socio-economic indicators of the Omsk region, the Siberian Federal District and Russia gives an idea of rather high socio-economic importance of tourism in the Omsk region.

Despite the fact that the tourism sphere in the Omsk region is developing at a stable dynamic pace, the comparative analysis of the indicators shows the significant delay in the region's industry development by such indicators as investment

attractiveness and income level of the employed population. Minor delay can also be observed in implementing such function as employment; a very small share of the domestic and incoming tourism in tourist products is also a negative factor.

6. Interests expressed by the authorities in cluster project implementation. It should be noted that the authorities in the Omsk region are interested in cluster project implementation. The 2014-2020 Culture and Tourism Development, a state program of the Omsk region, specifies the necessity to develop the tourism through clusterization of the economic relations among the tourist market subjects. Moreover, one should point out that the authorities regularly implement measures aimed at supporting and developing the cluster initiatives to establish the communicative links between the enterprises of the regional tourist industry (seminars, meetings, business sites, etc.).

Integral evaluation of the regional clusterization potential through the application of expert evaluation method is given in Table 3.

Table 3. Consolidated indicators for the clusterization potential of regional tourism (the Omsk region)

Clusterization potential indicator	Importance	Expert evaluation of the indicator availability (average score)	Weighted average expert evaluation
1. Favorable geographical location of the region	0.062	2.774	0.172
2. Availability of tourist recreational resources	0.176	2.774	0.488
3. Access of the tourist recreational resources (assets)	0.147	2.0	0.294
4. Demand on the region's tourist product in the domestic (international) market	0.179	2.742	0.491
5. Seeing tourism as 'an advantage in the region's development'	0.069	2.226	0.153
6. High socio-economic importance of regional tourism	0.083	2.226	0.185
7. Interests in cluster project implementation from the authorities	0.132	2.258	0.298
8. Interests in cluster project implementation from businessmen	0.152	2.0	0.304
Total	1.000	x	2.385

Summarizing the data given in Table 3 one should characterize the degree of clusterization potential availability in the regional tourism in the Omsk region as a rather high one. The total score is 79.5 % of the maximum. The implementation of the designed model enables one to monitor the clusterization potential for a tourist region with due regard to the peculiarities of the tourist cluster development.

DISCUSSIONS

Theoretical analysis of the existing methodological approaches to understanding tourist clusters, and clusters study in scientific literature lets the authors of the paper conclude that the notion of 'tourist cluster' is very controversial, despite the cluster approach recognition as the main one in developing regional tourism.

According to the normative documents, a tourist cluster that can receive state registration is '... a set of tourist and recreational special economic zones established by a decision of the Government of the Russian Federation and located on one or several

sections of the territory of the constituent entities of the Russian Federation and municipal entities designated by the Government of the Russian Federation. The managing company of the tourist cluster is a legal entity in the form of a JSC established on the principles of state-private partnership, which, under the decision of the Government of the Russian Federation, can be delegated separate powers to manage tourist and recreational special economic zones included in the tourist cluster (Porter, 2010). This type of tourist clusters is mainly developed through the initiatives from the state bodies and is one of the components in the strategic development policy of regional economy. For the bottom-up initiatives the tourist cluster associations are considered to be '...the societies of different enterprises and organizations over a particular territory which are directly or indirectly connected with providing the tourist services' (Yevplanov, 2011). A. A. Bogomolov defines a tourist cluster as a group of companies: tour operators, tour agents, hospitality industry, transport services providers, trading firms and scientific research institutes dealing with the problems of regional tourism development (Kraynik, 2009). E. G. Karpova believes the tourist cluster to be a set of business processes in the development and implementation of a tourist product (Karpova, 2012). In her definitions A. Osminkina specifically considers the location (Osminkina, 2009).

O. M. Kotova also grounds her definitions of a tourist cluster on the geographical proximity ('...a concentrated group of interconnected competing, but jointly working companies and organizations in recreation and tourist industry in a particular recreational (tourist) region of the country') (Kotova, 2012). E.A. Melekhina stands apart in her definition of a tourist cluster; she believes a route territory organization to be its the main feature. A route characterized by a particular intensity of tourist flow connects the tourist infrastructure objects which contribute to the cluster development (Melekhina, 2012). E. G. Kropinova and A.V. Mitrofanova define cluster as a comprehensive system comprising 'local groups of manufacturing enterprises in the tourist service and related industries, different non-manufacturing organizations where joint efforts are combined to satisfy the recreational needs' (Kropinova, 2011).

It is necessary to clarify some points in the definition of this term to mitigate the controversies. Considering the peculiarities of the making, distribution and consumption of a tourist product we believe that a tourist cluster is a network union of the subjects of the regional tourist market, formed to create and promote the competitive tourist product with the developed system of communicative connections between the participants of the business processes and preserving the mechanisms of the vertical and horizontal inter-cluster competition. To study the implementation of cluster policy in Russian tourism, the analysis of the strategic development programs of the subjects of the Russian Federation was conducted. The obtained data shows that more than fifty subjects of the Russian Federation apply the cluster approach in the development of the tourist regional branch (Maevskiy, 2014). Comparing the prevalence of tourist cluster initiatives with other industries, it should be noted that, according to the number of forming or declared clusters, the tourist industry occupies the second place after agriculture.

This popularity in Russia can be explained by multi-functional possibilities in the tourist sphere: economic importance, social and cultural roles, educational and recreational importance, etc. In 2014 a list of the planned subsidized tourist clusters was updated which included 69 projects (Russian Federal Law, 2014).

The analysis of the thematic spheres in tourist cluster projects subsidized by the state (Figure 1) reveals that the majority of the projects are connected with the development of the cultural educational and health improvement tourism.

The majority of the cluster projects supported by the state subsidies are mainly located on the territories of the Siberian (26 %), Central (23 %) and North-Western (16 %)

Federal Districts. Despite an active regional policy in implementing the cluster approach, the problem of identifying a tourist cluster still stands. The development of the regional tourist clusters is peculiar, since sometimes the cluster develops from the very beginning despite the availability of the tourist assets in the region. The main theories of the cluster formation (for instance, the theory of E. Bergman and E. Fezer and the studies of A. Prazdnichnykh) state that the enterprises united by any production or by the common sphere of activity exist and function in the region. Therefore, the authors suggest a system of indicators to evaluate the clusterization potential for a regional tourism, including the main and additional determinants of the cluster development evaluation (Table 1).

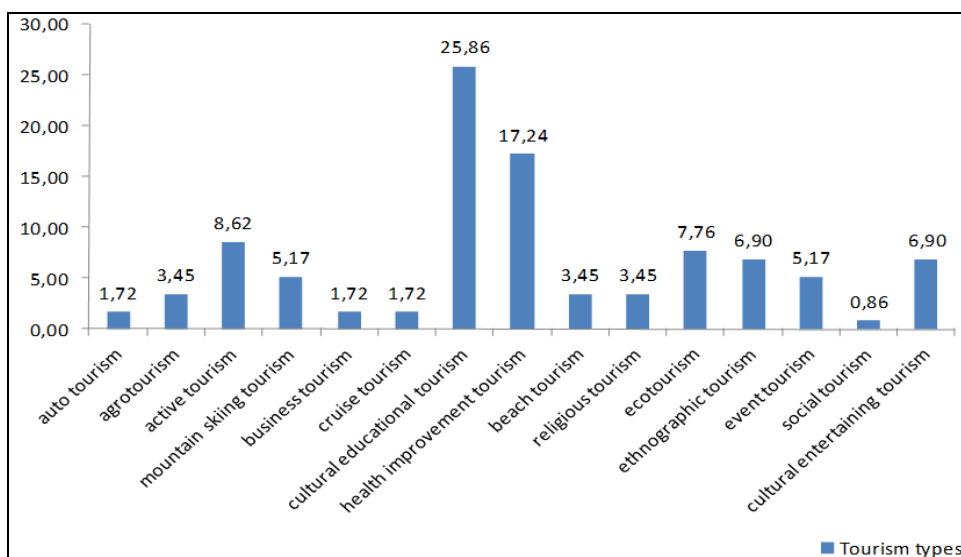


Figure 1. Structure of the implemented cluster initiatives in the subjects of the Russian Federation by tourism types, %

The main methods to evaluate the clusterization potential of a tourist region are as follows: expert evaluation, matrix analysis (in particular, SWOT-analysis), and the theory of graphs as a way to visualize the results. E. Bergman, E. Feser and other scientists suggested a method of inter-industry balance analysis to evaluate the possibility of tourist cluster development. This is not applicable since the core of this cluster is mainly represented by the infrastructure enterprises united by the common sphere of activity. In case of tourist cluster development from the very beginning the widely spread localization coefficients are not valid here. We believe that expert evaluation method is one the most adequate for the overall evaluation of clusterization possibility. This method is cost and time efficient.

CONCLUSION

Summarizing the research it should be noted that a list of indicators for the clusterization potential in a tourist region can be extended to include the indicator of availability and concentration degree of the competitive enterprises in different sectors connected with tourist services, which are able to constitute 'the core of the cluster'.

The analyzed approach to define a tourist cluster will contribute to eliminating such problems in its identification as the underdevelopment of measuring parameter system, etc. Thus, the results of the conducted research complement the methodological basis for the cluster approach applied to the tourist industry development.

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USE OF DASHBOARDS IN PREDICTING THE DEVELOPMENT OF THE COMPANY USING NEURAL NETWORKS IN HOTEL MANAGEMENT

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Abstract: Tourism development currently represents a very important part of national economics and its development and growth. To ensure growth, managers are looking for new effective tools to optimize decision making. This paper addresses the issue of dashboards based on neural networks and their utilization in managerial decision-making processes. Dashboard based reporting is oriented towards the tourism sector in Slovakia. The result of the research is the proposed balanced ranking and prediction model using financial and non-financial indicators with the application of artificial intelligence which allows to reach high level of efficiency and accuracy in evaluation of financial and non-financial health of companies operating in the hospitality sector. The proposed model also brings a new managerial and scientific point of view on the in-depth analysis of performance of these facilities. The main function of the proposed model is to classify health of a hotel. For this purpose, the MLP (Multi-Layer Perceptron) feedforward artificial neural network using backward propagation of errors was chosen as a training method.

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Key words: Predictions, financial health, neural networks, management, controlling, dashboards

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INTRODUCTION

Current development in the countries may be considered heterogeneous, even though their economic and social similarities. Each country achieves its economic and social goals with different success rate (Huttmanová, 2017). Tourism development has great importance and plays a critical role in the development of national economies. Tourism, mainly as a vital component of the so called leisure industry, has become a significant phenomenon in the last decades. Its economic, ecological, social, political, cultural and other effects form an indisputable part of the reality transformations today (Tej & Matušíková, 2014). A tourist, as a synonym of social modernity, is more flexible, more experienced in his travel habits and at the same time more challenging when choosing an offered standard. Not infrequently, he participates in creating the bidding standard, by which he consciously or unconsciously promotes his individualism, in the process of increasing globalization (Slivková & Bucher, 2017). Forecasting of tourism demand is essential for forward tourism planning. To develop appropriate public policies and to ensure sound business investment decisions, both government administration and private sector businesses use basic tourist demand forecasting to plan future operations and to assess the need for facilities and infrastructure investment. Therefore, forecasting has become essential for tourism management (Jun et al., 2018). Tourism industry is always considered as an appropriate choice to absorb economic incomes and an important source of employment (Bagherzadeh & Keshavarz, 2016).

The tourist development as well as the economic progress must take into account the characteristics of the natural and anthropic environment and the tourist development has to be done in accordance with these two variables (Gozner, 2015). If the environmental and spatial advantages of a geographical location of a city and tourism potential are considered as opportunities for the development, the bad environmental conditions are on the other hand characterized as the factor that slows the sustainable development down (Aliaskarov et al., 2017). Therefore, the efforts of many countries aim to effectively assist in the development of this industry. From the economic point of view, new techniques and procedures introduced within the field of tourism resulted in positive trends (Ružič & Demonja, 2015). In the last 20 years the development of IT-technology has led to the expansion of wireless networks covering very large territories and playing an important role in the field of tourism as well. In this context, there is an overwhelming amount of radiation from radio waves generated by wireless network devices which create the basis for several types of diseases and behaviours that affect more and more both humans and animals (Hila et al., 2017). The latest trends in this area effectively created real time dashboards. The adequate decision-making is one of the most crucial parts of a management. This statement also applies to the management of hotel facilities (Dostál et al., 2005). It is very important to deeply understand one's own company, its performance and surrounding (Neumaierová & Neumaier, 2002).

There are numerous methods and tools suitable to fulfill this objective. All these methods provide information for the ideal decision making for the managers and a better control of these organizations (Štefko & Krajňák, 2013). From modern management models that can play an important role in the future, the most promising ones are the management decision-making methods based on a classification and prediction using

artificial neural networks (ANN) supported by high-quality reports in the form of effective real-time dashboards. The relevance of such an evolutionary logical line is based on the planning and development of component elements with major emphasis on the factors referring to favorable and restrictive features in the tourist analysis (Ilies, et al., 2014). Dashboards represent modern reporting tools for controlling. The information coverage with specific indicators of the environment ensures that the company benefits from an effective and flexible information system which, at the same time, is a benchmark for comparison of the performance between the competing companies (Ivan et al., 2017). Organizations which adopt more than one management standard need to ask themselves how these different standards can be integrated with each other.

Integrated management systems (IMS) can be seen as one united management system which deals with various different requirements of other management systems (Kopia et al., 2016). When properly designed, their ability to show and describe complex data, context and knowledge in real time is invaluable and becomes an integral part of modern and effective management. Artificial neural networks are one of the modern trends in assessment of the financial and non-financial health of businesses. Because of their hidden internal structure, they are often described as a 'black box'. However, they are particularly suitable when part of the decision-making processes depends on coincidence and/or deterministic dependency. They are therefore suitable for the modeling and exploration of complex, single, often irreversible strategic management decisions. The results of data processing can be presented in the form of a dashboard.

Artificial neural networks and managerial decision-making

Human communication is a baffling, elegant, challenging, and above all complicated process. In the corporate world, communication is a dynamic process that underlines all kinds of information exchange. It is not about a mere passing of ideas, but the question is 'can communication be better?' Main purpose of this article is to present managerial decision-making model on an artificial neural network (Arputhamalar, Kannan, 2016). Managerial decision-making models based on ANN behave as a "black box". They usually operate in two phases:

1. First phase is typically focused on learning. Artificial neural network processes data and based on topology, algorithms and functions gains the context. There are many variations of learning methodology for different applications.

2. During the second phase, artificial neural network is perceived as an expert that produces output based on the knowledge and the learning in the first phase. At this stage, importance of presentation form and its quality is increasing. Managers need a highly precise information which is presented in a way it does not require them to spend more time than necessary to decipher it. Therefore, a dashboard is a great option.

Model design based on the artificial neural network requires multiple steps and decisions to be made by the innovation of tourist public service mechanism of wisdom tourism based on the neural network. The construction of intelligent scenic areas should not only pay attention to the input of the basic hardware facilities, but also from the tourist's point of view, understand the needs of tourists and the purposes of tourism, and therefore, constantly innovate in soft services (Wang, 2017). Hence, input and output neurons and their number are the most important elements. Based on a chosen topology, there are different types of hidden layers of neurons, their number and interconnections. Using appropriate configuration of ANN, activation functions and learning algorithm, we can create a network capable of analyzing and classifying health of companies in the accommodation sector in tourism. SEM analysis showed that the use of IT, financial performance, benchmarking, service standardization, top management support, customer satisfaction, service quality,

hotel interior and exterior design/look, location, employee training and empowerment were significant factors influencing the success and development of a hotel (Yadagaridehkordi et al., 2018). However, technology is not the only factor. An in-depth analysis of accommodation sector was a very important part of this research. Without a deep understanding of the sector, there is a high probability of incorrect results because of important attribute of ANN - GIGO (Garbage In Garbage Out). Learning system gains information only from the data that is provided. The lower the quality of the data input, the more incorrect the results will be. However, creating a high-quality model with deep knowledge of context is not sufficient enough for the managers. In real business situations, the busy managers need tools which show them information they need in a format they need it and in the moment, they need it, excluding everything that is not a top priority or can distract them. The solution proposed in this paper aimed to fulfill all three requirements. The first one with a high-quality ANN, the second one with a deep research of accommodation sector and the last one with a real-time, visually attractive and effective dashboard.

THE RESEARCH SAMPLE

For this research, a basic set of businesses operating in hotel services in Slovakia was created. Businesses were selected based on SK NACE (Classification of economic activities SK-NACE according to the Statistical Office of the Slovak Republic), specifically Section I - Accommodation and food services, Division 55 - Accommodation and Group 551 - Hotels and similar accommodation. Selected time of the research spread across the years 2009 and 2015. According to the portal "Index podnikateľa", there were 1,652 businesses under the category SK-NACE 55.1. Subjects in this group consisted of business entities that are registered in the Commercial Register of the Slovak Republic and have submitted financial statements to the commercial register. This research group was separated into two categories. The first one, labeled as **ZS1**, contained only healthy companies. The second group, labeled as **ZS2**, contained companies in liquidation or undergoing a curative process. ZS1 group consisted of 1,514 companies, ZS2 group consisted of 138 companies. Using simple random sampling, the final research samples were created (S1 from ZS1 and S2 from ZS2). To optimize and maintain objectivity of the results, companies that own more than one property were eliminated due to the unavailability of their financial statements for each individual accommodation property (Dataspot SRO, 2017). Due to the necessity to verify the functionality of the model, in addition to mechanisms that are part of the ANN, six companies were selected: two healthy companies from the group S1, 2 companies in bankruptcy/liquidation from the group S2 and two artificially created companies – one healthy and the second one problematic. Both artificially designed companies had been created to be as real as possible to represent their category. These companies were not included in the data files intended for training, validation and testing ANN. It was applied only for final verification and comparison. An overview of all companies and their designations are shown in Table 1.

Table 1. Profiles of test companies (Data source: Dataspot s.r.o., 2017)

ID	Category	Class	State
SZ1	hotel	*****	healthy
SZ2	hotel	****	healthy
SK1	guest-house	**	bankruptcy
SK2	congress hotel	***	bankruptcy
SSZ	hotel	****	simulated healthy
SSK	hotel	****	simulated bankruptcy

Design of model, data sources and input variables

Hotel and tourism business can be characterized as a business in an unstable environment with a certain degree of risk and uncertainty. Changes in the market are usually very fast and rather frequent. The common problem is also the rationality of customer behaviour and changing trends. Therefore, the replacement of staff in this process is difficult, despite intensive development of advanced technologies and management practices. The proposed model is designed to be a helpful tool for managers, not their replacement. It helps managers focus on the core of the business. During the analytical phase of the research, we have conducted many experiments with popular conventional models like Tafler model, Altman Z Score, Springate model and many more. Almost none of the commonly used models is applicable for tourism and specifically for hotel management. Principal problems of conventional models were identified, such as their static nature and reliance on the principles of market behaviour which relies on a certain rational behaviour of the consumer. Moreover, many models focus only on the financial side of the business, which is ideal for manufacturing companies, but not so much for customer and service based businesses. Therefore, the presented model had to overcome these disadvantages and at the same time, become a convenient and effective tool for the managers. To mend these traditional issues and to make a practical and precise model, we had focused on both financial and non-financial data and selected the most important factors for hotel analysis and benchmarking.

The data was gathered from multiple sources that can be separated into two main groups:

1. **Financial data:** Register of Financial Statements, Commercial Bulletin, Trade Register, Statistical Office of the Slovak Republic, Financial Administration Slovak Republic, Public Procurement Office, Social Insurance Agency in Slovakia, Insurance Companies Všeobecná zdravotná poisťovňa, Dôvera and Union.

2. **Non-financial data:** Association of Hotels and Restaurants of the Slovak Republic, Association of Tourism of the SR, Hotrec, Booking.com, TripAdvisor, STB, UNWTO, WTTC, Eurostat, European Travel Commission, Eurobarometer and the hotel websites.

After the analysis of all types of collected information, the input variables were selected. They were divided into three groups:

- **Financial** – standard and reliable indicators of a financial analysis and prediction models.
- **Non-financial** – important information specifying a property.
- **Organizational** – information specifying a company.

Input variables, their category, type and defined ID for clarity of research are presented in Table 2.

Model mechanics

Model mechanics defines processes that convert inputs into outputs, thus fulfilling the main function of the proposed model – to classify the health of the hotel and provide meaningful and practical information to the manager. They represent a substantial part of the model. Model mechanics can be described through these basic steps: input of variables, processing of variables, application of artificial neural networks and display of the output data in the form of a dashboard. The main function of the proposed model is to classify health of a hotel. For this purpose, we have chosen a training method MLP (Multi-Layer Perceptron) feedforward artificial neural network which uses backward propagation of errors. ANN model contains 21 input neurons. Each input neuron represents one variable. The model includes 1 hidden layer and the output layer contains one neuron. During the experimental phase, we have analyzed multiple types and configurations of artificial neural networks. The final testing configurations consisted of 9-18 hidden neurons, 10%-20% of data separated for testing and 3 different training algorithms (Levenberg-Marquardt, Bayesian Regularization a Scaled conjugate gradient).

Table 2. The input variables (Data source: processing by Karahuta, 2016)

Category	ID	Name	Type
Financial	VF1	Receivables turnover period	R
	VF2	Commitments turnover period	R
	VF3	Inventory turnover period	R
	VF4	Overcapitalisation degree	R
	VF5	Total debt	R
	VF6	Short-term debt	R
	VF7	Return on equity	R
	VF8	Return on sales	R
	VF9	Total liquidity	R
	VF10	Current liquidity	R
	VF11	Year	I
Organizational	PO1	Year of foundation	I
	PO2	Size of organization	C
Non-financial	VN1	Class	C
	VN2	Category	C
	VN3	Number of rooms	I
	VN4	Price	R
	VN5	Location type	C
	VN6	Seasonality	B
	VN7	Booking.com – score	R
	VN8	Tripadvisor - score	R

Variable types: I – Integer, R – Real, B – Boolean, C – Categorical

Final configuration consisted of 12 hidden neurons, 70% of data for training, 15% for validation and 15% for testing. The training algorithm was Levenberg-Marquardt.

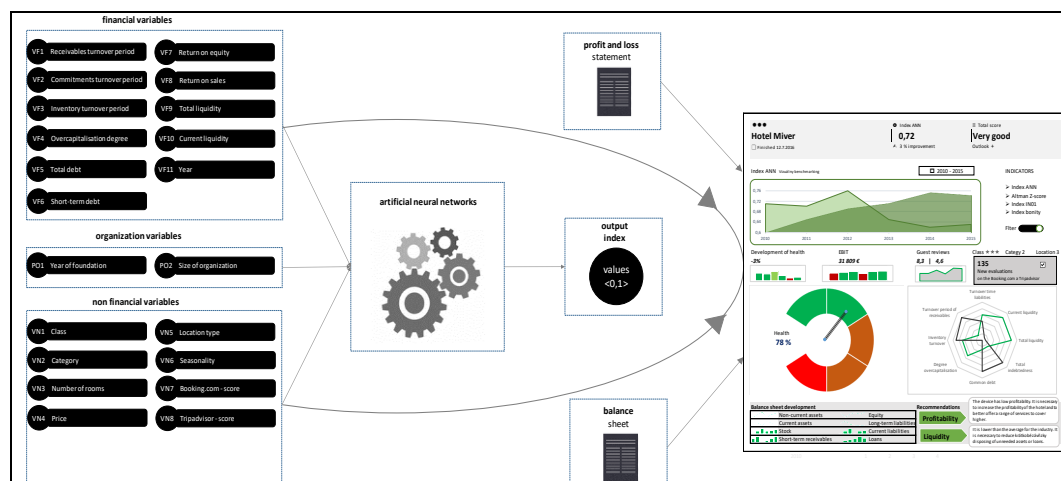


Figure 1. Business health assessment model based on neural networks

The model output

The output of the proposed ANN is a real number in the range of $<0;1>$ for each company per year. This one number provides immediate information about the state of the business health. Number 1 represents a healthy enterprise, whereas number 0 represents a troubled company. The turning point is in the middle with a value of 0.5. The main output of the model is the dashboard which processes and shows multiple

financial and non-financial data in textual and multiple visual formats. The most important part is the result of ANN, its interpretation and multiple recommendations for the manager. The diagram of the model is shown in Figure 1.

THE DASHBOARD FOR MANAGERS

In conclusion, we would like to point out the indicators that are relevant and applicable in models for the classification and prediction of the state of an organization. There are many indicators that may be applicable in models evaluating the state of a property. Controlling in tourism offers a whole group of quality indicators, but for their assessment the non-public information is often needed. One of the requirements for this model was the use of publicly available data. We consider customer satisfaction one of the key factors. Sensitive work with the customer is crucial. Modern web portals and especially mobile applications allow everyone to immediately evaluate and share their feelings and opinions. After the customer's submission of the evaluation, the manager loses virtually any possibility to change or to modify such feedback. This creates a significant pressure on the quality of provided services. We use three different Artificial Neural Networks techniques to predict tourist demand: multi-layer perceptron, radial basis function and the Elman neural networks. The structure of the networks is based on a multiple-input multiple-output (MIMO) approach (Claveria et al., 2017).

Despite highlighting the importance of the analysis of non-financial factors, we do not expect their direct impact on the financial health of the company. Their importance and significance is increasing in combination with financial indicators and other non-financial indicators. Each category and class of accommodation property generally has an existing target group of customers. Problems with inappropriate choice of category, class or other nonfinancial variable arise from their improper combinations (for example, a 5* hotel in an unattractive and economically less developed area). The research has shown that the model built upon the artificial neural network using a complex business analysis in context of the internal and external factors is more accurate than conventional models. To confirm this hypothesis, we have chosen randomly selected companies that were previously labeled as healthy or unhealthy. These data were not included in the data set intended for the Artificial Neural Network training. Then, we have calculated the classification of companies using conventional methods as well as the proposed model. Results were statistically compared with the actual state. For this purpose, the Pearson χ^2 test was used. Summary of the results can be seen in Table 3. Assumptions and hypothesis were confirmed. All conventional models were significantly different from the real situation. In the case of the proposed model, the statistical discrepancy was not confirmed. This does not prove that conventional models are incorrect or unusable. However, they are supposed to be used in sectors they were created for (mostly manufacturing companies). Despite this, many authors used them as universal models.

Table 3. χ^2 test results (Data source: Karahuta, 2016, p. 135)

ANN	Pearson χ^2 : .382114, df=1, p=.536474
Altman	Pearson χ^2 : 18.4314, df=1, p=.000018
Springate	Pearson χ^2 : 46.3404, df=1, p=.000000
Taffler	Pearson χ^2 : 4.91860, df=1, p=.026569
INo1	Pearson χ^2 : 29.4185, df=1, p=.000000

The main and most important feature of the model is the managerial dashboard of the accommodation property. The result of the model is meaningful only if it is precise

and easily understandable. The model output index is an easily understandable exact number in the range from 0 to 1 (the value which defines the level of a company's health). Despite the presumable simplicity, it reaches its full potential for application in management processes with visual display, benchmarking and in context with other relevant information. A designed dashboard enables managers to interactively overview the state of the companies they direct. A screenshot of application is shown in Figure 2. The dashboard is fully adjustable and it enables the managers to customize it to best suit their working process. It includes several basic components:

- **Index ANN.** It is a numerical result of the proposed model and its verbal interpretation (for example, 0.72 - very good). At the same time, the manager immediately sees the percentage change from the earlier period. Based on the analysis of previous years, the application predicts the future development (positive, negative or no significant change).

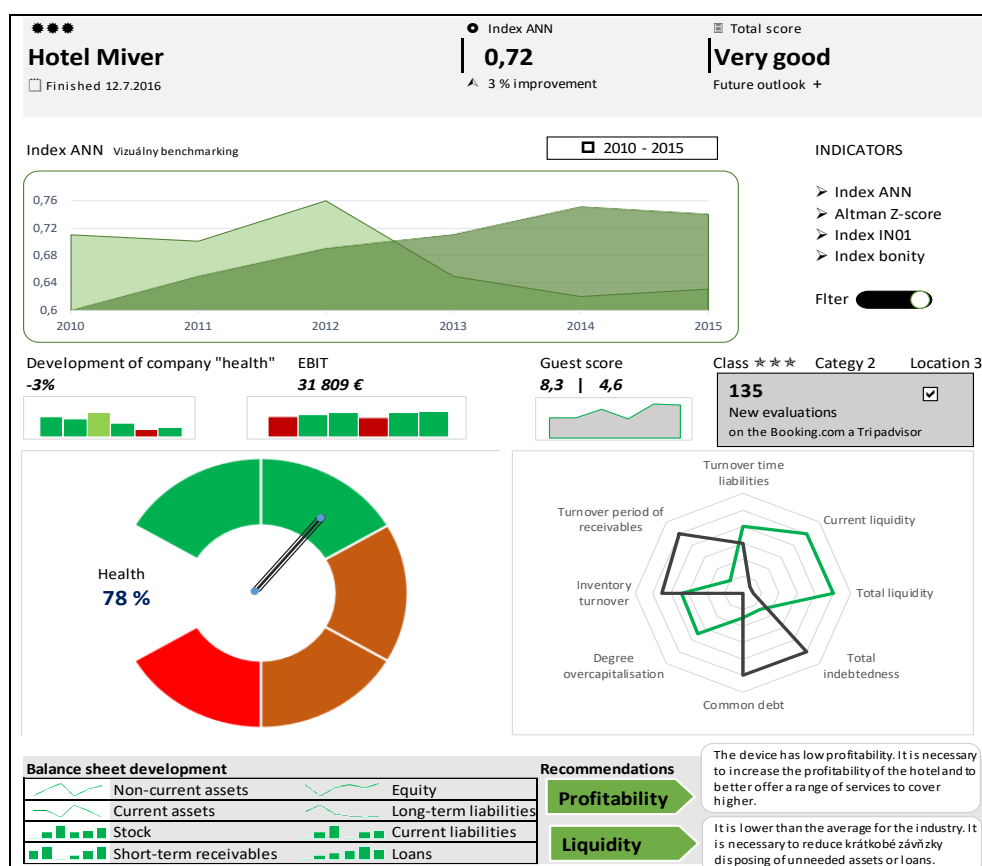


Figure 2. Dashboard (Source: own processing by Karahuta, 2016)

- **Visual benchmarking.** The client has the opportunity to compare the development of their own business compared to the industry in which it operates. It can follow various indices, models and indicators. It is also possible to set different filters, dates and scales.

- **Financial indicators and their comparison.** The report effectively utilizes the input data and displays them clearly using various forms of graphs and visuals. One of the options is a radar chart that very effectively visually portrays the position of the company

in the sector of selected indicators. The bar and line graphs show the evolution of key indicators over the past period.

- **The overall condition.** The general condition, or health of the company, represents the combination of our model and benchmarking with companies with similar characteristics. A key element is the index ANN converted into a percentage and adjusted by the absolute state of the sector. Colours provide immediate information on the status of the company.
- **Recommendations.** They form an important part of the dashboard. They are partly automated and warn against the limits of indicators. Recommendations also create a space for cooperation of the commercial and academic world. Index ANN and recommendations generate the majority of added value of the report.

CONCLUSION

Hotel management is a significantly practical area and its scientific development is deeply connected with practice. A solution presented in this work provides a powerful link between the two dimensions. Scientists and academics can apply their broad knowledge in real-life situations and analyze real data and ultimately help managers with the development of their business. At the same time, managers can confront scientific theories with practice and deliver results and data. This principle is also applied in our proposed model as shown on Figure 3.

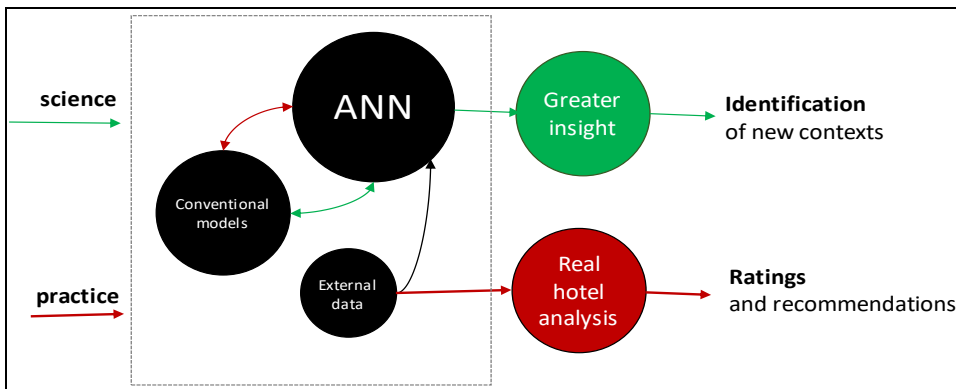


Figure 3. Interconnection of science and practice (Source: own processing by Karahuta, 2016)

The ability of ANN to learn, as part of the core model, is very important. Within the principle of GIGO (garbage in, garbage out), it is important to ensure that the input data are correct and reliable. The more accurate and detailed the data provided by businesses, the better the advice and analysis provided by science and the better the reports model that is generated. Thus, new connections can subsequently be discovered to improve the business. There is, therefore, the chance for symbiotic cooperation of practice and science.

While maintaining the principles and methodology applied in the design of the model, the model can be extended with new input data, thus exponentially expanding the number of combinations of elements and potential new context. At the same time, the model methodology enables its transformation for other sectors, too. The model offers benefits at many levels and dimensions. It is easily applicable in practice due to the fact that the proposed model is based on real data and analysis of the real environment. A database of accommodation facilities, proposed methodology and variable analysis create a solid foundation for further scientific knowledge and research in the future (Karahuta, 2016).

Aknowlegments

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THE MULTIDIMENSIONAL POSITIONING OF ITALIAN DESTINATIONS

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Abstract: In Italy, tourism is traditionally one of the most important driving sector of economic growth at the local level. The aim of the work is to explore the domestic inter-regional flow (the major share of Italian tourism) of the 20 Italian regions. This paper adopts a Multidimensional Scaling technique based on origin-destination matrix of domestic tourism flows. The findings point out geographical proximity, infrastructural factors and economic strength, in addition to specific place-based tourist resources, appears to be the determining factors of the competitive positioning. These results are useful to improve the further decision-making of different agents involved in tourism industry and the region's capacity to attract domestic tourists.

Key words: Domestic tourism, Italian regions, Origin-Destination matrix, Multidimensional Scaling

* * * * *

INTRODUCTION

In Italy, as in many other countries, tourism is a major sector of economic activity. The direct contribution of travel and tourism to GDP in 2015 (UNWTO, 2016) was EUR68.8bn (4.2% of GDP) (Figure 1). This contribution is forecast to increase by 2.1% to EUR70.2bn in 2016. This increase primarily reflects the economic activity generated by industries such as hotels, travel agents, airlines and other passenger transportation services (excluding commuter services). It also includes the activities of the restaurant and leisure industries. The direct contribution of travel and tourism to GDP is expected to grow by 2.2% per annum to EUR87.2bn (4.8% of GDP) by 2026 (UNWTO, 2016).

The total contribution of travel and tourism to GDP (including the wider effects of investment, the supply chain and induced income impacts) was EUR167.5bn in 2015

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(10.2% of GDP) and is expected to grow by 1.9% to EUR170.7bn (10.3% of GDP) in 2016. It is forecast to continue increasing by 1.9% per annum to EUR206.3bn by 2026 (11.4% of GDP) (UNWTO, 2016). Italian travel and tourism directly generated 1,119,000 jobs in 2015 (5.0% of total employment), and this number is forecast to grow by 2.0% in 2016 to 1,142,000 (5.0% of total employment). The total contribution of travel and tourism to employment was 2,609,000 jobs in 2015 (11.6% of total employment). This value is forecast to increase by 1.7% in 2016 to 2,653,000 jobs (11.7% of total employment).

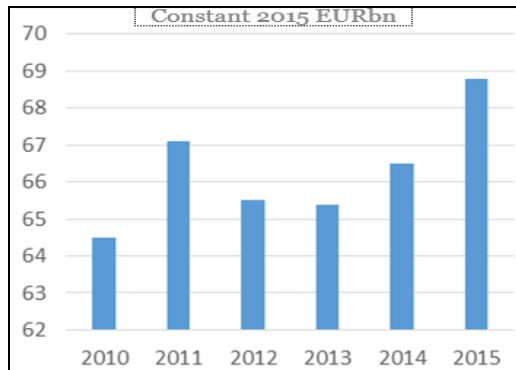


Figure 1. Direct contribution of Travel & Tourism to GDP (Source: UNWTO data)

Most of the tourism activity in Italy is generated by domestic demand, and it has a significant economic impact on the Italian economy as a whole. Domestic tourism tends to lead to increased employment, improved standards of living of the host community and development of attractions. Domestic travel spending generated 70.7% of direct travel and tourism GDP in 2015 compared with 29.3% for visitor exports (i.e., foreign visitor spending or international tourism receipts) (UNWTO, 2016). The consistency of these data is due to multiple factors, among which may be mentioned that Italy is home of the greatest number of UNESCO World Heritage Sites in the world. High art and monuments are found everywhere around the country. The great cities of art, such as Rome, Venice and Florence, are world famous and have been attracting visitors for centuries. In addition to its art treasures, Italy features beautiful coasts, alpine lakes and mountains. Italy has an abundance of high-quality natural and cultural heritage, which constitute unique resources for tourism development. Italy has a very strong tourism identity, consistently ranking as one of the top country brands, renowned particularly for its culture and art, gastronomy and wine, and sightseeing and nature.

Many visitors consider Italy “a dream destination”. In addition, the typical Italian tourism business structure is small, and the lifestyle entrepreneurs who often own and run these businesses are more likely to provide unique tourism experiences. The present research attempts to explore the positioning by comparing twenty competitive Italian destinations in a manner that is useful for destination management organizations and tourism-related firms in order to improve the competitiveness and attractiveness of the Italian regions (Figure 2). Based based on origin-destination matrix of bilateral domestic tourism flows, we aim to discover which regions can be considered competitors or potential partners. Our study contributes to the literature about competitive positioning of the tourism destinations by using official aggregate data, in order to check whether they can be useful for the attainment of such goals.

Italy can count on thousands of touristic sites, which are distributed all throughout the national territory. Tourist arrivals are concentrated in big cities, coastal

areas, and ski resort destinations because many Italian regions have identified tourism as a major industry for their economic development. However, regional structures for developing and promoting tourism products are often dispersed and sometimes lack the capacity to operate effectively in foreign markets.



Figure 2. The map of 20 Italian regions (Source: Euro GeoGrafiche Mencattini, scale: 1:1.000.000)

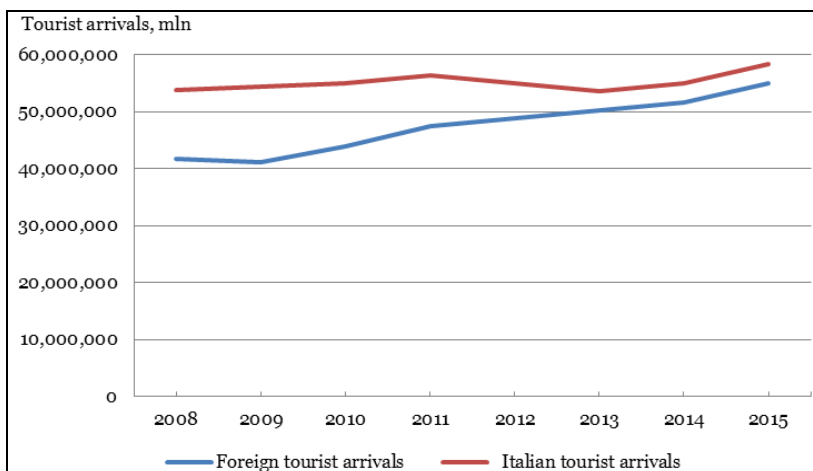


Figure 3. Trends of foreign and domestic tourist arrivals in Italy from 2008 to 2015 (Source: Authors' elaboration of ISTAT data)

Evidence indicates that there is a lack of clarity and coordination of promotion activities between the government, regions, provinces and municipalities (OECD, 2011). To analyse domestic tourism, it is necessary to study regional flows. All data are provided by the Italian National Statistics Institute (ISTAT, various years). The data of regional flows are from the survey "Occupancy of tourist accommodation establishments". This census survey collects data each month, at the municipality level, about arrivals and nights spent by residents and non-residents at tourist accommodation establishments, divided by category of hotel and similar accommodation and by type of the other collective accommodation establishments. Data are broken down by country of residence in the case of non-residents and by region of residence for Italian residents. Figure 3 shows the main dynamics of arrivals over the 2008-2015 period for both domestic and inbound components. In Italy, there are more domestic tourists than international ones. The number of domestic Italian arrivals increased from 2008 to 2011 (53.7 to 56.26 million) but decreased from 2011 to 2013 (to 53.6 million in 2013) (perhaps because of the terrorist attacks or economic crisis), and they have started to increase since 2013 (to 58.32 million in 2015). The number of foreign arrivals in Italy increased over the period 2008 to 2015 (from 41.8 to 55.03 million), except for a reduction in 2008-2009.

With respect to national destinations, the data indicate that Italian tourist preferences have not changed during the last eight years. The regional market shares, in terms of domestic arrivals, have also remained constant over time, with Lombardia, Emilia Romagna, Toscana, Veneto and Trentino Alto Adige being among the most frequently chosen destinations. For domestic arrivals, in 2015, the Northeast received the highest proportion of visitors (32.31%), followed by the Northwest regions (23%), and were again the most popular destinations in the south of Italy (Campania and Puglia).

The distribution of trips in the Italian regions is stable during this period, with no variation in arrivals over the period under study. Arrivals declined during the period 2012-2014. With respect to departures, because the Italian regions are very different in terms of population (they vary from 300,000 residents in Valle d'Aosta to more than 9 million in Lombardia), the flows were normalized by population to remove the size effect. The data show that Lombardia is the greatest source of trips, followed in recent years by Veneto and Molise. The inhabitants of Trentino Alto Adige, Friuli Venezia Giulia, Sardegna, Sicilia and Calabria are the least likely to travel.

The ranking of the top departures remained unchanged during the study period, with a change in position of Liguria and Trentino Alto Adige. Stability in the arrival and departure rankings over time is verified by the value of the Spearman's ordinal correlation coefficient, which never falls below 0.97 in the correlations. After providing a first approximation of the distribution of arrival and departure tourist flows, the net balance is calculated as the difference between trips received by the region (tourism arrivals) and trips originated from the region (tourism departures). Regions with a negative net balance are the origin more trips than they receive, while those with a positive balance are those that receive more trips than they originate. According to the average values for the years 2008-2015, Lombardia, Piemonte, Lazio, Campania, Molise, Sicilia and Puglia are net emitter regions; all the other regions are net recipients (Trentino Alto Adige, Emilia Romagna and Toscana are the higher net recipients). The paper is structured as follows: Section 2 provides a short background research, detailing previous important results related to the objectives of this paper. A description of the methodology applied to analyse the main features of inter-regional tourism flows in Italy and to perform the empirical analysis is in Section 3. Section 4 presents our principal results, and Section 5 offers some concluding remarks.

MAIN BACKGROUND

The main aim of this paper is to present how Italian regions are positioned in relation to each other by constructing an Origin-Destination matrix of domestic tourist flows. This matrix is the most complex spatial interaction model able to capture the tourist flows from region i to region j (i and j can be the same), which are measured in terms of annual trips. At the best of our knowledge, the analyses of competitive positioning of Italian regions are few and mainly refers to specific regions or some areas of the country. Most of the studies on tourist flows focuses on the main determinants of the tourism demand.

Some of the studies that have focused exclusively on domestic tourism demand are Gardini (1979), Cracolici and Nijkamp (2008), Massidda and Etzo (2012), Patuelli, Mussoni and Candela (2013), Marrocu and Paci (2013), Cafiso et al., (2016). Gardini (1979) considers inter-regional tourism flows and studies the relationship between the Leontief-Strout gravitational coefficients, distance, and regional market shares evolution. He finds that the distance between the region of origin and destination increased until the oil shock of the early 1970s.

After that time, higher transportation costs discouraged long-distance travelling. Cracolici and Nijkamp (2008) assess the relative attractiveness of competing tourist destinations in Southern Italy. They find that natural and cultural resources give only a comparative advantage to tourist destinations, because the domestic tourists is strongly connected to the complementary elements of tourism supply, such as information, tourist services and living costs. Massidda and Etzo (2013) investigate the main determinants of Italian domestic tourism demand as measured by regional bilateral tourism flows, emphasizing the role of supply-side variables as driving forces of tourist choice. The analysis is developed at both the aggregate level and for two traditional macro-areas of the country, namely, Centre-North and South. For the whole nation, the importance of traditional economic variables in determining domestic tourism flows indicates that domestic tourism is a luxury service in Italy. They confirm the negative impact of distance and find that the actual tourist choices also appear to be influenced by past experiences and by regional differences in the quality of the wider environment. In their policy remarks, they state that at a microeconomic level, domestic tourism would be boosted if lower income households gained access to it. In that respect, a reduction of holiday prices could be a fruitful policy.

Patuelli et al., 2012 investigate the effects of UNESCO's World Heritage Sites designation on Italian domestic tourism flows, rather than on the overall effects of 'cultural heritage' or generic cultural sites and attractions. Marrocu and Paci (2013) analyse the combined effects of demand and supply on the domestic tourism flows for the 107 Italian provinces. They find that neighbouring territories, as well as those that are less crowded, are more attractive destinations.

The origin's income, the destination's accessibility and available attractions are also important factors. More recently there are other papers that analyse the domestic tourism flows across Italian regions during times of economic crisis to study how distance influences tourist choice about their holiday destination. Cafiso et al., (2016) suggest that distance gained weight during the years of the Great Recession and therefore confirm, from a macroeconomic perspective, that tourists tend to choose closer destinations in times of crisis. Summing up, the aim of all these papers is to investigate the main determinants of the domestic tourism flows in Italy, such as income, distance, tourist services, infrastructure. Furthermore, the intent of our analysis is to explore the competitive positioning of each Italian regions, using aggregate data, rather than just from tourists' perceptions in survey interviews.

METHODOLOGY

To study bilateral tourism flows across the twenty (Nuts 2) Italian regions, we used the annual survey of domestic vacation in Italy from 2008 to 2015 and obtained the full origin-destination (or in-flow/out-flow) matrix of tourist arrivals, including all cases of intra-regional flows (when the origin region i is equal to the destination region j). The values of the flows were obtained by taking the value of arrival flow at the destination region from the region of origin. The origin-destination matrix has the following structure:

$$\begin{pmatrix} x_{11} & x_{12} & \dots & x_{1j} & \mathbf{X}_1 \\ x_{21} & x_{22} & \dots & x_{2j} & \mathbf{X}_2 \\ \dots & \dots & \dots & \dots & \dots \\ x_{i1} & x_{i2} & \dots & x_{ij} & \mathbf{X}_i \\ \mathbf{Y}_1 & \mathbf{Y}_2 & \dots & \mathbf{Y}_j & \mathbf{T} \end{pmatrix}$$

where x_{ij} is the number of tourists departing from region i and arriving in region j ; X_i is the total number of tourists departing from region i ; Y_j is the total number of tourists received by region j ; and T is the total number of tourists. The diagonal entries of the matrix contain the intra-regional flows, while the off-diagonal entries contain the inter-regional flows. To study the possible attraction of trips between regions, we calculated a tourist attraction index between regions, as proposed by Guardia-Galvez, Muro-Romero and Such-Devesa (2014). The index measures the cross-sectional attraction between each pair of regions. The tourist attraction coefficient is formulated as follows (Guardia et al., 2014):

$$CA_{ij} = \frac{x_{ij}}{X_i} \times \frac{T}{Y_j}$$

where CA_{ij} is the coefficient of tourist attraction between regions i and j .

The attraction of trips by one region to another is defined as strong if the coefficient is greater than one. When the coefficient is less than or equal to one, the degree of attraction between regions is weak. According to the interpretation of the formula, the coefficient of attraction is greater than 1 if the number of trips from i to j as a proportion of the total received by j is greater than the total trips originating in i as a proportion of total global travel. This would imply that the x_{ij} flow has a higher relative weight in the total trips to j than the total trips originating from i in the overall number of trips.

While the descriptive analyses enable an appreciation of the individual relations between each region and the other 19 regions, our objective is to investigate the nature of the similarity/dissimilarity between all of the Italian regions. This means treating the 20 regions as a whole and examining their internal dynamics, thereby it can help the researcher to identify which regions are competitors or potential partners. In order to reach a rapid geometric representation, or spatial map, of the different destinations, the mathematical technique of multidimensional scaling (MDS) enables to insight into the proximity between each region. This technique is used to reduce the dimensionality of data by transforming the original set of correlated variables into a smaller set of uncorrelated variables (O'Connell, 1999). The input data requirement for MDS is that it be in a square, symmetric 1-mode matrix indicating the relationships between a set of objects. For the Italian regions, the set of objects was the regions themselves and the relationships were the tourist arrivals between regions.

In a recent study, Marcussen (2014) reviews 64 papers, published between 1975 and 2014, that apply MDS to tourism research. MDS is also known as Principal

Coordinates Analysis or Torgerson scaling (Torgerson, 1952 and Torgerson, 1958). The author uses MDS to evaluate the application of the technique in the tourism literature, finding that the most common themes are images and the positioning of destinations. Multidimensional scaling (MDS) takes the origin-destination matrix of tourism flow as input and generates a matrix of coordinates of a point configuration. For a given set of tourism flows, MDS attempts to find a set of points such that the distances $\{d_{ij}\}$ between these points correspond as closely as possible to their proximities. This involves solving the following objective function (Kruskal & Wish, 1978):

$$\sum [d_{ij} - f(\delta_{ij})]^2 \quad (1)$$

where $f(\delta_{ij})$ is a hypothesized proximity function. A zero value for equation 1 indicates a perfect fit between the proximities and the distances, with increasingly positive values indicating increasingly poor fit, indication that it is difficult to find a set of consistent distance relationships that capture the proximity relations. In the MDS literature, a value of less than 0.100 is acceptable (Kruskal & Wish, 1978). Eq. (1) is difficult to solve exactly; heuristic methods are available. The applications in this paper use the PROXimitySCALing (PROXSCAL) technique, which implements the IterativeMajorization (IM) algorithm (Commandeur and Heiser, 1993) to calculate, at each step, a linear auxiliary function that summarizes the local neighbourhood of the current solution. PROXSCAL automatically performs multidimensional scaling of proximity data to obtain a least-squares representation of the objects in low-dimensional space.

RESULTS

The results of the coefficient of attraction considering the aggregate matrix are presented in table 1 (coefficients greater than 1 are marked in bold). The intra-regional flows are the highest values of almost all regions, except for Liguria, Trentino Alto Adige, Friuli Venezia Giulia, Umbria, Marche, Lazio, Molise and Basilicata. These regions are attractive destinations for all regions except themselves. The Italian regions attracted more tourists from regions that are geographically closer: Trentino attracted Northern regions, Emilia Romagna attracted Northern and Central regions, the others attracted Southern regions. Almost all the regions are the most attractive destination for their own residents (as already reported by Marrocu and Paci, 2013).

The results show that the regions that attract the most trips from a greater number of other regions are Trentino Alto Adige, Emilia Romagna, Umbria, Marche, Lazio, Abruzzo, Molise, Campania, Puglia, Basilicata and Calabria. This is especially the case in Southern Italian regions, with a strong attraction for the regions that are geographically closer. Geographical proximity and the location-specific tourist resources (the so called notion of “local for local”), in addition to economic strength, appear to be the factors determining the tourism habits of residents of these regions (Bernini et al., 2017).

Additionally, except for Lombardia, Umbria and Lazio, that are unattractive destinations for its residents, the coefficients of the flows on the diagonal of the matrix are classifiable as strong, suggesting that many Italians regularly perform domestic tourism within their region. This is true again for the Southern regions and the islands, namely Sardegna (the region with the highest index of attraction), Sicilia, Basilicata, Calabria, Puglia, Molise, Abruzzo. Even Friuli Venezia Giulia has a high coefficient of intra-regional tourist attraction. This means that both the distance and economic, social and infrastructural factors (in this group there are two islands and one mountain region), and place-based tourist resources, seem to be important aspects for residents when they come to deciding the destination of a trip. Particularly, the former exert a negative influence,

not allowing the residents of these regions to make more trips outside their region, while the latter exert a positive influence since these regions already have tourist resources.

Table 1. Index of attraction between Italian regions, 2008-2015 average
(Source: Authors' elaboration of ISTAT data)

	Pie	VA	Lig	Lo m	TA A	Ven	FV G	ER	Tos	Um b	Ma r	Laz	Abr	Mol	Ca m	Pug	Bas	Cal	Sic	Sar
Pie	6,0	2,9	2,8	0,7	0,4	0,7	0,7	0,8	0,8	0,5	0,6	0,6	0,4	0,4	0,4	0,4	0,4	0,3	0,4	0,7
VA	1,8	6,7	2,7	1	0,6	0,8	0,8	1,3	0,9	0,4	0,6	0,7	0,4	0,3	0,4	0,7	0,2	0,4	0,6	1,2
Lig.	1,9	3,9	2,5	1	1,1	0,8	0,8	0,7	1,3	0,7	0,4	1	0,3	0,3	1,1	0,5	0,3	0,3	0,6	1
Lom	0,7	1,5	1,6	2,1	1,1	0,9	1	1,1	0,8	0,6	0,9	0,7	0,6	0,4	0,4	0,5	0,3	0,3	0,5	0,8
TAA	0,4	0,4	0,4	0,7	2,8	2,4	1,4	1,2	0,6	0,5	0,8	0,5	0,6	0,2	0,5	0,5	0,2	0,2	0,3	0,7
Ven	0,5	0,4	0,4	0,7	2,1	3	2,2	0,8	0,7	0,7	0,8	0,6	0,5	0,3	0,3	0,5	0,3	0,2	0,4	0,6
FVG	0,5	0,3	0,5	0,9	1,6	1,9	8,1	0,8	0,6	0,7	0,7	0,8	0,4	0,3	0,5	0,5	0,3	0,2	0,5	0,6
ER	0,4	0,7	0,7	0,7	1,7	0,9	0,9	2,2	0,9	0,8	1,5	0,7	0,7	0,6	0,5	0,7	0,5	0,3	0,4	0,7
Tos	0,5	0,8	0,6	0,7	1,1	0,8	0,6	1,1	3,1	1	0,8	0,9	0,5	0,4	0,5	0,6	0,5	0,4	0,5	1
Umb	0,4	0,5	0,4	0,6	0,8	0,6	0,6	1,5	1,1	2,2	4,1	1	1,7	0,8	0,9	1	0,6	0,5	0,4	0,8
Mar	0,3	0,4	0,3	0,7	1,1	0,7	0,6	0,9	0,8	1,4	4	0,9	1,3	1,2	2,9	1,1	0,7	0,4	0,4	0,5
Laz	0,4	0,5	0,6	0,7	0,8	0,7	0,7	0,8	1,4	2,1	1	1,8	2,3	1,4	0,8	1,3	1,1	1,2	0,8	1,2
Abr	0,4	0,3	0,4	0,7	0,6	0,7	0,6	1,1	0,8	1,5	1,8	1,2	6,3	3,2	0,7	1,6	1,4	0,7	0,5	0,6
Mol	0,2	0,1	0,1	0,2	0,1	0,1	0,2	0,4	0,2	0,5	0,4	0,4	1,1	4,8	13,9	0,7	0,4	0,3	0,2	0,2
Cam	0,3	0,3	0,5	0,6	0,2	0,5	0,4	0,6	0,9	1,7	0,7	1,7	1,7	3,6	3,5	1,9	2,8	3,1	0,9	0,6
Pug	0,3	0,3	0,4	0,6	0,4	0,6	0,5	0,8	0,6	1,5	1,1	1,3	1,9	3,2	0,8	4,7	5,4	2,4	0,6	0,4
Bas	0,3	0,2	0,3	0,6	0,2	0,4	0,4	0,8	0,6	1,1	0,7	2,2	1,2	1,6	3	2,1	9,6	2,7	0,6	0,4
Cal	0,3	0,3	0,4	0,7	0,2	0,4	0,4	0,6	0,7	1,1	0,5	1,8	0,5	0,8	1,9	1,8	2	8,5	1,9	0,3
Sic	0,3	0,3	0,3	0,6	0,2	0,5	0,4	0,4	0,5	0,7	0,3	1,3	0,3	0,4	0,5	1	0,7	2,6	9,6	0,4
Sar	0,4	0,5	0,4	0,8	0,4	0,6	0,5	0,5	0,6	0,7	0,3	1,4	0,3	0,2	0,3	0,4	0,2	0,2	0,4	17,9

The empirical findings highlighted by the descriptive official statistics highlight the individual relations between each region and the other 19 regions, instead the nature of the similarity/dissimilarity between all of the Italian regions was investigated by the MDS. In order to analyse the competitive positioning of the Italian regions the average for the period from 2008 to 2015 is taken as the study value.

Table 3 provides goodness-of-fit statistics for a two-dimensional solution. Stress-I is the most common measure found in the literature (Kruskal, 1964):

$$\sigma_1 = \frac{\sum (d_{ij} - \delta_{ij})^2}{\sum d_{ij}^2} \quad (2)$$

where δ_{ij} is the tourism flow between two points, and d_{ij} is the corresponding distance in the resulting MDS space. Changing the denominator of (2) to $\sum \delta_{ij}^2$ gives the normalized raw stress (Borg and Groenen, 1997), and changing it to $\sum (d_{ij} - \bar{d})^2$ gives

Stress-II, where \bar{d} is the average distance in MDS space (Kruskal, 1964). With no denominator, (2) corresponds to the raw stress.

Table 2. Stress and Fit Measures

Normalized Raw Stress	,0213
Stress-I	,1460
Stress-II	,2699
S-Stress	,0435
Dispersion Accounted For (D.A.F.)	,9786
Tucker's Coefficient of Congruence	,9892

In table 2, each of the four stress statistics measures the misfit of the data, while the Dispersion Accounted For and Tucker's Coefficient of Congruence measure the fit. Lower stress measures (to a minimum of 0) and higher fit measures (to a maximum of 1) indicate better solutions. Dugard, Todman and Staines (2010) suggest that Stress values below 0.15 represent a good fit and propose that Dispersion Accounted For (DAF) and Tucker's Coefficient of Congruence should have values close to 1. In the interpretation of an MDS map, the axes themselves (Dim 1 and Dim 2) are meaningless and the orientation is completely arbitrary. That is there is no ex ante meaning of the axes in MDS diagrams, other than dimension 1 for the primary axis, and dimension 2 for the secondary axis. It is up to the researcher to give a meaning of the axes from the positioning of the objects on the map, just like factor analysis (Marcussen, 2011).

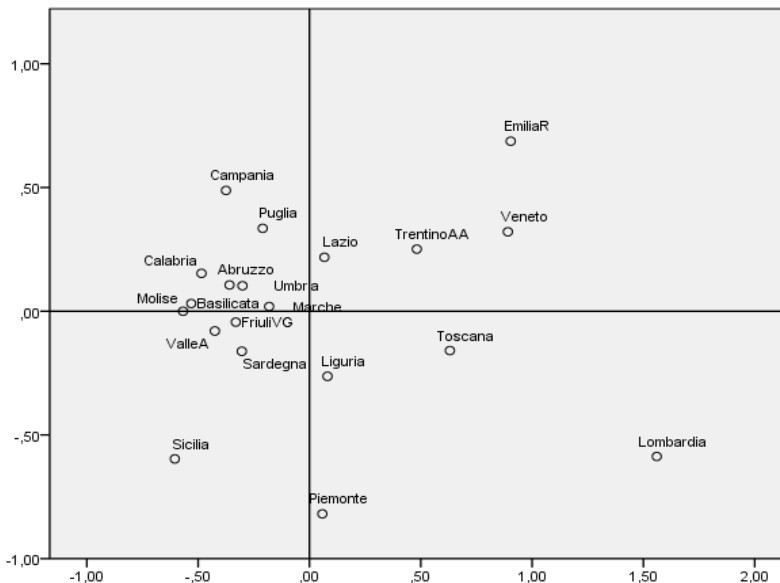


Figure 4. Graphical representation of the spatial positioning of the regions
(Source: Authors' elaboration of ISTAT data)

Figure 4 illustrates the broad geographical groupings of the regions and reveals different scenarios for Italian regions on the basis of tourist flows. The map reveals, on the right side of the horizontal axis, the regions with a high number of tourist arrivals. They are the Lombardia remote location and the group from Veneto, Toscana, Emilia Romagna and Trentino Alto Adige. These regions have world-renowned cultural

attractions (Toscana and Veneto) and are also attractive destinations for their natural endowments, including mountains (Trentino Alto Adige) and the sea (Emilia Romagna). Basilicata, Molise, Calabria, Sicilia, Valle D'Aosta, Campania, and Abruzzo are positioned on the opposite side. All Southern regions, which are characterized by a low income level, are in this group and do not show high outward tourism flows.

On the vertical axis, the graph shows a contrast between the regions that attract tourists from many other regions (Emilia Romagna, Campania, Puglia, Veneto, Trentino Alto Adige, Lazio) and those that attract tourists from few other regions (Piemonte, Sicilia, Sardegna, Liguria). Therefore, the factors implied by the position of the Italian regions can be defined, first with regard to capacity and the second with regard to the attractiveness of a region to tourists from other regions. Therefore, the quadrants can be used to generate suggestions for managers in both public and private sectors by differentiating between them. Quadrant I includes the regions with high tourist arrivals from many other regions, which are at the maturity stage of their life cycle. Emilia, Veneto, Lazio, as well as Toscana, with their enormous tourist resources and infrastructures, can be considered as a benchmark for other Italian tourist destinations. Trentino-Alto Adige, although having relatively limited tourist resources, has been able to build a competitive advantage beyond the resources available.

Quadrant III contains regions with low tourist arrivals from a few regions. This cluster includes both mountain regions and the two islands, which in addition to infrastructure improvements, should improve the quality of the accommodation facilities.

Quadrant II includes regions with low tourist arrivals from many other regions. It is the widest group, including regions which, despite a high tourist potential, do not have sufficient capacity to combine these resources with an integrated offer of promotion and tourism development policies. Some specific suggestions on feasible tourist policies that may improve the competitiveness of these regions might be the following: Basilicata should aim at actions targeted at niche tourism; Calabria could offer integrated packages between seaside and parks; Molise should highlight the *Molise brand* in order to make the region and its products more recognizable, through coordinated actions with neighboring regions -for the sea component- and actions targeted at niche tourism -for promotion of parks and indoor areas; Campania should enhance the internal areas (the parks), shortly exploited; Puglia should modify the current model of regional tourism development, strongly focused on summer tourism and concentrated in a few points in the regional territory, pointing to sea-wellness or improving the tourist portuality.

A separate analysis is to be made for the Lombardia, which has the highest number of tourist arrivals but a low tourist attraction index. The centralization of some international events, the facilitated access to mass tourism and the presence of a significant natural and artistic heritage, as well as business and health tourism, give Lombardia different tourist vocations. This requires a strong commitment to reduce the impacts deriving from the sector, such as transport modes increasingly oriented towards cars and airs, but also the use of water and electricity, waste generation and land occupation. This evidence suggests that some characteristics of demand, and thus of the origin, like socio-economic characteristics of the population, clearly affect the general propensity of outbound tourism flows (as previously reported by Massida and Etzo, 2012). At the same time, other supply factors, like cultural, historical and natural amenities, are relevant to influencing tourism inflows. The economic and infrastructural disparities between the north and south of Italy have a direct impact on the ability to exploit existing tourism growth potential. The lower level of development in the south represents both a weakness (e.g., in terms of transport infrastructure) and an opportunity (e.g., unique natural and cultural resources) for tourism (OECD, 2011). For example, the unspoilt and

unique natural and cultural resources represent important opportunity to tourism development in many regions of the Mezzogiorno. The Mezzogiorno is progressively catching up in the field of tourism, and some regions are actively developing tourism strategies. The development of a supportive framework for the tourism industry in Southern Italy should be of high priority for public authorities in the overall strategic framework.

CONCLUSIONS

In Italy, the majority of the tourism industry, in terms of consumption, value added and employment, is due to domestic tourism activities. Domestic tourism is important for the Italian economy because it can produce a number of benefits for the destination: increased employment, improved standards of living of the host community, particularly in remote and less-developed areas, and development of attractions. Italy offers a diversity of tourist attractions, and it continues to be one of the top cultural destinations in the world. The intense global competition in the tourism industry forces destinations to develop strong, unique, and competitive destination brands by spending large amounts of money to “sell” the destination around the world to promote blue skies, golden sands, and snow-capped mountains. To maintain the competitiveness of the Italian tourism industry, the challenge for Italy as a tourist destination is to strategically manage its diversity of offerings. Italian tourism faces many problems, including areas of management (specifically marketing and promotion), policy and regulation, infrastructure, and quality of accommodation facilities. Its success depends not only on the so-called push factor (market demand forces) but also on pull factors (supply-side factors), which have a major impact on the branding success of a particular destination (Hassan et al., 2010). In particular, organizations engaged in regional destination management face challenges to improving the performance of their destinations. As competition increases and tourism activity intensifies, tourism policy focuses on improving competitiveness by creating a statutory framework to monitor, control and enhance the quality and efficiency of the industry and to protect resources (Goeldner et al., 2000). Tourists perceive a destination as a brand that comprises a collection of suppliers, and during their holiday, they “consume” destinations as a comprehensive experience without realizing that each element of the product is produced by several local service providers (Buhalis, 2000).

However, the destination tourist product is the result of the contributions of many firms, which collaborate to access greater value and capability otherwise not accessible. Consequently, the success and attractiveness of a tourism destination depend on a set of variables that accounts for various characteristics of both the origin and destination areas in terms of economic, natural, cultural and territorial features.

The considerations, in the light of our results, are threefold and are in line with those of previously reviewed literature:

- the most popular regions are those with strong attractions
- economically weaker regions have few departures
- there are important flows between neighbouring regions

Overall, our empirical evidence highlights the roles played by the demand and supply characteristics and their spatial interaction to provide a better understanding of domestic tourist flows in Italy. This has important implications for both tourist operators and policy makers alike to promote long-term sustainable development by acquiring competitive advantages and making territories attractive to external consumers. On the one hand, it is necessary avoid congesting regions with a high number of arrivals; on the other hand, social policies to support tourism for regions with low departures are needed. Finally, because an important pull factor of the Italian destination is cultural attractions, like museums, churches and other monuments, specific policies must be implemented to acquire a

competitive advantage. The different tourist-attractive features of origin and destination tourism flows call for effective coordination of managerial actions, destination marketing strategies and policies designed to promote tourism activities. Across the Italian regions, there exists limited cooperation among local stakeholders. So, a further policy suggestion is the development of inter-regional networks between decision makers, economic operators and policy authorities of the neighbouring regions in order to provide integrated services and create real tourism partners that may improve tourism performance.

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CUSTOMER RELATIONSHIP MANAGEMENT IN BUSINESS-TO-BUSINESS MARKETING: EXAMPLE OF TOURISM SECTOR

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Abstract: The aim of this study is to demonstrate how customer relationship management systems are implemented in tourism companies that do business-to-business marketing. The study firstly tries to explain the concepts of business-to-business marketing and customer relations management. The existence and implementation of customer relationship management systems, particularly in business-oriented organizations, is crucial in order to make a difference in the globalizing world where competition conditions are gradually increasing. In order to achieve this, it has been evaluated how the customer relationship management systems are formed, how they are implemented, and what advantages they provide by conducting interviews with the employees in the companies that are business-to-business marketing in tourism sector and business areas. In methodology, semi-structured interview technique has been used which enables qualitative data collection as a method in order to reach the goal of the study. As a result of the interviews and research, it has been established that customer relations management in B2B tourism companies is quite vital to be more productive, work efficiently, support marketing activities considerably and therefore increase the sales volume.

Key Words: Business to Business Marketing, Customer Relationship Management, B2B, Tourism, CRM

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INTRODUCTION

The technological advancements in the globalizing world and the rapid change in socio-economic conditions result in the increase of customer's demands and expectations. The high variety of services and products in the market challenges the customers to make a choice and forces them to question their loyalty. Businesses are well aware that they have to adapt to the requirements of the modern age in order to be able to compete and preserve their presence in the market. In this vein, they take important customer-related steps both to win the customers and ensure their loyalty. Customer relationship management has

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become an approach that arises precisely as a result of these considerations. The concept of customer relationship management has become a very important system for companies that are doing business-to-business marketing (B2B) as well as for companies that are doing business-to-consumer marketing (B2C). Therefore, it is very important for the customers to establish customer management systems and use them effectively and regularly in order to reach the customers correctly and effectively. In particular for service business, managing customer relationship is important because of the inherent intangibility and heterogeneous characteristics associated with service delivery (Singh, 2017, 49). Vogt (2011, 361-362) states that, in order to be more effective in CRM in tourism industry; there should be partnerings with destination marketing agencies, engaging with industry partners such as travel companies, following technology and business innovations and adoption patterns to be ahead of the curve on what society is eager to have and how innovative firms are piquing consumer's curiosities, becoming involved in other disciplines or venues that are developing and researching CRM and inviting CRM consultants and firms and organizations practicing CRM to travel and tourism research conferences. B2B enterprises have started to establish and implement customer management systems that are formed according to total quality management standards in order to be able to record information about purchasing behaviors related to customers, to make customer segmentation and to communicate with them in this direction and to make them feel valuable. Thus, they aim to achieve customer satisfaction and loyalty and to be successful in long term brand image and sales volume.

BUSINESS-TO-BUSINESS (B2B) MARKETING

Business-to-business marketing is defined as "the marketing of goods and services to commercial enterprises, governments and other non-profit organizations for use in goods and services they produce to sell to other industrial customers" (Chaston, 1999). The American Marketing Association Board of Directors defines marketing as set of activities of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (www.ama.org). Business-to-business marketing, on the other hand, is sometimes called *commercial marketing* or *industrial marketing* (Miller and Washington, 2016). As an academic effort starting at the beginning of the 1900s, marketing has been present for 100 years, while business-to-business marketing has been present for over 30 years. Although it has not been given enough publicity in marketing research, there have been important developments in the meantime and it claimed a rich place in the literature (Chaston, 1999). The theory of business-to-business marketing completes its development in these three stages in line with development phases: pre-industrial, industrial, and post-industrial stages. According to Polonsky et al. (2010), the pre-industrial era is divided into two as the potential relationship stage between the buyer and the seller and the relationship discovery stage. During the potential relationship phase, the parties begin to acknowledge each other or to confirm the existence of a potential business partner. They are not in communication yet. In the relationship discovery phase, there is no communication yet, but they evaluate each other's ability to develop relationships. In the industrial era, the buyer or seller communicates directly or indirectly with the other. This leads to a negotiation process that assesses whether the actors have decided to start developing a relationship with the other. In other words, this process is a search and trial process that creates a common ground between the parties. In the post-industrial era the parties communicate with other buyers or sellers in order to better understand the character of the potential business partner. As both partners are committed to more, they are more eager in terms of their relationship in taking greater risk, such as sharing more confidential information in order to be successful (Baxter, 2013, p.14).

The large investments in business-to-business marketing in the past usually focused on logistics, sales force management, and after-sales support (Weitz & Wensley, 2002, 463). The first marketing theory was based on the direct application of economic theory. In industrial purchases the fundamental criterion was an acceptable quality and a reasonable price. Parties in trade preferred the lowest-cost supplier. Although the economic theory at stake could not fully predict or give an account of business-to-business purchasing decisions, it at least created an academic curiosity in order to try to understand how and why exceptions grow even more in making a "rational" decision (Hadjikhani & LaPlaca, 2013). The importance of business-to-business marketing, which was known as the industrial marketing, could be established by considering that for each customer market, there are several higher enterprises where the product or service should be first processed in the leading markets of each other, before it is consumed finally. The scope of the most business-to-business marketing activities is the trade between the supplying and purchasing enterprises, widely known as "the supply chain." This metaphorical concept connects the market (s), the distribution network, the production process, and the procurement (or procurement) activities carried out on behalf of suppliers and other stakeholders, and can occur between different types of businesses.

Business-to-business marketing is a vast and important field of marketing practice and theory (Ellis et al., 2011). Although the market among the enterprises is bigger, it is also dependent to a great extent on the customer markets. The reason for this dependency is the fact that the most of the demand for customer goods is the source for the enterprises' demand for goods (Haley, 2012). Among the characteristics which separate B2B from B2C, there are (Blythe, 2006, 28);

1. That more than one person is involved in the purchase
2. That there are professional purchasers
3. That there are fewer purchasers in most markets
4. That the size of the orders is large
5. That the purchasing processes occur in a more formal, more professional framework.

The difference between B2B and B2C is important not only in terms of positioning, strategy and communication but also as a criterion used in the classification of industry goods (Pötter, 2009, 6). As it can be seen, business-to-business marketing is one of the widest, most developing and most attractive areas of marketing. The experts comment that it has many aspects open to exploration even after so much detail. This marketing type active in production and trade in our country, has, and will continue to have a presence in the supply of national and international brands, sub-industry, transportation, logistics, and many more areas. It is obvious that the business-to-business marketing, which has different dynamics from the customer oriented marketing, has great importance for marketing. However one may say that there are some deficiencies in terms of relationships with customers especially in our country. In this context, to understand the operation to be cooperated, it is crucial to ask the right question, to understand the customer in the best way and act accordingly.

CUSTOMER RELATIONSHIP MANAGEMENT

Customer relationship is all activities designed to initiate, preserve and develop a long-term bond (Govoni, 2004, 54). In the current sense, customer relations is a broad process involving all the pre-sales and after-sales activities between the business and the customer in order to continue a steady relationship with their customers, and to have more information related to the needs and the behavior of the customers in this regard (Beksırgakızı, 2007, 2). Customer relationships management (CRM) is a management philosophy arising in close connection with the union of marketing and information

technology (Gardial, 2004, 121). When we take a look at the literature, we see that there are many definitions related to customer relationship management. This suggests that it is a concept difficult to define. The difficulty in defining it is partly explained by the fact that this management approach targets different customers and appeals both to the customer market and the enterprise market. In this context, it can be said that the concept in the basic meaning of the customer relationship management is a philosophy, process, and management of the customer relationship development (Demir & Kirdar, 2007, 296). Customer relationship management helps the enterprises define and classify their target customers. Thanks to the data uploaded on to the database, customers will be better known for the next sale, and be approached with suitable strategies after being classified in terms of purchasing behavior. However, in a sector such as banking where the competition is very high, customer profiles can be built by monitoring the transactions done by the customers, after the customer data is evaluated on its own or as a whole, following the more efficient use of information processing systems. Market segmentation could be done more efficiently. That is why enterprises and institutions should save all the customer information and the characteristics analyzed based on this information in their databases, and should conduct research work on their data warehouse. It means that important investment should be made in customer relationship management. For customer relationship management it is vital that efficient information processing and fast and continuous service should be provided to the customer (Taskin, 2009, 62-63). Today's high competition makes it necessary that enterprises B2B marketing should be re-structured, and revise their strategies and approach to the customers. The commercial customer who is an element of higher competition is continuously stimulated and forced to consume in high speed communication technology. These enterprises, which are aware that there are many alternatives in the present situation, will naturally tend to develop relationships with enterprises which value them and which they trust. This is a risk factor for all businesses. However, this awareness also makes it harder to win commercial customers.

The biggest difference between B2B marketing and other marketing customer relationship management applications, is that the business transcend sales and marketing departments and comes to include other functional areas such as human resources, risk management and customer management in total quality management. It cannot be conceptualized on its own; rather necessary plans are made taking all the departments as a whole. Here the main goal is to strategically develop long term relationships which will benefit both enterprises and commercial customers (Beksirgakizi, 2007, 4).

METHODOLOGY

The purpose of this study is to demonstrate how customer relationship management systems are implemented in tourism companies whose target market is tourism enterprises. To this end, answers to the following questions were sought:

1. Do you have customer relationship management (CRM) system implemented and efficiently used?
2. Based on what was your CRM system implemented in your tourism enterprise formed?
3. What activities does the CRM system implemented in your tourism enterprise include?
4. Is there a department or a person responsible for tourism CRM activities in your enterprise?
5. Are you personally involved in some of these activities? Could you explain your duty if you are involved in these activities?
6. In an enterprise such as yours which engages in business-to-business marketing activity and what advantages would implement in active use of a CRM system?
7. Are there any suggestions you would like to make to develop the CRM system for your enterprise?

In this study, semi-structured interview technique has been used which enables qualitative data collection as a method in order to reach the goal of the study. The real aim of the interview technique is, apart from proving a hypothesis, to try to understand the related people's experiences and how they relate to these experiences in terms of the subject. The semi-structured interview is a technique which consists of providing the related people a flexible but standard interview form. Researchers prefer using semi-structured interviews because questions can be prepared ahead of time. This allows the interviewer to be prepared and appear competent during the interview (Cohen, 2006). Accordingly, with the semi-structured interview technique used in this study, it has been aimed to get meaningful, qualitative data in line with the responses given. In this study which was conducted with tourism enterprises in general between September 2017-January 2018, the research group consists of 12 people working in tourism, travel agency, food and hospitality sectors and somehow engaging in customer relationship management activities in Istanbul province. The interlocutors were contacted face-to-face, via telephone or e-mail, and they were asked to share their experiences related to the subject and relay information.

FINDINGS AND EVALUATION

This section will be devoted to the findings accumulated upon the analysis of the qualitative data collected by interviews with people who engage in CRM activities and are knowledgeable about the CRM activities in their enterprises. The names of the participants will be kept confidential, and they will be referred to as P1, P2, P3 etc. The findings of the study, based on the interview questions, are considered to be a subject, and presented with sub-headings formed in line with the responses of the study participants. The participants have been asked questions such as if there are CRM activities in their business, how it has been implemented if there is any, whether they personally engage in these activities, what advantages the CRM system brings, and the information acquired will be explained one by one, accompanied with examples when necessary.

Research Findings on Participants' Socio-Demographic Characteristics

The participants in the study, 67% were female while 33% were male. We can see that 8 % of the participants are aged 18-24, 25 % is aged 35 or older, and 67% is aged 25-34. As seen above, 42% of the participants have a masters degree while 58% have a bachelor degree. According to the information above, 17% of the participants are senior manager or executive director, 25% are c-level executive or authority and 58% are intermediate manager or specialist.

Findings about the existence of customer relationship management system in the enterprises the participants work at:

All participants confirmed that they have a customer relationship management system at their enterprises. This situation shows that the need for and the popularity of customer management systems have been gradually increasing. Some of the participants stated that they have a similar customer management system, if not exactly a customer relationship management system, while others state that they had not had such a system until recently and they have just implemented such a customer system, that it is an ongoing process but the employees have been given training to facilitate their conformity. Some of the views of some participants on this subject are as following:

"We have a CRM software used for reporting and data storage if not exactly a customer relations management system." (P6)

"We have a newly implemented CRM software at our enterprise. Training has been given to the employees for the transition. It helps us conform to the new system to start using it in terms of learning and trying it out." (P10)

Findings about the formation of customer relationship management system in the enterprises the participants work at:

Table 1. Findings about the formation of customer relationship management system in the enterprises the participants work at

Interview Questions	f
Based on what was your CRM system implemented in your tourism enterprise formed?	
To meet customer expectations and for satisfaction	6
For easy tracking the internal company information	3
Because the current quality required a management system	3
Total	12

As seen in Table 1, the question of "Based on what your CRM system was formed" was responded by 6 of the participants with the same answer as to meet customer expectations and for satisfaction. In addition, they mentioned the need to form such a system in line with the complaints, to meet the demand and give priority to production. Here is a related example on this subject: "It is a software formed with risk management orientation in order to give priority to the production in accordance with the wishes of the customers, to decrease the work load of the sales team, to track orders and delivery of the orders, and to provide sales and production reports more easily" (P10).

"It was formed in accordance with the feedback to customer complaints." (P9).

Three of the participants shared the information that the CRM system was formed as a response to the need to share internal company information. And some of the participants emphasized that the system was formed to facilitate the relay of information to their employees in the field. An example is shown below: "It was formed taking into account the tracking/controlling needs of the employees working in the field. Thus the information flow with the company is carried out more easily and our team in the field could work more efficiently and more productively. (K6)."

Three of the rest of the participants shared the information that the CRM system was formed as a necessity of the inter-company quality management processes and in accordance with the related standards. The implementation and effective use of CRM systems with ISO standards by companies which emphasize total quality management activities is quite important for the company quality, vision and success. Some of the views regarding this subject are as follows: "It was formed based on ISO 9001, ISO 9004, TS7246, ISO 10002 standards and customer experience internal procedure and processes" (P8).

"It was formed based on ISO TR 9001: 2015 Quality Management System" (P4).

"The CRM system at our company was designed in accordance with the quality management system stipulated in Quality Management System TS EN 9100:2016, TS EN ISO 9001:2015. The facilitation and development of the points below are shown as the grounds to meet the demands of both current customers and of potential customers (...)" (P5).

Findings about the activities involved by the customer relationship management system in the enterprises the participants work at:

Table 2. Findings about the activities involved by the customer relationship management system in the enterprises the participants work at

Interview Questions	f
What activities does the CRM system implemented in your tourism enterprise include?	
Customer information, pre-sales and after sales tracking, prices etc.	7
Reporting	4
Sectoral tracking, evaluation of the market	1
Total	12

As seen in Table 2, the participants shared their views on the activities involved by the customer relationship management system in the enterprises the participants work at.

7 of the participants stated that they use the CRM system for the storage of customer information, pre-sales and after sales tracking, preparing price offers, while 4 of the participants said they use it for data analysis and reporting; and one participant maintained that it is used to evaluate the market in light of present data and following the sector closely in this regard. Some of the examples of the responses are as following:

"For recording customer contact details, sales tracking activities, and customer visit notes, for preparing offers, internal company assignments and tracking" (P2).

"For data storage and reporting" (P6).

"It includes the activities of stock tracking, production and production planning, marketing, accounting, cost calculation, sales marketing, OEM and reporting." (P10)

Findings about the existence of a person or a department responsible for CRM activities in the enterprises the participants work at:

Table 3. Findings about the existence of a person or a department responsible for CRM activities in the enterprises the participants work at

Interview Questions	f
Is there a department or a person responsible for tourism CRM activities in your enterprise?	
Yes	10
No	2
Total	12

As seen in Table 3, to the question of if there is a person or department responsible for CRM activities carried out at the enterprises they work at, 10 of the participants responded in the affirmative, whereas 2 of the participants responded in the negative. There were different responses from those who responded in the affirmative according to the company scale and institutional structure. It has been observed that in big scale companies there is usually a functioning customer relationship department, and many authorities are responsible for these activities while in medium scale and small scale companies, only one or a few people were specifically assigned to this duty. Some examples are as the following:

"Yes. Responsibility areas were established and assignments were made in accordance with the Quality Management System. They are tracked regularly and reported to the management monthly" (P8).

"SAP ERP Management itself is responsible for the CRM activities" (P1).

"Everybody is charged with updating the system but there is one authority responsible for the software and use" (P2).

Negative respondents generally reported that all employees were involved in CRM activities but that no person or department was specifically assigned to them. An answer to this is as follows: "The system is used by all departments (Accessories, Planning, Pricing and Loading) but not a single person is assigned to it" (P3).

"We work as a team of one agricultural engineer, one milk technician and three food engineers. We are all responsible for CRM activities. However, no single department or person is assigned to it" (P3).

Findings about the activities involved by the participants in the CRM activities:

Table 4. Findings about the activities involved by the participants in the CRM activities where the participants work at

Interview Questions	f
Are you personally involved in some of these activities? Could you explain your duty if you are involved in these activities?	
Yes	9
No	3
Total	12

As seen in Table 4, 9 of the participants stated that they are present at their companies as the solely responsible authority or partially responsible authority for CRM activities. Some of the participants who stated that they carry out CRM activities as the solely responsible authority are in the position of customer relation agent or in a similar position, while others stated that they only support CRM activities related to some departments (for example, sales transactions). And one user working at an institutionalized company said that all employees are responsible for CRM activities. Some examples from these interviews are as follow:

"I work directly as the responsible authority, I am the customer relations agent" (P9).

"I take part in the sales-marketing part of these activities. The quota-purchase activities with the customers, the product spectrum which must be prioritized in the region, market research about the dictates and niches of the market, establishing customer risk status and market research before production planning" (P10).

"All employees are responsible for customer relationship. They are all obliged to follow the established processes, with regard to the possible or actual problems, whether with internal or external customers" (P8).

The participants who said that they are not directly involved in or responsible for CRM activities stated their views as follows:

"It is not the case that I am actively involved. I only facilitate the changes necessary in accordance with the process" (P6).

Findings about the advantages the participants think the CRM activities will bring to the institutions:

Table 5. Findings about the advantages the participants think the CRM activities will bring to the institutions

Interview Questions	f
In an enterprise such as yours which engages in business-to-business marketing activity, what advantages would implementation and active use of a CRM system?	
Marketing activities are supported	3
Tracking will be easier as all the information will be in one place	4
Relationships with the customers and the service provided can be measured	2
Customer satisfaction will increase	2
It allows planing production according to the demand	1
Total	12

As it is seen in Table 5, the participants had various opinions on the advantages that can be gained in terms of the effective and regular use of CRM activities in an institution. While 4 of the participants are convinced that it is advantageous to collect all the data in a single system, 3 of them stated that CRM activities directly support marketing activities in allowing for sector research, analysis, pre sales, sales and after sales transactions, giving the scope of these activities. Moreover, addition of activities which will increase the satisfaction of internal customers is among the cited advantages. Examples of some views are summarized below: "The main advantages are that in B2B channels, especially sales teams follow activity, activity reporting, data sharing and cases, thus creating and following a common sales awareness and strategy; that the B2B channel is transformed into an active sharing platform by analyzing and reporting sales data, general and personnel-based measurement of sales effectiveness, performing category analyzes in SKU-based systems (in category management enterprises) and keeping the customer portal according to the level of integration of the system. With the collected data, sales management and sales support benefits such as visit reminders for sales management, frequency of visits, profit per visit, control of sales costs, can be obtained.

Also, when we deal with the "sociological" side of B2B, there are special days, birthdays, etc. that are integrated into CRM systems modules can also provide support to sales teams for continuing personal warm relationships for connections" (P7).

"It brings advantages such as tracing the relationships with our customers, measuring the service we provide, observing "how can we be better?" offering equal quality service to all customers based on their needs, measuring fairness in terms of the compensations demanded for the service, determining deficiency in the service, and taking measurements and preventing these deficiencies" (P4).

"It benefits the conduct of proper marketing activities. Because understanding the customer forms the base of the sales. Working with systems which meet the expectations adds value to the enterprise" (P11).

The findings about the suggestions of the participants regarding the development of the CRM system at the institution they work for:

Table 6. The findings about the suggestions of the participants regarding the development of the CRM system at the institution they work for

Interview Questions	
Are there any suggestions you would like to make to develop the CRM system for your enterprise?	
I do. It must be user-friendly	1
I do. It should be more marketing activities oriented.	1
Surveys can be conducted.	1
All employees should be integrated into the system and it should be used actively by everyone.	2
No, I don't	7
Total	12

As seen in Table 6, 7 of the participants which is a majority of them stated that they are happy with the present system they use and they do not have any suggestions. 2 of the participants stated that all employees of the company should be integrated into the system. Therefore the whole company can share information on a single system. 1 of the participants stated that the use of the CRM system should be easy and have no details, whereas 1 participant stated that the present CRM system is not marketing activities oriented, but it should be. 1 participant stated that survey system could be added to the CRM system, and therefore customer satisfaction could be measured easily. Examples of these views are given below: "It may be supported with online surveys but I think no different action is necessary" (P8).

"No, I don't. I am satisfied with the system we use (P5).

"Surveys and brand analyses can be conducted and customer satisfaction could be thereby measured" (P9).

"The integration of different employees from each department of the enterprise might better the process" (P1).

CONCLUSION

The interviews as a research technique were conducted with people working at tourism companies that are business-to-business marketing to demonstrate the content, scope and advantages of the CRM activities regarding the present customer relationship management systems. The employees unanimously stated that they are aware of the advantages of CRM activities in terms of productivity, time management and profits, and emphasized the importance of CRM systems for a company, adding that they should be definitely implemented. Thus, it is clear how important CRM is for organizations with enterprises as their target market. It is vital to have a present customer management system approach at the tourism companies doing business-to-business marketing in

order to preserve their place in the market, to ensure customer satisfaction and in the long term customer loyalty. In an atmosphere of high competition, the tourism companies are aware that the way to succeed is to put the customer on the focus. In this vein, success of the companies providing service to other businesses, which is a large market, is only possible by adopting, and effectively implementing a right customer relationship management policy suitable for the company. In this study interviews were conducted with 12 people working at enterprises in the tourism sector providing business-to-business service and they were asked to interpret their present CRM system at their companies. As a result, it has been established that each employee shares the view that the contribution of the CRM system to the company is undeniable, it takes them one step further in their present market, and it increases the internal company productivity. Moreover it has been stated that the system is developed in accordance with the necessities of the time, and it will need developments again. This suggests both that the companies design and implement this approach in line with the total quality management standards, and that the employees actually adopted the CRM system to a great extent and they are aware that it helps them in their efficient and productive work.

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THE DECISION MAKING OF BUSINESS TRAVELLERS IN SELECTING ONLINE TRAVEL PORTALS FOR TRAVEL BOOKING: AN EMPIRICAL STUDY OF DELHI NATIONAL CAPITAL REGION, INDIA

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Abstract: The purpose of this paper is to understand the decision making pattern of the Business Travellers in Delhi National Capital Region in India while booking their trips through Online Travel Portals. The study revolves around purchase decision pattern of Business Travellers by investigating their travel decision making style in selecting online travel portals for their trip booking. The authors have adopted the quantitative methodology to achieve the objective of the study. The study is confined purely to the Business Travellers who book their travel through online travel portals. The data was collected through a structured questionnaire. 300 Business Travellers were interviewed at the departure lounge of Indira Gandhi International Airport, New Delhi, India out of which 150 questionnaires were incomplete in many respects and could not be used and only 150 questionnaires were usable resulting in the response rate of 50%. The Analytical Hierarchy process method was adopted to analyze the relative weights assigned by Business Travellers. The present study identifies through literature review the nine fundamental values of internet purchase i.e. product quality, cost, time to receive the product, convenience, time spent, confidentiality, shopping enjoyment, security and environmental impact. The research findings indicate that business travellers value confidentiality, security and product quality the most while choosing the Online Travel Portal to book their trip. The study is primarily centered on the consumer typology approach to study the decision making patterns of business travellers whereas there are other variables such as lifestyle, personality, attitude which can also be investigated. The study is only restricted to Business Travellers decision making pattern pertaining to their travel booking whereas a study can also be

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undertaken on leisure travellers decision making pattern. The study is restricted to only Delhi National Capital Region. More studies can be carried out in other geographical areas. The findings of the study indicate that Business Travel is one of the emerging travel segments both in terms of numbers and revenue generation and to meet the changing needs of the business travellers the Online Travel Portals need to develop innovative and effective marketing strategies and tools. India is one of the fastest growing economies and has registered its presence in the global scenario. Business Travel segment is still unexplored. The study was conducted keeping in mind the burgeoning business travel segment. The study explores the factors that the business travellers considers while selecting online travel portals for travel product purchase.

Key words: Tourism, Business Travellers, decision making pattern, Online Travel Portals

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INTRODUCTION

The evolution of information and communication technology has opened the doors and presented challenges for the tourism businesses, especially the travel agencies. A startling fact to note before plunging into the advent of the Information and Communication Technology is the research study findings by Forrester. It pronounced that the Internet users who used the tool for research and buying travel products fell sharply by 9% between 2005 and 2007 whereas Online travel spending increased by over 41% during the same period of time (Travel Industry Association of America, 2007). Indian travel and tourism market is worth 42 billion USD and is expected to grow at the rate of 10.2% compounded annual growth rate in the next ten year. (Red Seer Analysis, 2009). New age Indian Travellers are well informative, tech savvy and ready to adopt digitization. They are investigative in nature and conduct lot of research online, have a marked presence on the social media platforms. This presents a lot of challenge and opportunities for Online Travel Portal to tap this segment of prospective travellers. The Online Travel Portals provide increased flexibility, cost comparison and a wide array of options in terms of destination choices. These Online Travel Portals are now being adopted by this new age Indian digital traveller. Indian Online Travel Industry is growing at the rate of 49% compounded annual growth rate and out of which the Online Travel Portals share is 17.5% of the total gross bookings (Red Seer Analysis, 2009). The three major participants in the Indian Online Travel Portals are Make My Trip, Yatra and Cleartrip and they together account for 90% share of the Indian Online Travel Portal Market (Red Seer Consulting, 2009). There are more than thirty active players in the Online Travel Portal Industry. Price is considered a lucrative element in the Online Travel Portals especially while booking the Air Travel. There is a lot of competition in the Online Travel Space especially in the Air Travel segment whereas the competition is now shifting towards the hotel bookings due to the high margins guaranteed by this sector. Mergers and acquisitions are going on in the Online Travel Industry of India and the prime companies are taking over the smaller concerns to expand their base and services. Most of the Online Travel Portals are partnering with Indian Railways Catering and Tourism Corporation for train bookings and increasing their paraphernalia of services.

Indian Online Travel Portal Industry has a great potential and opportunity for growth and they are continuously in the process of integrating services and tying up with the Service providers such as airlines, trains, hotels and car rental companies to generate higher revenues and transactions. These online travel portals got a boost as the internet

users in India increased 2.5 times from 2006-2010 and the number of credit card users also increased three folds between 2006-2010 (Statista.com). India's Inbound and Outbound Tourism Industry is growing by leaps and bounds and this presents a golden opportunity to the online travel aggregators to cater to the needs of the travellers i.e. both the leisure based and business travellers. Business Travel in global terms is growing by leaps and bounds and is contributing immensely to the revenue generation to the burgeoning tourism industry. The spending generated by global business travel reached 1.2 trillion USD in 2015 with a 5% growth in comparison to 2014 and was forecasted to reach 1.3 trillion USD by 2016 (GBTA). The spending due to business travel is expected to reach 1.6 trillion USD by 2020 growing at a rate of 5.8% in the next five years (GBTA). It is expected that India will register a double digit growth in business travel spending in the next five years (GBTA). Based on the literature review it is observable that very few researches have been conducted to study the decision making pattern of business travellers in selecting Online travel portals for travel booking. The study attempts to identify the factors which the business travellers takes into account for online purchase of travel products.

LITERATURE REVIEW

Business Travel Industry forms a significant part of the ever-expanding International Tourism phenomenon. On a wider sense corporate travel is defined as the travel concerned with people travelling for work related purposes. Davidson & Cope (2003) classified Business travel industry into individual business travel and business tourism connected with MICE (Meetings, Incentives, Conferences and Exhibitions). The phenomenon of Globalization and economic integration among various economies resulted in rapid growth in world trade, increased movement of goods and services, diffusion of Information Technology and increased business movement which resulted in growth of business travel. Internet is a boon to the tourism industry as internet expansion, electronic commerce has transformed the travellers experience with the use of technology. Tourism product distribution has changed because of the increased technology adoption worldwide which can be attributed to rise of e-commerce as mentioned by many researchers (Kracht & Wang, 2010; Buhalis & Licata, 2002; Bennet & Buhalis, 2003). Douglas & Lubbe (2009) came across three areas of technology adoption in business travel i.e. technology as a distribution tool for corporate travel booking, technology needs of business travellers across the business travel network, use of technology as a possible medium for business travel booking. Internet marketers are striving hard to attract consumers to buy products and services online. In order to succeed in this highly competitive digitized world many online travel portals sell array of products which range from air tickets, hotel rooms, car rentals, bus booking, holidays, cab booking which they assemble from multiple vendors. In this way they position themselves as a full service online travel aggregator and assist the prospective consumers to search, evaluate and purchase the travel product through a single portal. It is imperative for the Internet marketers to understand the value of online purchase from the consumer perspective. Slowly and steadily the Internet marketers begin to embrace the customer value perspective and start believing that consumers will pursue value maximization with limited search costs, knowledge, income, mobility (Gale, 1994; Smith & Rupp, 2003).

Online Travel Agencies provide a contact point through the internet so that the prospective customers can search and eventually book the travel products. If the brick and mortar travel agencies wish to have an online presence the management must attempt for providing higher value to internet customers (Wolfe et al., 2004). This process is referred to as value innovation (Smith & Colgate, 2007). Nine fundamental factors of internet purchase

are described in the literature (Keeney, 1999; Wang et al., 2006) i.e. product quality, cost, time to receive the product, convenience, time spent, confidentiality, shopping enjoyment, security and environmental impact. Based on the customer value perspective the said study focused on finding out the relative weights of the nine fundamental purchasing travel products through Internet. The Analytical Hierarchy Process given by Saaty (1990) was used to analyze the weights given by Business Travellers. Review of literature indicates that in the framework of e-commerce there are many functional service qualities which are valued by customers during online purchase such as fast connectivity, security issues and user friendly network (Dhar & Wertenbroch, 2000). Online Travel Portals have several unique competitive characteristics. Online Travel Portals can utilize and select only those which are offered by the airlines and do not have the ability to change the prices or other product features. Online travel portals help the customers to find the best available ticket according to their needs (Clemons et al., 2002). Online Travel Portals offer multiple options for a given search. It can serve multiple customers simultaneously; electronic markets on the internet have made it easier for consumers to search for services from various electronic markets (O'Connor & Frew, 2002). E-Commerce has revolutionized many organizations and the evolution of ICT has spurred fierce competition between organizations and have to adapt technology in order to survive in the digital space. Online travel portals provide the first point of contact through the Internet to help the prospective customers to search for air fares and suitable flights and come to a decision and simultaneously book the ticket through the Internet (O'Connor & Murphy, 2003).

Electronic medium has new horizons for travel related information, price comparison and availability which will assist customers to book travel products online. The advent of reservations online is the most striking discovery in the digital space and these online travel portals are likely to be used by individuals as well as business travel planners (Carroll & Siguaw, 2003). Online travel portals and suppliers of online travel products provide common array of travel products. The common elements include the content of information, structure, security aspects, ease of use (Kim & Lee, 2004) Online Travel Portals are facing fierce competition in the digital market place and they are feeling the heat to assess the efficiency of their websites (Park et al., 2007), Perceived value is built during the purchasing process whereas satisfaction is evaluated post purchase as revealed through various studies. Huang (2008) found that loyalty to an online travel agency resulted in an increased intention to purchase from that agency. Loyalty refers to the psychological commitment that a customer makes in the act of purchasing (Nam et al., 2011). This commitment may eventually result in the final intention to purchase or recommend. Brand loyalty has a strong impact on purchasing intention (Hawes & Lumpkin, 1984). Lang (2000), indicates that many travel consumers are surfing the web but reluctant to book online preferring more conventional and traditional travel networks. Internet is serving as a mode to extract information while very few users who surf the net book online. This makes the literature review indecisive on how to represent the online purchasing behaviour of consumers.

RESEARCH METHOD

The Analytic Hierarchy Process is used in this case. It is a mathematical tool and a multi-objective decision making tool given by Saaty in 1990. The process uses pairwise comparison method to rank order alternatives of a research problem that are formulated and solved in hierarchical structure. The technique is simple in nature and helpful in decision making. The Analytical Hierarchy Process adopts a methodology of setting up a pairwise comparison table where each element is paired with every other element known as criteria comparison matrix denoted by numerical values 1, 3, 5, 7, 9. The number of

comparisons of criteria are calculated as $n(n-1)/2$ which in our case is $9(9-1)/2=36$. The Analytical Hierarchy Process works best when a problem is further broken into levels comprising of factors or elements. The factors though are mutually independent but are comparable with the factors of the same level. It is deduced as an effective decision making tool. The study explored the relative weights that business travellers assign to the factors for decision making in selecting online travel portals for travel booking. The population of the research comprises of Business Travellers booking their travel online. A questionnaire survey was used to gather data from business travellers who booked their travel online. The business travellers were surveyed at IGI, New Delhi, India. We surveyed in IGI, New Delhi because it is the largest airport in India and due to the business travellers who select online travel portals for travel booking. 300 Business Travellers were interviewed at the departure lounge of IGI Airport, New Delhi out of which 150 questionnaires were incomplete in many respects and could not be used and only 150 questionnaires were usable resulting in the response rate of 50%. The below mentioned Table 1 gives an insight of the demographics of the respondents who were interviewed at Indira Gandhi International Airport, New Delhi, India. 60% of the respondents were male and the remaining 40% were females. Age group varied from 25-29 to 60-64 range.

Table 1. Demographic Profile of Business Travellers at Indira Gandhi International Airport, New Delhi (Data Source: Primary Data collected at Indira Gandhi International Airport, New Delhi)

Sample	N	Percentage
Male	90	60%
Female	60	40%
25-29	20	13.33%
30-34	28	18.66%
35-39	40	26.66%
40-44	22	14.66%
45-49	12	8%
50-54	10	6.66%
55-59	10	6.66%
60-64	08	5.33%

MEASURES

A total of nine most fundamental values for selecting online travel portals for travel booking were found in the literature surveyed i.e. product quality, cost, time to receive the product, convenience, time spent, confidentiality, shopping enjoyment, security and environmental impact (Keeney, 1999). Each respondent must make the decision between each pair of fundamental objectives. First, each respondent compares two distinct objectives and decides which one is more important than the other. Then, each respondent assigns an importance rating from 1–9, where 9 indicates the objective has the highest possible order of affirmation; 7 means strongly favoured and its dominance demonstrated in practice, 5 indicates experience and judgement strongly favour one objective over the other, 3 means experience and judgement slightly favoured one objective over the other; and 1 means two objectives contribute equally to the business travellers. After completing the pairwise comparison of criteria, the consistency of the data is checked by using the Eigen value λ_{max} to calculate the consistency index CI. λ_{max} is the Eigen value and is used to calculate the consistency index, CI as follows: $CI = (\lambda_{max} - n)/(n-1)$ (Analytical Hierarchy Process, Saaty, 1980), where n is the matrix size. Judgement consistency can be checked by taking the consistency ratio (CR) of CI with the appropriate value in Table 2. The CR is acceptable, if it does not exceed 0.10.

A standard Analytical Hierarchy Process questionnaire was designed displayed in meant to collect the relative weights of the fundamental objective. Each respondent must make the decision between each pair of fundamental objectives. First, each respondent compares two distinct objectives and decides which one is more important than the other. Then each respondent assigns an importance rating displayed in Table 2 above. The range varies from 1–9, where 9 indicates the objective has the highest possible order of affirmation. 7 means strongly favoured and its dominance demonstrated in practice. 5 indicate experience and judgement strongly favour one objective over the other. 3 means experience and judgement slightly favoured one objective over the other and 1 means two objectives contribute equally to the consumer.

Table 2. Pairwise Question Pattern

	9	7	5	3	1	3	5	7	9	
Product Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cost

Data Analysis

To understand the relative weights given by Business Travellers to the criteria in selecting online travel portals for travel booking, Analytical Hierarchy Process was chosen to analyze the relative weights given by business travellers. The expert's choice of software helped the study from all perspective i.e. from the development of the model to the final report output. The structuring module feature helped the study in the development of the Analytical Hierarchy Process for decision making pattern of the business travellers in selecting online travel portals for travel booking.

Table 3. Standard Weight Values for selecting Online Travel Portals
by Business Travellers(N=150) (Data source: Keeney, 1999)

	Product Quality	Cost	Time required to receive the Product	Convenience	Time Spent	Confidentiality	Shopping Enjoyment	Security	Environmental Impact
Product Quality	1	2.43380	2.89652	2.36767	2.37775	0.40028	0.97199	0.34751	0.97414
Cost	0.44348	1	1.08477	0.70588	0.10990	0.27411	0.91580	0.26562	0.66432
Time required to receive the product	0.35709	0.13567	1	0.49454	0.57912	0.23753	0.54376	0.22520	0.57133
Convenience	0.44590	1.734730	2.07529	1	1.78542	0.22496	0.90532	0.25286	0.76686
Time Spent	0.42739	1.19717	1.82709	0.57263	1	0.21269	0.92693	0.22083	0.59127
Confidentiality	2.61331	3.89198	4.42986	4.44564	4.62698	1	4.30493	1.18530	2.14963
Shopping Enjoyment	1.04917	1.20162	1.88143	1.13460	1.19142	0.22398	1	0.31035	0.63768
Security	2.99533	3.92042	4.45200	4.10195	4.48528	0.85724	3.21755	1	2.42935
Environmental Impact	1.03490	1.57067	1.75723	1.51899	1.73116	0.47088	1.60760	0.42104	1
	10.36657	17.08606	21.40419	16.3419	17.88703	3.90167	14.39388	4.22871	9.78458

The study evaluated the criteria in selecting online travel portals and comprised of several levels such as the goal hierarchy, criteria hierarchy and sub-criteria hierarchy. Severdly the opinions were sought from experts to assign weight values. Eventually, the geometric mean value was used to calculate complete decision-making scores from

business travellers. By following this process the standard weight values can be established to select online travel portals shown in Table 3. The pairwise comparison matrix of criteria and sub criteria is used to get each hierarchical factor weight. Table 4 mentioned below summarizes those results. The Eigen value λ_{max} deduced is 6.0012. In the results of the study, we find the consistency index, CI, as follows: $CI = 0.020$. RI was found to be 1.25 and further calculated the $CR = CI/RI = 0.020/1.25 = 0.016$. As the value of CR is less than 0.1 it proves that the judgements are acceptable.

Pairwise comparison matrices and the priority vectors for the remaining criteria can be deduced displayed in below mentioned Table 4. Table 4 displays the weight of the nine factors which influences the online behaviour of business travellers.

Table 4. Customer Value Factor Weights for selecting Online Travel Portals by Business Travellers (N=150) (Data source: Keeney, 1999)

	Product Quality	Cost	Time required to receive the Product	Convenience	Time Spent	Confidentiality	Shopping Enjoyment	Security	Environmental Impact	W'
Product Quality	0.09912	0.14339	0.14337	0.15119	0.13148	0.10370	0.07799	0.0890	0.10009	0.11989
Cost	0.04302	0.05871	0.05013	0.04633	0.05122	0.06487	0.06953	0.06190	0.06898	0.05765
Time require to receive the product	0.03134	0.05314	0.04117	0.03052	0.02948	0.06007	0.03895	0.05215	0.05815	0.04398
Convenience	0.04703	0.08703	0.09307	0.06312	0.09785	0.05229	0.06942	0.05488	0.06429	0.07031
Time Spent	0.04411	0.06643	0.08235	0.03215	0.05304	0.05549	0.06481	0.05533	0.06025	0.05802
Confidentiality	0.24936	0.23091	0.20071	0.27123	0.24990	0.27509	0.30037	0.29240	0.22209	0.25280
Shopping Enjoyment	0.10232	0.06256	0.08877	0.06928	0.05969	0.06060	0.07030	0.07671	0.06603	0.07354
Security	0.29327	0.25285	0.21419	0.25254	0.24234	0.21809	0.23221	0.23904	0.25189	0.24005
Environmental Impact	0.09999	0.8761	0.08617	0.09464	0.09337	0.12127	0.11343	0.09780	0.10478	0.09981

The results display that confidentiality, security and product quality are considered by Business Travellers in selecting online travel portals for their travel booking.

CONCLUSION

Online Travel Portals must change their strategies to meet Business Travellers' demands as the occurrence of online travel purchase has increased since the online travel agencies represent a viable alternative to traditional travel agencies. Business Travellers will be attracted to online travel portals if they feel that they are getting a better deal for their travel booking. Nine fundamental factors have been proposed in the literature and the research assessed whether these nine factors are considered by business travellers in selecting the online travel portals for travel booking. The data was analyzed from the questionnaires filled by 150 business travellers at IGI Airport. The nine factors were assigned different weights by business travellers booking their travel through online travel portals. We found that confidentiality, security and product quality were the three main factors considered by business travellers while selecting an online travel portal for travel booking which contradicts that convenience (Harris & Duckworth, 2005) and cost (Clemons et al., 2002) are the key factors for selecting the online travel portals for online travel purchase.

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THE TOURISM POTENTIAL OF THE NORTH CAUCASUS: THE FORMATION, CHARACTERISTICS AND DEVELOPMENT PROSPECTS

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Abstract: This research looks at the North Caucasus region at the south of Russia, a bridge between the Black and the Caspian Seas, its unique geographical location that determined the diversity of natural, climate and ethnographic resources. The goal is to show the modern complications concerning of the North Caucasus Region unique offer on the world tourist market. This has been done by examining different zones of nature management with their features in region. For this research we used coefficients relate with the social and economic development, and tourism attractiveness. As a result, we found the existing problems which lead to low internal demand and adverse demand on the international tourist market. Through showing that the Solving these urgent problems together with implementation of the Development Strategies will make the North Caucasus an attractive resort for different kind of tourists. This information will likely impact the design of future special tourist zones in the region.

Key words: tourism, geographical region, tourism development, North Caucasus

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INTRODUCTION

The North Caucasus is a geographical area (a part of Caucasus geographical region) located in the south of Russia between the Black and the Caspian Seas. Its conventional boundary passes across the Kuma–Manych Depression that had connected these seas in ancient times. The southern boundary passes along the summits of the Greater Caucasus and separates the territories of Georgia, the Republic of Abkhazia, the Republic of South Ossetia and the Republic of Azerbaijan (Figure 1). As for

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administrative and territorial division, the area is split into 9 regions. These include both Russian-speaking entities formed by Cossacks either voluntarily settled or exiled to this territory and national republics, where mostly indigenous Caucasian people live.



Figure 1. The map of geographical location of the study area (Source: GPF – Geopolitical Futures, (2017), https://geopoliticalfutures.com/north-caucasus-russias-southern-buffer/_2017)

Nowadays Russia possesses 258,3 thousand km² of the North Caucasus area (1,5% of the whole territory). This is one of the most rich recreation areas of the country. The diversity of natural, climate, balneological, ethnographic and other tourist resources promotes development of various types of tourism (Aleksandrov et al., 2015). Since ancient times, this region have been attracting the interest of different states and civilizations. Several directions of the Great Silk Route passed across this area. It was also a place of numerous grave mounds and burial grounds that contained unique artifacts. Megalithic ruins as ancient as Stonehenge were found there. Numerous migrations over the centuries made the ethnic map of the region on of the most confusing in the world. Only the Balkan Peninsula situated at the interface between Islamic and Christian civilizations can be considered as an analogue. Before studying the tourist heritage and existing modern tourist destinations of the region it is necessary to describe the administrative entities comprising it. This inductive approach (starting from the particular features of the regions before going to its general description) we let us to make the judgements on the current condition of tourist industry and prospects for the further development in conclusion.

Stavropol Krai. In the late 18th century the main part of the southern border of the Russian Empire - the Azov-Mozdok defense line was constructed there. The settlements of Volga and Khopyor Cossacks were established in the border areas. At the same time in the east the Kuma river valley was occupied by the Nogai tribes, Turkic-speaking people, whose main occupation was distant-pasture cattle tending. Geographic location of Stavropol Krai determined the diversity of landscape and geographical belts – from the

Stavropol highland and Strizhhament mountain in the west (max. 850 m) to the Terek–Kuma lowland in the east (less than 100 m). This difference in altitude leads to diversity of climate zones and floral belts – starting from the mild one to the semi desert. In the south of the region, where the shoots of the Caucasus begins locates the most famous Russian balneotherapeutic health resort – Caucasian Spas (Polyakova, 2015).

Thus, the area of the region can be provisionally divided into three zones:

1. the west – the regional center Stavropol city is located there. It can offer a big variety of architectural monuments. There are also thermal springs in the neighborhood of Kazminka village, a number of farms and guesthouses designed mainly for weekend break of Stavropol dwellers.

2. the south – where the health resort of Caucasian Spas with well developed net of medical and recreational centers is situated. There are also many places related to world-renowned Russian poets. The unique geological features of this area provide a certain level of so-called medicinal radiation emanated from Beschtaunite magmatic rock. That is the factor that gives the local climate special medicinal features.

3. the east is an area of nomadic Nogai peoples and traditional wine production in the Kuma river valley. Currently the viticulture traditions are revived due to the famous brandy producer in Praskoveya. There lives a unique ethnic community of Nekrasov Cossacks returned to Russia from Turkey in 1960s. Nowadays there is an ethnic and cultural complex of Nekrasov Cossacks.

It is interesting to mention that the total area of Stavropol Krai is bigger than the one of the Netherland. Considering rather vivid ethnic composition, one can see the wide range of tourist resources. All these factors create strong potential for tourism development. Krasnodar Krai. Throughout history, this territory belonged to indigeneous Cherkes people and their ancestors – the Zygiens, the Cercetae, the Maeotians, the Shapsugs and others. After expansion of Russia to this area it became home for the Kuban Cossack Host named after the Kuban River, the main waterway of this region. The references to the Kuban River can be found in writings of the Scythians, the Sarmatians, the early Slavs, the Greeks and the Romans.

The region has a vast coastline along the Black Sea. That results in the diversity of climate zones – from temperate one to subtropics. Uniqueness of regional climate is one of the reasons of the developed viticulture in this area of the North Caucasus. Nowadays Krasnodar Krai offers tourists the largest number of wine routes in Russia. Currently the wine map of the area consists of 14 wine route, each of which includes different activities: training workshops, degustation and winemaking. The other important feature of this area is unique archeological and cultural heritage – dolmen megalithic monuments at the coast of the Black Sea. Together with the natural heritage they create huge variety of cultural and ecological routes. It is obvious that access to the sea and prolific climate made this region the most popular one among the Russians for having beach-related rest. The center of Winter Olympic Games 2014, Sochi city region is also located in the region. The infrastructure facilities constructed for the Games attract additional tourist flows to Rosa Khutor ski resort and extreme park, seaside complexes in Adler and Central Sochi (Too, 2014). The Republic of Adygeya. Until fairly recently this region was an area of a single folk located inside Krasnodar Krai. The native people there are the Circassians including the Adyghe people. Provisionally the area of the region can be divided into three types: lowlands, piedmont plain and highlands. The last one is occupied with the Lago-Naki plateau by 90%. The latter is famous for its alpine meadows and numerous hiking routes developed back in the 1920-s. One of the most popular routes is the Route №30 – as a family route of low difficulty level to the seaside through the mountains. Its duration varies from 20 to 5 days depending on the passes and pathways chosen.

Uniqueness of natural heritage of the plateau creates microclimate of highland Switzerland in some of its parts. Mountain rivers with pure mineral water and beautiful landscapes become a perfect base for health tourism. The region is also popular for water tourism organized on the Belaya river, the main Republic's waterway. Teams from America, Africa, Western Europe and Russia arrive to Adygheya annually to take part in rafting, catamaran and kayaking competitions (Shadova, Tappaskhanova, Ahrhám, Zumakulova, 2015). At the same time event tourism gain popularity. The region becomes a venue for the fest of amateur song named "Pervotsvet" and the festival of bard song "Azish-tau". The Karachay-Cherkess Republic. Currently the tourist areas of the Republic are the most popular ones for weekend breaks among the population of the North Caucasus region. There are such ski resorts as Dombai and Arkhiz. The average altitude of the mountains is about 3-4 thousand meters and this means the resorts are located in highlands with all year round snowpack and partially glaciated slopes.

The bigger part of the Caucasus state wildlife biosphere reserve named after Kh.G. Shaposhnikov is located in the region. This is the largest and the oldest specially protected natural area in the North Caucasus. Many types of endemic plants and animals are represented there. There is also an artificially rebred species of Caucasus wisent that was killed off in the early 20th century (Ataev & Bratkov, 2011). The region is famous for the opportunities for alpine climbing since 1894. The national mountaineering competitions are held there. The great variety of natural resources promotes ecotourism development. Unique ethnic and subethnic indigenous groups create opportunities for ethnographic and cultural tourism. Hiking routes of the region also attract many tourists each year. The most popular one is №25 developed in Soviet times. It goes from Arkhyz to Krasnaya Polyana, Adler and Ritsa Lake in Abkhazia (Starostenko, 2011).

Unorganized camping starts to gain popularity again. According to surveys organized by researchers from the North Caucasus Federal University in 2013, the main reference group for this type of activity are the dwellers of Russian largest city regions of Moscow and Saint-Petersburg. The most famous destinations are the Gonachkhir, Makharr, Alibek and Amnauz gorges. The lack of tourist infrastructure as well as internet and cell phone signal coverage are the main factors determining the choice of destination for resting from everyday life. That is the reason of keeping such places in the North Caucasus. The biggest resort of the republic is the village Dombai. A group of academics of the Saint Petersburg Research Institute led off its development in 1930s. Nowadays there are 93 hotels per square kilometer. Two luxury apartment complexes "Sputnik" (Moscow) and "Krokus Invest" (Stavropol) are in process of construction. Simultaneous capacity of all these buildings is 4500 persons including village residents. If we also take into account holiday visitors, the population density of Dombay Meadow will come to 10000 people/km². One of the aspects for tourism development in the region is unique climate resources of Teberda resort. On «The list of Russian resorts including reasoning their unique natural therapeutic factors» approved by the Ministry of Public Health of the Russian Federation Teberda resort is under № 1.4 out of 18. It is reasoned as "especially beneficial for active pulmonary tuberculosis treatment".

The official recognition of the area was preceded by empirical studies and experience accumulation, which proved the beneficial features of the local climate. Nowadays there is a tuberculosis sanatorium with 350 bed spaces. The Kabardino-Balkar Republic. During the Soviet times different ethnoses of Abkhazo-Adyghean language group (the Circassians or the Adyghe), the Kabardians, the Balkars (a Turkic people) formed the population of the region. Cultural diversity of all these ethnic groups is a basis for unique cultural heritage of the region. Syncretic traditions and customs established sustainable anthropogenic system that has just started forming, but at the same time is a

reason for multiple interethnic conflicts affecting the tourism development in the region (Matveeva & Savin, 2011). Nevertheless, due to Elbrus (the highest mountain in Europe) location in the Republic it attracts about 260 thousand tourists annually. Ski resort and vast opportunities for mountain climbing make this place good for various types of tourists. Lately the adventure sports like hang-gliding and paragliding gain increasing popularity. One of the reason is a unique mountain hang-gliding and paragliding center Cheghem located on the border with Georgia on Zinka mountain sides. Its peculiar feature is combination of weather conditions of diverse complexity within 3-5 meters from take-off. Now this place is a venue for various national sports events (Baragunova & Kaloeva, 2014). The heritage of the Soviet times includes sanatoria.

The main city Nalchik is a balneo-mud and climatic health resort. There are more than 10 springs of mineral water in this city. The Republic of North Ossetia-Alania is an area of indigenous Caucasian people - the Ossetians. Despite the accession to the Russian Empire in the 18th century, this Republic has kept its national and cultural identity and is one of the regions in the North Caucasus that almost avoided integration. The most obvious example is religious views of the local population. The highest percentage of pagans (29%) in the Russian Federation lives in this region. Thus, neither Christianity, nor Islam could not become the official religion of the area. The main types of tourism in the region are cultural, natural and ecotourism, which are usually combined in mixed tours. Natural heritage of the area includes beautiful mountain gorges– the Tseyskoye, the Fiagdonskoye, the Karmadonskoye and the Dargavskoye ones and unique deep karst lakes (Kurskiev, 2012). There are also springs of sulphide, sodium-chloride and thermal carbon types of water as well as therapeutic mud sources, but they are underused (Isachenko & Chizhova, 2012).

Cultural heritage of the republic includes:

- necropoleis - semi-underground and underground stone crypts and family vaults (14th – 18th centuries) located in blocks and related to cult of dead ancestors honored by the locals until the present;

- ancestral towers as the prevailing type of cultural monuments. The towers are located almost in each village in mountain area of the region.

One of the main factors for tourism development in the region is Kazbek mountain (5033 meters), one of the most splendid and lofty European mountains. Kazbek is located at the boarder between Russia and Georgia, but the most challenging climbing route threads along the northern (Russian) slopes. The routes to the summit are a good example of integration of tourist heritage of all the regions of the North Caucasus region.

The Republic of Dagestan is located in the north-east of the Caucasus along the Caspian Sea coast. In world history this area is known as “Albania” or “Caucasian Albania”. This is the most multiethnic region of the Russian Federation. Peoples of Dagestan speaks languages that belong to 4 main linguistic groups. Uniqueness of cultural heritage creates inimitative local flavour that is one of a kind on the Earth.

Among the main tourism activities offered by this region are:

- resort therapy and beach-related rest at the seaside. There are such balnearies as “Talghi” (uses sulphide high concentrated water containing hydrogen sulphide), «Kayakent» (hydrothermal therapeutic muds), «Caspiy» (thermal and mineral water), «Akhty» (mineral water from five alkaline saline springs) (Dzhamaludinova, 2013);

- Islamic religious pilgrimage. There is one of the main natural Islamic sacred places in the region - Shalbuzdag mountain. The sphere of religious tourism that serves tourist from other Russian regions, Middle Asia and East grows rapidly over recent years. There are also the oldest mosques in the world - Dzhuma Mosque in Derbent, Central Dzhuma Mosque in Makhachkala, Karakure Mosque and others (Alexseev, 2009);

- mountain and ecological tourism. The region offers a vast diversity of natural resources for alpinism, trekking, rafting and camping. The Karadakh gorge, Khala-Khelyi and Kazenoy-Am lakes, Bogoskiy, Nukatlsky, Butnushuer — Korkagel ranges are one of a kind because of their beauty and splendor;

- cultural tourism. There are such ancient cultural monument as Derbent – the oldest “gates of the Caucasus” and Naryn-kala fortress; Midzhakh village – the Museum of the Lezgians; Makhachkala – the largest cultural center of the Dagestan peoples; Gunib village – the essential place of the Caucasian War, ancient Persian baths, etc.

The Republic of Ingushetia. This is the smallest region of the Russian Federation. It is located on the northern sides of the Greater Caucasus and the adjoining smaller mountain chains – the Terek Range, the Sunja Range and the Skalisty Range. The area of the region is historical habitat of indigenous Caucasian people named Ghalghai or the Ingush (Yampolskaya & Ivanov, 2015). Nowadays tourism development in the region is considered to be a promising project for future decades. In many ways, the reason is geopolitical uncertainty and activity of political Islamic groups that prevent pro-Russia trends among the Ingush people. On the one hand, this leads to relative “underdevelopment” of regional recreation sphere. On the other hand, it promote conservation of local natural heritage as opposite to popular North Caucasus resorts (such as those in the Karachay-Cherkess Republic). Thus, saying about lack of organized tourist flows to the Republic it is necessary to highlight the following promising groups of resources important for tourism development:

- natural heritage. This includes the area of Dzhedzhakhsko-Assinsky State Historical, Architectural and Natural Open-air Museum, beautiful mountain gorges (Dzheirakh, Galgaiche, Armkhi, Guloi-Khi and Targimskoy hollow), waterfalls (Lyazgghisky and Furtougsy), holy Mat-Loam (Stolovaya) mountain and others;

- ski resorts. Currently there is only one open recreational resort named Armkhi situated on the northern and southern sides of the Skalisty Range. The complex includes two hotels, a cable railway, a cycle route, a swimming pool and an adventure park;

- cultural heritage. Among this kind of resources the first place belongs to the ruins of medieval towns and towers (Vovnushky, Erzi, Furtoug, Anghety, Magoi-Dzhel, Gul, Verkhny Pui, Kyazi, Lyalakh, Khani, etc.) There is also the oldest church in the Russian Federation built in the 18th century – Tkhaba Erdy.

The largest regional cities of Magas and Nazran also attract tourist attention, but the lack of tourist infrastructure reduces it to some isolated cases. Annual number of tourists arriving to the Republic does not exceed 2000 people (The North Caucasus: The Challenges of Integration, 19 October 2012). The Chechen Republic. The region is located in the east of the North Caucasus in the Terek and Sunzha rivers valleys. This is a habitat of indigenous Chechen people. Among the Russians, this republic is mainly connected with the Caucasian wars, the first and the second Chechen wars. This fact has unfavorable impact on tourist and recreational image of the region. Nevertheless, over recent years the tourist flows to this area increases. Largely the reason is the policy of Ramzan Kadyrov, the head of the Republic. Large investments and public outreach in the region promote both tourist infrastructure development and relation to tourism as a main source of income for local (Matveeva, Savin, 2012). The following groups of tourist resources of the region can become a base for sustainable tourism development in the region:

- monuments of natural and cultural heritage located in Argun State Architectural and Natural Reserve Museum (150 towers, more than 20 religious buildings, more than 200 military towers of Early Middle-Ages, 150 ruins of castles and fortresses, dozens of megalithic ruins, 2600 ruins of ancient military and guard towers, about 150 underground and aboveground crypts) (Betilgiriev & Gayrbekov, 2011);

- modern ethnographic and ethno-confessional monuments. These include the Akhmad Kadyrov Mosque named “The Heart of Chechnya” in Grozny, Dondi-Yurt museum complex – reconstructed medieval Chechen village in Urus-Martan and one of the largest medieval necropolis in the Caucasian region named «Tsoi Pede», an elaborate cemetery in the Malkhistin gorge;
- balneological resources. There are outlets of Sulphur springs in the region. In Soviet times there was nation-wide spa resort. In 2014 the resort was reopened in Sernovodskaya village.

FACTS AND FIGURES

Now that we have seen all the qualitative characteristics of the tourist potential capacity of the North Caucasus, let us study the qualitative indicators. Despite the rich natural and cultural heritage of this area, such important indices as the level of social and economic development and standard of living in the regions under research are the lowest ones among the all 85 territorial entities of the Russian Federation.

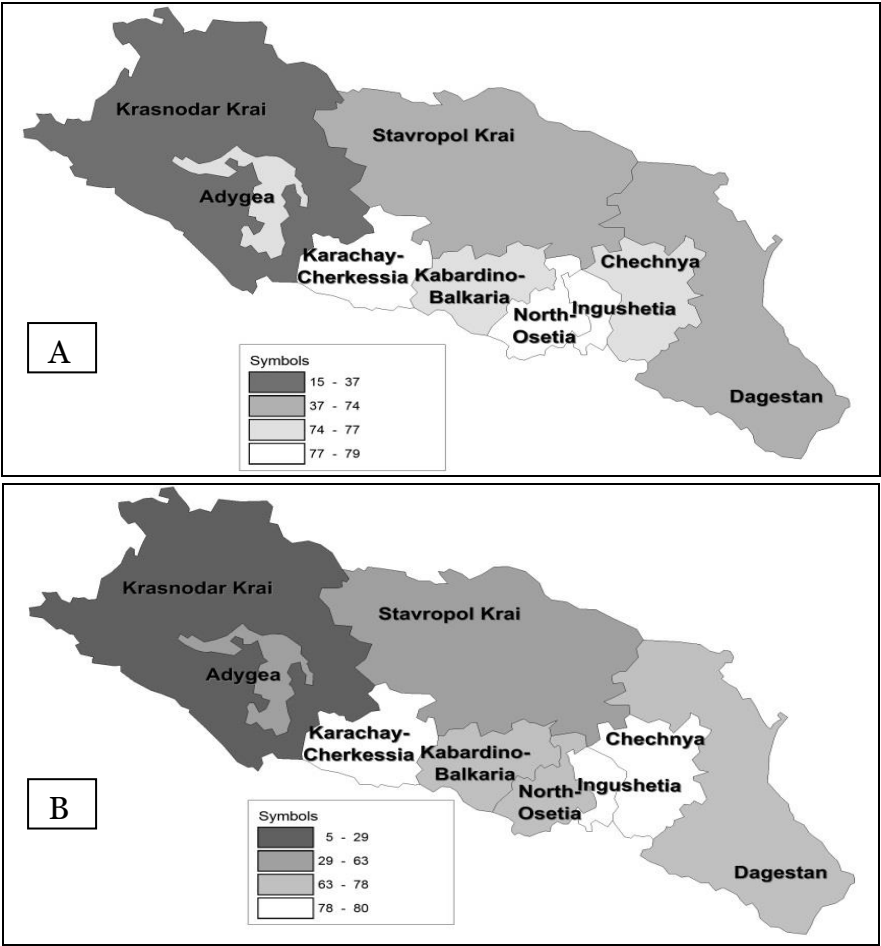


Figure 2. The main indicators of the development level of North Caucasus regions:
A) the level of social and economic development of a region; B) standard of living
(Source: RIA rating (RiaRating) and national rating (National tourist rating), 7 December 2015)

This is supported by the data of independent sociologic agencies like RIA rating (RiaRating) and national rating (National tourist rating, 7 December 2015) (Figure 2). All the regions on the schematic map are ranked by the four main indicators of standard of living and level of economic development. The lowest value gets the highest position in the rating and those with the highest values are the most underdeveloped regions of the country. According to the map the most favorable conditions are in Krasnodar Krai, while the Karachay-Cherkess Republic, the most promising region for tourism development, is ranked very low. Occupancy rate of the main region resorts clearly demonstrates season dynamics of tourist resources demand. Despite of great variety of tourism types winter sports (ski, snowboard, toboggan) are the leading one. Today the biggest occupancy rate among all the regions falls on a winter season – the season of winter sports that lasts from January till March. Its rate in summer comes to 10-20%. Spring and autumn are off-seasons, except the short period of autumn and spring school one-week breaks. That is the reason of low profitability, the problem of which is being solved by high prices. Costs for one room per night float between 1.5 and 3.0 thousand roubles in winter. Winter vacation that lasts 10 days will cost about 50-80 thousand roubles, which present the similar rate to the foreign tour costs while the service grade stays low. During the Soviet Union period the quality service factor was one-to-one, which means that one service unit was fixed for one visitor. No changes have taken place since then. The European standard differs and is equal to the rate of 1 to 5 or even 1 to 7. To gain the same quality level of service staff increase up to 15-20 thousand workers as well as creation of new hotel facilities are to be done.

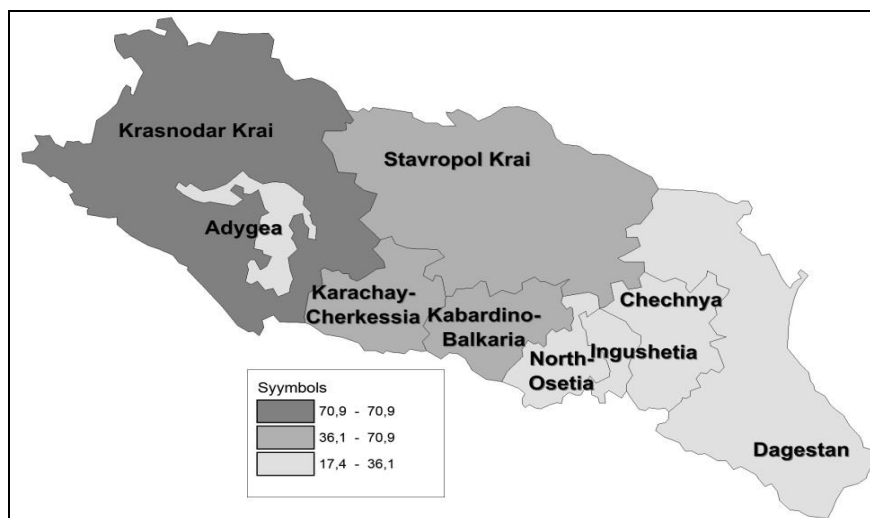


Figure 3. The level of tourist attractiveness of North Caucasus regions in 2015
(Source: National tourist rating, 07. 12. 2015)

Another important indicator is tourist attractiveness. It includes the level of tourist business development, income from tourist services, popularity of the region among Russians and foreigners, environmental setting and many other factors (National tourist rating, 7 December 2015) (Figure 3). As a result, Krasnodar Krai the most tourist attractive region in the North Caucasus. The eastern regions and the Republic of Adygeya are much less attractive. Thus, when analyzing the current

condition of tourist and recreative industry of the North Caucasus, one should also consider such independent data despite the information on tourism in the region found in Internet speaks for positive results in regional tourism development.

PROSPECTS OF TOURISM DEVELOPMENT IN THE NORTH CAUCASUS

The Strategy of social and economic development of North Caucasus federal district up to 2025 involves development of tourist cluster in the region (Identification summary of the state program of the Russian Federation “Development of North Caucasian Federal District” up to 2025). Thus, in 2010 joint stock company «Resorts of the North Caucasus» was established by the decree of the Russian Government. It operates on the principles of public and private partnership as a managing company for this project. As a part of the project the agreements on establishing special economic zones in the Russian regions included in tourist cluster were issued (Project of tourist cluster managed by stock company «Resorts of the North Caucasus», 2014). Thus, 7 special tourist economic zones in Southern and North Caucasus Federal Districts were created. The following resorts are currently under construction: Arkhyz - in the Karachay-Cherkess Republic, Mamison - in the Republic of North Ossetia-Alania, Elbrus-Bezenghi – in the Kabardino-Balkar Republic, Armkhi and Tsori – in Dagestan, Lagonaki – in Krasnodar Krai and the Republic of Adygeya (Concept of tourism cluster development in the North Caucasus Federal District, Krasnodar Krai and the Republic of Adygeya, Moscow, 2011).

№1. “Arkhyz” year-round tourism and recreation complex. This point of the tourist cluster is located in Zelenchuk area of the Karachay-Cherkess Republic. One of the longest cable-railways at Russian ski resorts is constructed in Arkhyz complex. The gondola lift equipped with 8-seat gondolas carries 2400 persons per hour. A chairlift and a cable-railway for children also operates there. The slopes are equipped with systems of artificial snowing and illumination. Since season 2015/2016 after one more cable-railway and three ski trails were put into operation the capacity of all lifts in Arkhyz complex has reached 6600 persons per hour, the length of trails is about 14,5 km. Long-term Arkhyz complex development program includes building five tourist villages. In addition to the existing “Romatik” village “Lunnaya Polyana”, “Pkhia”, “Dukka” and “Dukka-2000” will be built. All of them will be connected by the common infrastructure and tourist offer designed for all types of tourists. According to the development program, Arkhyz will include 58 lifts and 137 ski trails of diverse complexity (Shebzukhova et al., 2014). 60% of them will be green and blue trails for beginners. The volume of estimated tourist flow by 2020 is 445 thousand people.

№2. “Elbrus-Bezenghi” year-round tourism and recreation complex. The complex is planned to be built on the territories of Chereksky, Chegemsky, Zolsky and Elbrus areas of the Kabardino-Balkar Republic. Modernization of the resort was started in 2014. The first efforts in ski trails renovation for season 2014-2015 resulted in steep increase of tourist flow. In winter season 2014-2015 140 thousand ski passes were sold. It is more than throughout 2014. According to the survey conducted by JSC “KSK” among the tourists of the Elbrus resorts, 94% of respondents would like to come back next year.

One million rubles was allocated in 2015 for the resort modernization. This money was used for the third funicular line construction. Elbrus cable railway will be the most high-altitude and will bring people to the highest European ski resort. It will also be equipped according to the needs of disable people. №3. “Veduchi” year-round tourism and recreation complex. This complex is located in Itum-Kalinsky area of the Chechen Republic, in the Argun River valley. One of the problems of Veduchi construction was bombs left in this area after the war. Within the first six months of 2010 the sappers have cleared up 200 ha. For now 500 ha more are demined. The program involves construction

of 19 trails of total length equal to 32 km; 8 cable railways (one of them is child lift, a lift for children training); hotel complex for 500 persons, servicemen's living accommodation, chalet village, service facilities including ski training center, rental centers, restaurants and cafes. The final planned capacity of the resort will be 4,8 thousand persons per day. One of the features of Veduchi resort will be the most long trails for 12,5 km. Due to it the resort will achieve top-10 best European resorts with the longest ski trails. №4. "Mamison" year-round tourism and recreation complex. The resort locates in the Mamison gorge in the Republic of North Ossetia-Alania. Mamison is situated 102 km from Vladikavkaz international airport and 85 km from Vladikavkaz railway station. The resort area is more than 84 thousand ha. The surface area of the slopes is up to 19,5 mln m². The elevation change is 2042-4038 meters above sea level.

Mamison resort is able to change economic situation in the region. The main problem of land use planning and management there is landscape and total absence of tourist infrastructure. Its uniqueness lies in quantity and quality of natural mountain trails, a rather rare phenomenon in the rest of the world. Such natural trails remain open longer due to glaciers. They can prolong ski season up to 2 months. Zaramag glacier can keep trails open even in summer. №5. "Tsori and Armkhi" Year-round tourism and recreation complex. Armkhi resort locates in Dzheyrakhsky and Sunzhensky areas of the Republic of Ingushetia, on the Skalisty and Tsei-Loamsky Ranges According to the program 4 trails of total length equal to 11 km and 4 lifts will be built there. Armkhi locates on the south and north sides of the Skalisty Range, its maximal altitude is 3 km. Currently the elevation change is 300 m, by the end of construction it will be equal to 1,5 km. The key element of the resort is Tsori ski complex. Approximately, in 10 years it should reach its European competitors (Italian, Austrian and Swiss resorts) by the level of equipment and variety of tourist services. The plan is to build there 57,4 km of trails, 12 lifts, a ski and biathlon center including a shooting zone and a stadium, an extreme park and an ice palace. Between the two resorts, at an altitude of 1700 meters an 18-hectare golf course will be constructed. All the neighboring airports and railway stations will be renovated and enlarged. The distance between the resorts is 45 km. There is an asphalt road for 10 km, 20 km of gravel road and 15 km more are under construction.

№6. "Lago-Naki" year-round tourism and recreation complex. This ski resort will be built on the Lagonaksky highland, a part of the Western Caucasus located in the Apsheron area of Krasnodar Krai and the Republic of Adygeya. The program of mountain climate resort development consists of 2 parts: winter adventure sports and tourism; tourism in off-season time and in summer. The key idea of the ski resort construction project is a theme park with sections for different types of visitors. Each of these sections will offers some specific activities: ski trails, snowboard park (including freeride trails for athlete training, competitions and other sport events), ski trails for children, toboggan area, paths for snowshoeing, skating and curling rink. Implementation of the first project stage is planned for 2013-2019. The targeted capacity of the resort after the first building phase completion is 7000 persons including hotel complex for 1 thousand persons. The infrastructure of the first phase will comprise 14 funiculars and 35 ski trails of the total length equal to 50 km. The resort will create 2 thousand jobs in tourist infrastructure. In total 4 thousand people will be employed. №7. "Matlas" year-round tourism and recreation complex. The resort is located in the Khunzakh area in Dagestan, 180 km from Makhachkala international airport (Erkenova, 2015).

There is a new airdrome for regional and private flights 10 km from the resort. Investing in the resort is considered to be a priority for the near future. The resort will become a base for an ethnic and nature museum, a ski center. The resort capacity will be 18500 persons per day. After the first building phase is completed the capacity of tourist

accommodation establishments will be 6 800 persons. The plan is to construct 25 ski trails of various complexity. Moreover, Matlas has strong balneological potential. There are dozens of mineral springs. This water is beneficial for kidney disease and intestine issue treatment. Finally the most important but almost unstudied type of tourism in the region is wildlife tourism or hiking. At the present time the only agency that control this activity is border-security forces. The number of wildlife tourists only in the The Karachay-Cherkess Republic runs up to 100-200 thousand people per year.

The research conducted at the valleys of the rivers Sofia and Adzapsh produced amusing results. Daily amount of visitors of the river Sofia valley (nearby the Arkhyz) going camping in July and August comes up to 700-800 people, at some particular days even up to 1000. This leads to total amount during the season equals to 20-25 thousand tourists. The most popular activity among them is ecotourism (wellness or health tourism, sport and excursion tourism). There are springs of different kinds of mineral water in valley of the river Adzapsh, which is 15 km away from the last village Phiya. The main branch of health tourism is arthropathy treatment. Mineral baths are made at the place of adarce in the open air. The temperature of mineral water is 18 degrees. There is a number of springs that serves to specific treatment, such as eyes cure, gastrotherapy, hemorrhoid therapy, etc. There is also sacred spring that is used for alternative medicine. About 10 thousand people come during a season to visit this place. As a rule, they live in tents with all the conveniences outside, which causes unfavorable environment conditions. Standards of environmental safety are missing. For such a big group of tourists a set of arrangements is to be done, among which development of camping area with minimal set of paid services. This will help to follow sanitation measures and save headstreams of Kuban' rivers, which represent the main source of water for human consumption in Pre-Caucasian Region.

CONCLUSION

As the result of our analysis, we should note reach natural and cultural heritage of the North Caucasian region that can form a unique offer on the world tourist market. Nevertheless, the existing unsolved problems lead to low internal demand and adverse demand on the international tourist market. Among such problems are:

- lack of tourist infrastructure in many regions where unique tourist attractions locate. Significant funds are allocated for these needs from the federal budget, but corruption at all the levels of government prevents appropriate use of this money;
- language and cultural barrier is one of the main obstacles for tourism development. The majority of population considers ethnic identity and usual mode of life to be more important than laws of hospitality necessary for creating reputation of any resort. Ignorance of English (in some cases even of Russian) among the locals creates more obstacles for foreign tourists arriving to the North Caucasus;
- managerial imbalance in designing region development strategies. In most cases, they are developed by the national government and sent to the regions. The problem is that the Government has no actual data on the current situation in these regions. That leads to "detachment" of region development strategies from real life;
- modern geopolitical situation: location of the North Caucasian region on the borders between Russia, Abkhazia, South Ossetia and Georgia and Azerbaijan. For now, it does not create any real geopolitical threat, but there is still a shadow of the Chechen wars, the Ossetian conflict and other incidents of the 20th and 21st centuries.

Solving these urgent problems together with implementation of the Development Strategies will result in better living of the local population and will make the North Caucasus an attractive resort for both Russian and international tourists.

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CONSUMERS BEHAVIOUR AS REFLECTION OF FOOD SECURITY AT REGIONAL LEVEL IN HONDURAS

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Abstract: The primary driver of food security or insecurity is the food system which creates a framework of approach to study and also solving this issue in region. The case study is analyzing the availability and accessibility of food in settlements Sangrelaya and Cocalito in Honduras. The local food system and its functioning are characterized on the base of research and analysis of food consumption practices and the food situation perception. The research results show that the inhabitants of villages Sangrelaya and Cocalito suffer from food insecurity mostly due to the threat of spatial and economic insufficient access to food.

Key words: local food, food security, food system, consumption, Honduras

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INTRODUCTION

Food security is a pressing issue in the global as well as regional life (Atkins & Bowler, 2001; Lawrence et al, 2010; Gibson, 2012; FAO; Reid, 2012). When studying food security, it seems as most comprehensive to apply a system approach. Food system is considered as a major actor of food security, respectively food security is a main outcome of food system. (Sobal et al., 1998; Ericksen, 2008; Rutten et al., 2011; Hammond & Dubé, 2012; Fonte, 2002). The model of conceptualized food system could explain in the best way the structure, relationships and functioning of food systems (Sobal et al., 1998). Food system according to our conception includes production, processing, distribution, sale and consumption of food (Kneen, 1989; Hartog, 1995; Sobal et al., 1998; Atkins & Bowler, 2001; Bentay, 2005; Ericksen, 2008; etc.). Individual activities are interconnected as chain-, circle or as network- relationships (Lang et al., 2012; Sobal et al., 1998). It is clearly not a closed system, it imports and exports food all the time (Lang et al., 2012). The level of food security is directly related to functioning of various

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subsystems of the studied food system. By analysing them it could lead to the identification of possible problems, for example hunger or food insecurity (Ericksen, 2008; Rutten et al., 2011). However, the structure and dynamics of the food system, which is the central player in food security, is strongly influenced by the level of economic development and direction of economic growth of the country (Odekon, 2006; Hammond & Dubé, 2012). Consumers are the last part in the food chain but directly or not directly connected with all subsystems of food system in region/ nation. The behaviour of consumers can influence food system, on other hand reflect the functioning of interconnected individual parts of food system. Food and gastronomy can play also an important role in the sector of tourism López-Guzmán et al., 2018; Privitera et al., 2018). In our research we focused on Honduras which still belongs to developing countries. Food insecurity is a problem of this country.

More global organizations, which monitor the food situation in Honduras, are confident about it. The World Organization for Food and Agriculture (FAO) in its studies on food security in Honduras states that between 1990 and 2005, the proportion of undernourished fell from 19% to 14%, which means improving the food situation of the population. However, food safety analysis, carried out in the country indicated that the population of Honduras diet is one-sided, since they receive 80% of calories from 10 kinds of foods, with a high percentage of corn and beans (FAO, 2011). FAO statistics indicate top 10 commodities available for consumption in Honduras, in the first place is mentioned corn, then there are sugar, cereals, palm oil, rice, poultry, beans, green bananas, sweet yellow bananas, sweeteners and others. The average energy consumption per capita per day was for the last reported period in 2009 – 2687 kcal. The largest share in the consumption of food are grains, they made up nearly 50%. There belongs rice, corn and wheat. Meat represents just 5.6% of consumption. Sugar has a relatively high proportion of consumption – 16.3%. The prevalence of malnutrition from a lack of nutrients in the diet is permanently decreasing. In the years 2010-2012 amounted to 10%. Compared to the years 1999-2001 it means a decrease of 6%. The country is the recipient of food aid. Items of it vary considerably. In 2013 it was delivered to the country four thousand tonnes of grain, ten years back in 2003 it was 56 000 tons. The World Food Programme (WFP, 2014) based on its analysis and criteria assessed Honduras as a country in need of food aid. According to estimates, almost 1.5 million of its inhabitants are facing starvation. Chronic malnutrition affects rural areas and 48.5% of the population. Honduras is considered one of the most vulnerable countries in the world, due to natural disasters. Our research focused on the analysis of the food system in relation to food security in the micro-region of Sangreleya and Cocalito (Honduras).

One of the partial steps in studying food system was a behavioural research of food consumption at the household level. The aim was to find out how the consumers act as the last link in the food system. Through their consuming practises we can identify connections between parts of food chain in the region. Consuming practices also indicate gaps and deficits in local food system. Using a questionnaire, we determined how individuals / households victual, buy food, produce food, how they perceive the food situation in their household and how they perceive food security in their region.

Food security as a dimension of food system

International Food and Agriculture Organization (FAO) adopted at the World Food Summit in 1996, based on diplomatic agreements, a definition of food security: "Food security is a condition where all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life" (FAO, 2013). Food security could be in the simplest way introduced as a model of four pillars of availability, accessibility, utility and

stability/vulnerability (Jones, 2013; Gibson 2012; FAO, 2008; Riela, 1999). Food security metrics may focus on these domains or some combination of these domains (Tansey et al., 1995; Jones et al., 2013). Food availability means the quantity, type and quality of foods that are regionally available (domestic production, imports, food aid). Food accessibility is an economic and physical possibility to get supplies of food (income, purchasing power, transport and market infrastructure). Especially the food acquisition behaviors of households are important for translating physical and economic access to food into food security (Jones et al., 2013). Utility means the ability of individuals and households to consume food and use their nutritional value. Stability/vulnerability is an economic and political background that allows the functioning of the previous three pillars (Atkins & Bowler, 2001; Ericksen, 2008; FAO, 2008; Lawrence et al., 2010; Gibson, 2012). All these components together create subsystems of the food system (food availability = production, distribution, exchange; accessibility = affordability, allocation, markets, acquisition, transportation, preferences; utilization = nutritional value, social value, food safety, consumption) and can be analyzed at any regional level (Ericksen, 2008; Rutten et al., 2011). It follows that study of food systems requires a system approach to understand the complexity of the concept of food security (Maxwell, 1995; Neff, 2009; Tolmáči, 2017). System approach is useful in its methods to analyse components, relations, interaction, structure and behaviour of system (Matlovič & Matlovičová, 2015; Marsden & Morley, 2014). The importance of system approach lies in the ability to orientate in loads of facts and information which are in some way interconnected (Černík & Viceník, 2011).

METHODS AND DATA

Our research aim was to monitor the food security through analyzing food production, aspects of food consumption and diet of inhabitants in the developing micro region of Sangrelaya and Cocalito, district Colón, Honduras. Key dimension of food security in our research were availability, economic and spatial accessibility and consumption of food. The analysis of these various subsystems of local food system led to the identification of factors that most threaten the availability and accessibility of food for the inhabitants of this region. This examined issue offers a broad range of research questions. Its diapason is overlapping spatial, economic, social, legislative, medical and prognostic aspects. They can be summarized in three lines of selective questions:

Table 1. Research questions

Availability: How much and what kind of food are in the region intended to be eaten?
Do residents produce local food (plants and animals)?
How does the distribution of food work?
What are the store possibilities of sellers and households?
Do residents receive food aid?
Accessibility: What is the spatial and economic access to food for the population?
Where do residents of researched region buy food?
Are in the researched area accessible grocery stores?
How do residents receive funds to buy food?
What is the price of food?
What are the economic conditions of the local population?
Consumption: What is the typical diet of the population and what is the real situation in the nutrition of the population?
What are the main components in the diet of the local population?
Which food/nutrients are dominant in consumption of the population?
Which food components/nutrients are absent in the diet of the population?
Which socio-economic factors have dominant effects on food intake of the local population?

Our timetable for implementing the research was planned as a series of interrelated sequential steps. For a thorough treatment of the research subject and for greater clarity on issues of social properties in the selected area (and for better use in practice) we applied qualitative and quantitative approaches. For the collection of data and information, we used basic techniques – fieldwork, participant observation, questionnaire and interview. Participant observation is a useful method of learning on the studied area, e. g. the living conditions of its population and community relations. Prolonged and intensive contact with the region is essential for the study of the phenomenon of hunger (hidden hunger) in the natural environment and in the search of local causalities. We searched the number of grocery stores directly in the region, their range and food prices. This pre research led (after collecting and analyzing the gained information) to creation of questionnaire. Using this questionnaire we conducted a behavioural research in selected micro-regions. The aim was to determine the self-production of food, the current way, frequency and variability of food consumption, purchasing power, preferences in food purchases, subjective perception of the food situation of households, the relationship to each other and the acceptance of food aid (Table 2). The questionnaire contained more open (essay) questions. The questionnaire was distributed to inhabitants in the official language of the country, in Spanish. For a deeper understanding of the situation and to complete the picture of how is functioning the food system in the searched region/communities we then used a semi-structured interview. We conducted them with three representatives of communities (teacher, doctor and missionary). It completed our integrated view of the topic studied at the regional level.

Table 2. Selected indicators of food security

Household/individual indicator	Characteristic
Variability of food intake	Food consumption of groups of fats, carbohydrates, protein, dietary fiber, vitamins, minerals
Frequency of food intake	The number of meals consumed during day, composition of the meals during the day/week, favourite foods
Food self-sufficiency	Local agricultural production - crops, fruits, vegetables, breeding of domestic animals
Shopping of food	Location of shops, frequency of shopping, preferred food, transportation of food
Subjective perception of FS	Perception of abundance or lack of food in household, frequency of food shortages, possibly of hunger

In the case study we used the recommended methods for research of food security and nutrition of the population. These included: questionnaire, semi-structured interviews, participant observation and analysis of the food system (Foran et al., 2014; Loring et al., 2013; EFSA, 2009; Gerster-Bentaya, 2005; Riely, 1999; Spišiak, 1985). The principal indicator for our research was the consumption of foods. It can be tracked at the individual level or at the household level. Traditional methods to track consumer habits are dietary records, dietary recalls, dietary diversity, household budget survey, food balance sheet, interview (Jones et al., 2013; EFSA, 2009; Riely, 1999; Spišiak, 1985). To retrospective category of methods, not entailing detailed description and weighing of consumed food, for preparing our questionnaire we included food frequency method and diet history method (Ferro-Luzi, 2002; EFSA, 2009). We collected most of our research data in during field work and from local institutions. Others we searched on internet and we used statistical data from international organisation as FAO, WHO and World Food Program.

Sample

Municipalities of Sangrelaya and Cocalito in Colón in Honduras are spatially interconnected. Therefore it is appropriate to consider their cadastre as one research area. Residents of both villages are from one ethnic group of Garifuna people, sharing the same natural, economic, social, cultural, and social conditions (Blouet et al., 2005). They use the same infrastructure, schools, church facilities, retail, health services, attending joint cultural events and having similar lifestyle. Although these two communities belong to two separate self-governing territorial divisions, in spite of the fact that they have the characteristics of a single community. The aims of our research are connected to the functioning of food system in these villages. The latest available statistics on the number of inhabitants are from 2010. The village Sangrelaya has registered 973 residents, the village Cocalito 621 inhabitants. Children and teenagers under 18 years made up a very high proportion of the total population (by age of living in Honduras 45% of the population under 18 years old). We, definitely, can talk about very young population. Exact statistics on the age structure of the population of both settlements are not available. For the questionnaire survey, we applied two criteria concerning age and region: respondents must be from the village Sangrelaya and/or Cocalito and have more than 18 years. The upper age limit has not been established. In the event that we take into account the fact that the village is about 40-45% of the population younger than 18 years, the actual number of residents who might be involved in our research was about 650. Subsequently, at a confidence interval 8 and at 95% confidence level we distributed questionnaires to 122 respondents. The number of selected respondents equals to desired number of respondents needed to maintain the representativeness and credibility of research from which we could obtain generally valid conclusions and evaluations for the whole region.

Results of the questionnaire: Food consumption behaviour of respondents

In the questionnaire we focused on the composition of the diet, frequency of consumption and purchasing food, place of shopping, preference of purchased and consumed meals and the overall perception of the food situation of the population and food aid. Meat, except of fish, is for local inhabitants not a very common component of meals. Chicken is from farmed animals the most often consumed item (30.3%), beef and pork are consumed only in exceptional cases. Fish is part of meals most commonly in 68.4% of cases. For many people it is a usual part of everyday diet. Fishes are the basic of the diet of local residents. Meat consumption occurs more than once a week in 38% of the population. Fish meals are consumed seven days a week by 43% of inhabitants.

Fish and seafood (turtles, crabs, shrimps etc.) are purchased in 84.2% cases mostly fresh directly from the fishermen in the village or on the beach just after fishing. Some of respondents (6.6%) fish by themselves. Other meat, especially chicken, is purchased in pulperias (60.5%). Pork and beef are mostly from domestic breeding of more wealthy local residents. They slaughtered the animals and during the day, they sell it out. Domestic breeding is not typical, just 56.6% of respondents breeds some animal. The most widespread is poultry - hens and chickens has 87% of breeders, 30% have pigs and only 7% have cattle. The less affordable foods include milk and dairy products. More than half of respondents (56.6%) consume it just 1-2 times a week. 13% of them do not consumed it at all. Dairy products mentioned were milk, cheese and butter. Regional milk suppliers are farmers in 22.4% of cases, but most dairy products are purchased in local Pulperias (51.3%), or they are imported from the city of Tocoa and La Ceiba (11.8%).

Vegetable consumption is one of the problems of the local inhabitants. It is very low. Vegetables are financially and geographically difficult accessible food components,

even though it may be due to the natural conditions of the country incomprehensible. 26% respondents stated that they have no vegetables during the week time and 17% said that, in general, they consume it very rarely. Once or twice a week consumes vegetable 37% of respondents. Slightly better results were recorded for the consumption of fruit, but it also has its reserves, over 40% of respondents consumed fruit only 1-3 times a week. Fruits are readily available, and they are included in dietary lists more often than vegetables, mainly because they are grown in this area more often. Cultivation of various crops was mentioned in questionnaires 23-times, fruit was included 45-times. Out of vegetables the locals cultivate less demanding crops such as yucca, corn, beans or green bananas called platano or guineos. Just few individuals grow tomatoes, peppers or carrots. Grown fruit species include mangoes, oranges, papayas, bananas and coconuts. The access to fruit and vegetables in local pulperias is very limited. Vegetables are mostly purchased in Tocoa (51.3%) as well as fruit (45%). The locals buy them sometimes from local producers. Fruit and vegetables are becoming more affordable for local residents through vendors who come to the village with the car fully loaded with goods.

Among residents, we further investigated the frequency of consumption of rice, potatoes, yucca, pasta and bread. Rice was the leading crop according the number of days it was consumed, and also according the number of respondents who consumed it. It was followed by bread and yucca. Pasta and potatoes were included in consumption pattern much less often. Rice dominates in overall dietary pattern of local inhabitants. Among the five most commonly consumed meals (food) 84.2% of respondents chose it as their top. The other four dishes in top 5 most frequent meals were: soup machuca (fish soup with banana and coconut, green bananas, tortillas (corn or wheat pancakes) and fish.

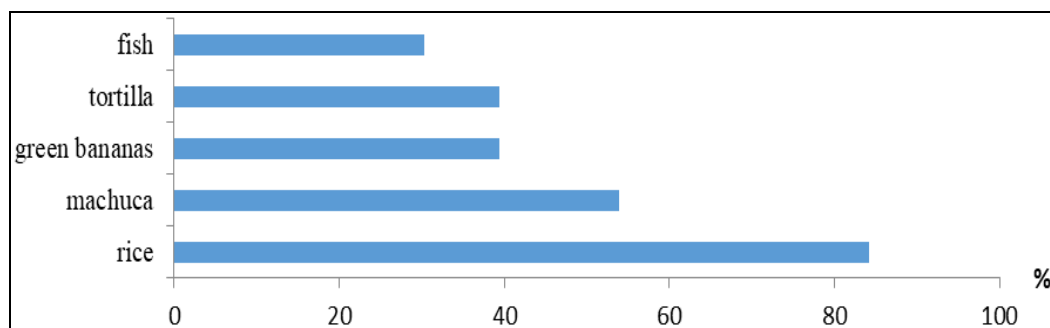


Figure 1. Ranking of the five most commonly consumed foods and dishes (Source: Field survey, 2013)

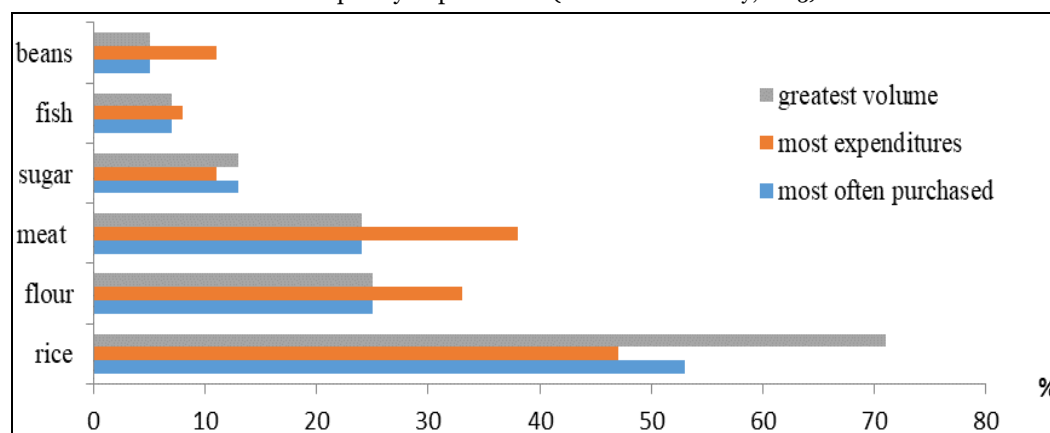
Respondents included among the 10 most frequently consumed food of this region also beans, seafood, chicken, yucca. This selection of the most commonly consumed foods in the region corresponds with the list of the most common food consumed by the people of Honduras by FAO (FAO, 2011). The survey was also focused on the structure and frequency of food consumption during the day. Three times daily consumes 80.3%, two times a day 13.2% of respondents. For breakfast and dinner in consumption clearly dominated corn or wheat pancakes (tortillas), accompanied by eggs, beans and bananas. For lunch the most often choice was rice. It consumes about 72% of respondents, further fish, chicken, soup and bananas. One of the favourite foods of 54% respondents was soup "Machuca". The primary ingredients of it are: coconut water and fish.

They are simultaneously the most affordable raw materials, in economical and spatial sense of view in the region. In addition to food insecurity in the region there is a problem with drinking water also. In our survey 84, 2% of respondents declared they do

drink water from the public network, which is causing frequent digestive problems. Only 7.9% of respondents do not drink this “public” water and purchase safe drinking water, mostly from water supplies. Locals like to drink sugary liquids (77.6%), such as carbonated soft drinks and a variety of juices from own production.

A particular problem of food supplies in the region is food shopping. Due to incomplete and insufficient road infrastructure and isolation of the region is evident the pure availability of large shopping centres and supermarkets. In those centres costumers have not only more choice of food but the food is also two to three times cheaper than in small grocery shops in villages. Shopping outside the municipality was realized by 70% of respondents, out of which 79% of purchases took place in Tocoa. The rest of the respondents shop food in village Iriona, exceptionally, some manage to shop in San Pedro Sula (few hundred km away). The majority (45%) can go to the city once a month, three times or more a month manage to go shopping only 12% of respondents. 16% of the respondents do shopping outside the village during the year very rarely. For example, teachers are going to the city of Tocoa every month for their wages and they used to shop food using this occasion. Therefore they have the highest frequency of shopping outside local villages. Outside the villages residents are usually buying vegetables, fruits and meat, because they are mostly in local Pulperías not available. Other purchased foods are mainly rice, flour, sugar and beans, because in supermarkets in the city they are cheaper. Out of total expenditures respondents spend the most money on: rice, meat, flour, sugar, fish and beans. These commodities dominate in the volume of purchased food and the frequency of purchases of the respondents also (Figure 2).

Figure 2. The most preferred food items in terms of price, volume and frequency of purchases (Source: Field survey, 2013)



When asked in case they had more money what kind of food they would buy (they normally do not buy) the respondents answered: more vegetables (49%) and fruit (34%). Furthermore, they would purchase more milk, dairy products (28%) and meat (22%). Surprising was that 18% of respondents were attracted by cornflakes and cereals. Many would invest more money into basic foods that normally buy, but by buying them in larger quantities. The final part of the questionnaire was devoted to subjective evaluation of food availability according to their perception of food situation in the region. At the same time, we asked them, how they help each other at the time of crisis or hunger and food insecurity in the households. Most respondents (88%) consider their situation to be unsatisfactory and think they do not have enough food. Only 9% of respondents consider

the stock of their food supplies as satisfactory and diet as balanced. Satisfaction with food stock was expressed mostly by respondents with higher education and those who have permanent jobs and stable income (doctor, nurse and teachers). They consumed much more variable meals including vegetables and fruits.

Despite the high proportion of dissatisfied, only 4 respondents clearly stated that they were hungry because they do not have access to any meal. Over 90% of respondents did not reply to this question at all or indicated that they did not feel hungry, which might suggest that the situation is not so critical and hunger due to lack of food in the acute form is not common. This statement was supported by the recorded responses to the next question, which revealed, that even if they do not have enough food, they often help each other and resolve the situation. Alternatively they have meals consisting of rubbed yucca or boiled rice. Over 60% of respondents have already been in situation, that they had no food, and someone helped them. 15.8% of respondents never needed food aid. In 46.5% of cases it was a family that helped and provided food for them. 23.3% answered that their children helped them in times of need. 9.3% said that they have got help from parents. Nothing extraordinary was to get help of neighbours, or help of friends. 23.4% of respondents got help from neighbours and 20.9% were provided food from friends. Evidence that food aid is conceived as natural can be proven by the positive 95% responses to the question whether they already gave food to someone because they did not have enough food and they have been threatened by hunger. Few people have obtained organized and institutionalized food aid (21%), in almost 43% of these cases food aid was delivered by vincentic nuns (Sisters of Charity of Saint Vincent de Paul).

The rest received food aid from the state, for example, after the devastating hurricane, or they get aid from local parish or school. Respondents declared that food situation in the region is weak or critical. According to them it is caused by lack of employment opportunities, low income, poverty, lack of privately owned land, uncultivated land etc. From the interviews it is clear that in the community there are people who suffer from hunger and malnutrition, vulnerable groups are single mothers with young children and the elderly because they do not have stable income. For local residents, it is very difficult to adopt a varied and balanced diet, because food is expensive and stores with a wider range of food supplies are distinct.

Results of interviews: an opinions of community members on their food conditions

During our research on food security and food availability/ accessibility in the region we have conducted three interviews with representatives of the local community – teacher, missionary and doctor. All three live in the community and are familiar with the economic and social situation in the region, as well as its potential. They agreed that the food situation is difficult but not critical, such as in some regions of Africa. They think that the diet of local residents is nutritionally unbalanced and monotonous.

Meals consists mainly of yucca, corn cake, rice, beans, fish and occasionally poultry. It lacks fruit and vegetables. The problem is that people do not know the importance of a balanced diet, do not know even what that means. Monotonous diet does not supply them with essential vitamins and minerals. For example, children in the morning tend to take to school just a short casaba (kind of bread made from yucca). They do not feel hunger but they are not strong enough to study. The teacher indicated that they have difficulties to concentrate. They are not able to listen and they hardly think. Doctor also confirmed the problems with proper nutrition. She had evidence of four cases of severe child malnutrition, but many children, especially under the age of five years are referred as on the edge of malnutrition. She tried to teach young mothers and motivate them to care better for their children. The local teacher evaluated the food situation in the

region by statement, "We have no problem with hunger, but we have a problem with food." In the community there are people, who do not have enough food, they are not hungry, but they have little food. This is called "a certain kind of hunger", which is found particularly in large families, which have 8, 9 to 14 children. It is estimated that enough food has about 30% of families. He identifies two reasons of it. The first is the lack of jobs and unemployment. People catch fish and work on the farm as day workers, but this work is not stable. The second reason is the high illiteracy of the population. It is estimated that about 40% of the population cannot read or write. He observes as a problem also the accessibility and high distance to places with large shop where the food is cheaper than in the village. There are 16 grocery shops (pulperias) in the region, which is for the given number of inhabitants a lot. The problem is the variety, quality and price of products offered to them as a result of difficult access for vehicles to the region. Shopping in the city is more profitable but challenging mainly for transportation. Availability of food exacerbates the lack of paved roads and bridges. Their quality deteriorates during the rainy season. The missionary sees the food shortages in the villages. He considers as a drawback the reluctance of inhabitants to seek the way how to increase their standard of living. Many of them are satisfied only with the subsistence minimum they have. On the other hand, others would like to manage but do not have the funds to buy seeds, plants, animals or do not have land on which they could plant or graze cattle.

Agriculture is not the main source of livelihood, cultivation and farming is gaining nourishment for only a few people. There are several explanations. The big change came with the emergence of rich farmers. They bought land from local people and started to grow African palms on large plantations and had herds of cattle. A particular problem for locals is the agricultural practice. Growing vegetables and crops is for them very demanding and difficult. They need special assistance, someone who can explain them how to plant and how to care for plants. Breeding animals are introduced only minimally because they have no money for food or land. Interest in doing enterprise is declining, because there is a threat that someone will steal the harvest and it discourages them from agriculture. Especially the younger generation is losing interest to work in the domestic economy and is lacking knowledge of agricultural work. Residents of the region are recipients of food aid from several governmental and non-governmental initiatives. Children in school are supported already for eight years (from 2005) by the government's food aid program. Within it the school gets supplies of raw materials from which selected parents cook meals for the whole school. Special food programs are led by nuns. There are about 20 families included in it. For them they deliver at the end of each month some basic products such as sugar, oil, flour, rice etc. Activities under the direct supervision of Missioners include collection of food in the church once a month. At the same time they help to distribute food packages from the USA (Stop Hunger) for the poorest households. This initiative supported the region twice. Among residents there is a strong mutual sense for help. The community has expressed strong solidarity and loyalty.

The local missionary considers as major development boost for the region, which will also improve the availability of food, the improvement of the infrastructure (bridges and roads). It will connect the village with the other settlements and simplify the transport. Another challenge for the community is the electrification of the village, which will bring more changes. He says "We need to be part of Honduras". According to the missionary there is a chance to return to agriculture and it will bring positive changes. Missionaries in cooperation with the municipality want to start small agricultural projects that would be able to solve the subsistence nature of livelihood of the local population. Representatives of Health centre plan in cooperation with the mayor in Colon to create a supporting program, which will focus on the elimination of malnutrition.

Discussion: characteristics of food system in microregion Sangrelaya and Cocalito

Here are listed the main problems in local food chain with affection on food security in researched area. The agricultural potential of the country is not fully utilized by local residents. Just few agricultural products originate from local production. They grow yucca, beans, rice, oranges, mango, avocado, coconut, bananas. Breeding is limited to poultry (hens and chickens). In few households they breed pigs. Cattle are breed only in wealthy farms. Subsistence fishing is the main activity of the primary sector. Fish is the most affordable and regional source of protein and nutrients. Fisheries is a very important component of the regional food system. People across the region rely on local seafood that they catch themselves for a significant portion of their diet (Mydlová, 2016; Loring, 2013). Most products, including the basic foodstuffs, are imported into the region. People are dependent on food distribution. Our research has shown that the biggest problem is the availability of fruits, vegetables, dairy, meat, especially pork and beef. Therefore, we think that all agricultural projects should be planned in order to fill the gap of these commodities. Nutrition of the population is based on rice, fish, yucca flour, bananas and chicken consumption. Vegetables are in dietary patterns completely absent or minimal. The reason is that vegetables, fruits and meat are in comparison to rice, fish, two-, three- and more times expensive. In the region is taken into account more the quantity than the quality and nutritional value of the food. The aim is not to be hungry. Graded yucca or boiled rice are often a way to fight hunger. Shopping in the village is possible only in small convenience stores – “pulperias”. Most of them offer only basic products – rice, flour, oil, sugar, beans. More variable assortment, e. g. chicken, meat, etc., is only in three stores and very irregularly. Outside the village residents go shopping most often in the town of Tocoa. It is located 80 km (about three hours drive by car, depending the weather, season, adjustments of unpaved roads).

Distribution of food is, because of poor transportation conditions, complicated, especially when just minimum of local inhabitants own a car and the rest must use services of local carriers by sea, river or road (e.g. buses from the adjacent villages). In modern terminology of scientists we can call this region as “food desert” (Guy, 2007; Shaw, 2014; Eckert, Shetty, Meenar, in Reid, et al, 2016). To store the food (availability) is also complicated due to hot and humid climate. The region is located in the tropical zone with difficult climatic conditions. During the year, people face really high temperatures and humidity level at which food has a tendency to spoil. There is no electricity in the village. The residents produce energy by using diesel generators, but not every household is equipped with them. Moreover, such a source of energy is very expensive. It is for them impossible to constantly keep the food in cool conditions. A large stock of food requires refrigeration, but they cannot afford it. To preserve fish is easier, they salt or dry them. In this case we can result that the undeveloped transportation system and storage technologies of the place have significant impact on regional food system and food security (Eckert, Shetty, in: Reid, 2016).

In Honduras, not excluding the region of Sangrelayi and Cocalita, we can notice also the impact of globalization. It can be observed also in production, distribution and consumption of food. It could be indicated by an increase of the impact of the global food system and by the decline of the local food system. Local food system is typical by acting without necessary distribution of food over long distances and more direct relationship between producers and consumers (Lacy, 2000; Feagan, 2007; Reid et al., 2016). Great land owners and multinational agri-food companies are buying land and establishing large farms with hundreds of hectares for cultivation of bananas, African palms and other

exotic agricultural commodities which are prioritized for export markets. They are using the existing land resources and do involve intensive deforestation, creating new farm land. The globalization trend has some considerable negative features. The export capacity of the country is increasing, but most of the profits end up in the hands of large commercial farmers, not small landowners. Connected with this process, the region of Sangrelaya and Cocalito face problems with agricultural production of local people. It reflects the decline in self-sufficiency in domestic consumption, which is very important. Another effect is the loss of biodiversity, which has negative impact on the climate (Atkins & Bowler, 2001; George, 2010; Oosterveer & Sonnenfeld, 2012).

How to deal with food aid in undeveloped region

Identifying the problem of food accessibility and availability plays a major role in determining the solutions that we can apply in order to evaluate hunger, malnutrition, and lack of available nutrition. In case if we only treat symptoms or misdiagnose problems, we do not make things better, but in fact it can be even worse (Corbert & Fikker, 2009). Specifically concerning the provision of food aid around the world, involving governmental projects (Nováček, 2017) and NGO projects, it is necessary to carefully consider in what form it could be provided and what kind of food to choose (Klennert et al. 2005; UNAIDS; UNDP). This requires a thorough examination of the conditions in which people live. Identify regional particularities and way of life of the local inhabitants (Cruz, 2013). This applies especially to areas where people have access to certain types of food and they are not in acute danger of lack of food, as in our research region. Inhabitants of the analyzed areas in Honduras regularly consume rice, because it is financially very accessible (Basset & Winter-Nelson, 2010). Paradoxically as food aid from international organization (Stop Hunger) they have been supplied with rice. This food aid just temporarily covers their own portion of cheap purchased rice. Aid package per head, however, was very small. These people are willing to accept anything. For packages of rice they were very grateful. But this food aid can cover just one dinner for a larger family. This aid had a very short-term effect. Its purpose was fulfilled. They eat up. It satisfied the donor. It remains questionable whether it fulfilled the true purpose of aid and to what extent it was effective. What would these people need is not only food aid but starting to create conditions for development, and not only in this community but everywhere in the whole region.

CONCLUSIONS

The aim of the research was to analyze the issue of the availability and accessibility of food on the micro-region level and to detect some basic general conclusions. The results of our research were conducted on the basis of a questionnaire survey and interviews. They confirmed that inhabitants of villages of Sangrelaya and Cocalito do experience food insecurity due to spatial and economic threat to gain food. Our basic assumption was confirmed, but two partial premises were not proven: self agricultural production of food is not the main source of the livelihood of local inhabitants. The majority of locals are not employed and do not practice agriculture.

Community self-sufficiency in producing agricultural products (plant and animal) currently operates at a much lower level than we expected. Most of the food they consume comes from retail stores and are imported to the village. In the context of food security and for sake of improved food availability it was confirmed the need for development in the agricultural sector at the local level. The locals can work and obtain self-sufficient supplies from their own production. As the second unconfirmed assumption we consider the pattern of regular consumption of food, because over 80% of respondents declared, that they ate three times a day, which represents quite a high

regularity. But compared with more economically developed regions they consume food less frequently and in smaller doses, so it can be stated that local residents due to limited budget do not have regular and sufficient supply of food. Other assumptions formulated as working premises were confirmed. Residents of Sangrelaya and Cocalito have insufficient variability of food (meals) and receive nutritionally unbalanced diet. From this case study it is evident that eating habits are determined by food availability in different regions of the world and of course specific situation of studied countries. Food security – in our research dominantly composed of food availability and food accessibility monitored through consumption practices - in the region is clearly affected by the socio-economic potential of the population, e. g. their employment, monthly income, number of household members, education and the distance of food selling units. It is also related to road infrastructure. Its improvement will in the future ensure better spatial accessibility of food and bring the expected economic development of the region. Our research can, for sure, have benefits for a particular community in Sangrelaya and general consequences also.

The locals can gain a much more realistic opinion on the state of food security in their region. They can get basic ideas on the scale of hunger and malnutrition problems. Described facts and conclusions can be used for a proactive approach in the fight against hunger and in developing appropriate strategies against food insecurity in the region. Our research results can be used for planning new projects that directly or indirectly affect the availability of food. It can also increase the effectiveness of existing or planned food aid by all organizations. The used research strategy can be applied to any developing and developed region (after modifications from the point of view of the specific conditions of the region under examination). A thorough analysis of the potential of the region and its citizens is a prerequisite to provide effective food aid and development cooperation. Basic SWOT analysis is able to assess what people really need, what are the priorities and possibilities to determine the most appropriate way (form) of action that will solve the problems in specific regions. But for appropriate changes and solution of many problems it would need a strong will and belief of many stakeholders at national and international level in the field of politics, economic and business conditions, education and other spheres with an impact on development and sustainability.

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GEOTOURISM BASED UPON THE GOTHIC CATHEDRAL OF SANTA MARÍA, VITORIA-GASTEIZ, SPAIN

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Abstract: The identification of the rock types used in the construction of the Cathedral of Santa María, a gothic monument in Vitoria-Gasteiz in Spain, has enabled the reconstruction of the entire building process, from the extraction of stone from the quarry to the current restoration. Furthermore, the substrate of the building is used as a reference to narrate the “full history” of the Spanish city of Vitoria-Gasteiz since the Campanian, 80 million years ago. In this multidisciplinary study, the *geotic* aspects of low heritage value are combined with other *biotic* and *anthropic* features, and these constituents facilitate the dissemination of information about the cathedral and associated geotourism, in supporting the cultural and nature tourism. This simple methodology (geological history of the substrate followed by building process) can be easily applied to tourist areas that have poor geoheritage.

Key words: geotic aspects, biotic aspects, anthropic aspects, cultural tourism

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INTRODUCTION

In their less simplistic and more general view, Newsome & Dowling (2010) divide the environment into *abiotic*, *biotic*, and *cultural* attributes, and include sites of geological interest as well as cultural and historical assets. Another non-exclusive division, based on areas of knowledge, considers *geotic*, *biotic*, and *anthropic* characteristics (Martínez-Torres, 1994). *Anthropic* characteristics include didactic, cultural, and patrimonial themes; from this perspective, tourism activities are framed within the anthropic aspect because of their interactions with the environment and human activities (Reynard et al., 2017). Tourism that is oriented towards the knowledge and enjoyment of biotic environmental features is often called ecotourism or nature tourism. Ecotourism, and cultural tourism in general, are firmly established and are well provided for in terms of access to information and infrastructure. In contrast, geotourism, or tourism related to geodiversity or geotic aspects in general, is a more recent development. In this paper, the way in which geotourism can be related to cultural tourism and ecotourism is explored, using the Cathedral of Santa María in Vitoria-Gasteiz, Spain, and its surroundings as an example.

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LOCATION AND TOURISM

The Spanish city of Vitoria-Gasteiz, situated on the wide plain of the Llanada Alavesa at an altitude of 550 m above sea level, has a population of 250,000 and is the capital of both the Province of Alava and the Autonomous Community of the Basque Country (Figure 1). It has an abundant availability of public land, which has been progressively occupied in a process of discreet urbanism that is closely regulated by the local government. The support of all political parties and successive town councils towards its development into a sustainable and environmentally responsible city was recognized in 2012, when the city received the *European Green Capital Award*. From an historical/heritage perspective, the restoration of the Cathedral of Santa María was recognized in 2002 with the *Europa Nostra Award for Cultural Heritage*. Since 2015, the cathedral has been listed as a *UNESCO World Heritage Site* within the *Routes of Santiago de Compostela: Camino Francés and Routes of Northern Spain*. These distinctions have focussed the city's official tourist policy towards ecotourism and cultural tourism. Information collected by the city council shows that 140,000 tourists visited Vitoria-Gasteiz in 2014. The typical visitor of the city is aged 35–64 years and is from a neighbouring Spanish region, and 8% are from France. The average stay is 2 days, during which other destinations are visited, such as the Rioja Alavesa, a centre of wine-based tourism. The most valued touristic aspect is gastronomy, followed by nature (Council of Vitoria-Gasteiz, 2016).

Ecotourism in the area focuses on the *Anillo Verde* (Green Ring), a route of 30 km around the city perimeter, along which the *Salburua Lagoons* are the main highlight. These lagoons cover an area of 206 ha and are included in the Ramsar list of *Wetlands of International Importance* and the *Natura 2000 European Network* as a *Site of Community Importance* (SCI). The main historical and cultural heritage tourist attraction is the Cathedral of Santa María, a visit to which is considered mandatory in travel guides.

METHODOLOGY

The proposal of geotourism here described derives from three researchs developed in the Cathedral of Santa María: excavation of the foundation, recognition of the building materials and its provenance. In relation to the rocks of the substrate the geological history of the city is narrated. From the building materials and its provenance, the construction process is described: ancient quarry, transportation and placement of the stones. Moreover, the environmental characteristics of the transportation route are described. Geotourism has already been proposed in other cities such as Rome (Heiken et al., 2005), Lisbon (Pinto et al., 2011, Rodrigues et al., 2011) or Brno (Kubalíková et al., 2017). Likewise, specific urban geotourism apps have been developed (Pica et al., 2017). In this work we use a single monument and its building process, to link geotic, biotic and anthropic aspects as a unique geotourism resource.

GEODIVERSITY AND GEOHERITAGE

The city of Vitoria-Gasteiz has an area of 277 km² and is set on Upper Cretaceous rocks with some discordant quaternary deposits. The relief is very smooth and outcrops are scarce (Figure 1). On the few slopes where the substrate does crop out, a monotonous series of marls and marl limestone are visible, dipping gently to the south (Figure 1). Fossils of *Micraster* and *Inoceramus* have been found in the area. The Geological Service of Spain has identified 144 important sites as part of the Global Geosites Project (Instituto Geológico y Minero de España, 2011), of which only the *Ámbar de Peñacerrada II Geosite*, approximately 30 km away, is close to Vitoria-Gasteiz (Martínez-Torres, Alonso & Valle, 2011). Of the 150 Sites of Geological Interest of the Basque Country (Mendia et al., 2013), only one site in Vitoria-Gasteiz is mentioned: the *Wetland and Quaternary of Salburua*. The wetland comprises a system of lagoons that protect the city from floods,

but it is best known for its outstanding ornithological richness. The hydrogeological aspects, therefore, are secondary to its exceptional biotic aspects. The lack of geological heritage in Vitoria-Gasteiz is a reflection of its low geodiversity. The very monotonous series of Upper Cretaceous layers on which the city rests is more than 6 km thick in places; in geomorphological terms, it has no outstanding features of interest (Ramírez-del-Pozo, 1973). As the relief is very smooth, outcrops are scarce (Figure 1).



Figure 1. Location of Vitoria-Gasteiz and the slope of highway A-1 (42.827634, - 2.761958), Characteristic Upper Cretaceous marly limestone, The series dips toward the south and shows small sedimentary extensional faults and a gentle angular discordance at the base of the limestone (Overview is from Google Street View. Accessed 13 Dec 2017)

THE CATHEDRAL

The Cathedral of Santa María, generally known as the Old Cathedral, is a gothic Catholic edifice with characteristic pointed arches that was built mainly in the 13th and 14th centuries (Figure 2). It is located in the centre (and the highest point) of the city.



Figure 2. Southern facade of the Cathedral of Santa Maria. The ashlar is composed of Paleocene limestone (*Lumaquelas de Ajarte*). The masonry is Campanian calcarenite (*Calcarenitas de Olárizu*)

The northern and eastern facades form part of a medieval wall that surrounds the ancient city. The western façade lies beneath the cathedral's tower and the southern facade is defined by a square that was originally destined to be a cloister. The cathedral was closed in 1997 because of the risk of collapse. Thereafter, it was completely examined from the foundations up, and both the interior and exterior were excavated to the substrate, thereby facilitating an archaeological interpretation of the entire history of the city up to the

cathedral's construction. Likewise, analysis of its structure has enabled the phases of construction and subsequent reconstructions to be determined, as far as the current restoration. This information has been summarized in a restoration plan (Azkarate et al., 2001). The restoration works continue today under the motto *Open for Works®*, and an exhibition of the history of the cathedral and the city has been installed at the site.

LITHOLOGICAL MAP OF THE CATHEDRAL

The building stones of the cathedral and their source locations were documented during the overall analysis of the cathedral. Of the 18 lithologies identified (Figure 3), the most plentiful were Paleocene bioclastic limestone used in ashlar and sculpture, and Campanian calcarenite used in masonry (Martínez-Torres, 2001). Other analytical techniques used to investigate the walls included 41 drillholes, and geophysical techniques such as radar, electric profiles, thermographs, and X-ray analysis (Bell et al., 2012).

The provenance of the stones was identified by delimiting the identified rocks to areas with the same lithology and fossil content on geological maps. Within each geological level, the *lithotecto*, or level able to be quarried, was delineated. From this information and other details documented in the cathedral archives, the likely quarry sites of the stones were determined, and these were later visited. Field studies of these old quarries produced very different results in terms of ages, locations, and typologies of extractions (Martínez-Torres, 2007, 2009a). The ashlar and sculpture stone used in the cathedral came from the town of Ajarte; hence, the defined lithotype is termed *Lumaquela de Ajarte*. The lithotype used in the masonry is termed *Calcarenita de Olárizu*, as it originated from the mountain of that name (Martínez-Torres, 2001). The available information on each element of the building was collected and processed in a GIS. An analysis of the lithological maps and mechanical drillholes revealed that 4,922 tons of *Lumaquelas de Ajarte* and 5,437 tons of *Calcarenitas de Olárizu* were used in the cathedral. In an additional study conducted to investigate the alteration of the construction stone over time, complex maps were drawn. Now, visitors can learn about the alteration processes and consequent restoration criteria in specialized guided visits.



Figure 3. Example of a lithological map (width 10 m) showing the northern façade of the Cathedral of Santa María, 1. Campanian calcarenite (*Calcarenitas de Olárizu*); 2. Paleocene limestone (*Lumaquelas de Ajarte*); 3. Paleocene dolomite; and 4. Campanian marly limestone of the substrate (Image of the Fundación Catedral Santa María)

THE ROUTE OF STONE

After the rocks used in the cathedral and their origins had been identified, the entire construction process was modelled, from the extraction of the rock in the quarry to its placement. A guide was written to disseminate this information, *La Ruta de la Piedra: camino medieval desde las canteras antiguas de Ajarte hasta la Catedral Vieja de Santa María en Vitoria-Gasteiz* (Martínez-Torres, 2009b), known in English as “The Route of Stone: the Medieval Road from the Ancient Quarries of Ajarte to the Old Cathedral of Santa María in Vitoria-Gasteiz”.

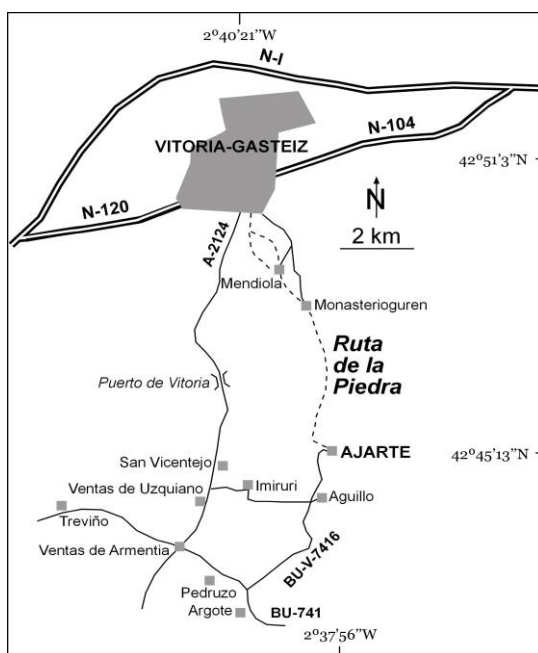


Figure 4. The Route of Stone (Ruta de la Piedra) from ancient quarries in Ajarte to cathedral in Vitoria-Gasteiz

The guide outlines a rugged 14 km walk that has been designed to give information about the cathedral construction process and other geological, biological, and historical features. Geotourism, ecotourism, cultural tourism, and active tourism have therefore been integrated into a single attraction. The first stop along the route is in the town of Ajarte (Figure 4), where the rocks used in the stonework of its houses are described, and special attention is given to the abundant fragments of lamellibranchs. The next stop is an old quarry front, where the paleontological features are noted and the different extraction and loading systems are explained. In the sections where the medieval road is preserved, its construction and erosion processes are discussed. Along the walk, the structural relief and its influence on the distribution of the vegetation are also considered. On arrival at the cathedral, visitors can see the stones used in its construction and inspect the fossils found in them, and verify their origins. They can also learn about how the ashlar was carved and placed. The cathedral administration organizes guided tours along The Route of Stone. One of the most requested dates coincides with the reenactment of a medieval market around the cathedral on a weekend in September, when a *Lumaquela de Ajarte* ashlar is transported in an ox-pulled cart along the last 4 km of the route. After the walk, visitors are invited to enter the cathedral.

THE FULL STORY OF VITORIA-GASTEIZ

The tour of the cathedral commences next to the eastern wall, where the foundations and the rock that supports them are visible in an old pit that has been excavated. The substrates are Campanian limestone and marly limestone. A map of the Campanian world at the beginning of the visit shows the location of Vitoria-Gasteiz at a depth of 200 m in the Tethys Sea. Bivalves (*Inoceramus*), ammonites (*Parapuzosia*), and sea urchins can be identified in sediments that are now visible. A *Micraster echinus*, 80,000,000 years of age and the first inhabitant of Vitoria-Gasteiz, has been proposed as a logo for the city (Figure 5).



Figure 5. The first inhabitant of Vitoria-Gasteiz, a *Micraster* that is 80,000,000 years old, shown in a logo project



Figure 6. The façade of the old school that later became the Hospicio de San Prudencio, built in 1589, is a good example of the neoclassical style and comprises the main types of stone used in masonry and sculpture in Vitoria-Gasteiz, 1. Paleocene limestone (*Lumaquela de Ajarte*); 2. Upper Cretaceous limestone (*Caliza Negra de Anda*); 3. Albion sandstone (*Arenisca de Sierra Elquea*); 4. Miocene sandstone (*Arenisca tipo Fontecha*).

The museographic narrative continues with information about the foundation of the city on the hill of Gasteiz, the superposition of different walls, and the antecedents of the cathedral. Information about the different rocks and their origins is presented in the

explanation of the medieval constructive typologies, and the tools used by the stonemasons are on display. The different construction phases and their links to various historical events and the history of art are explained as the visit progresses, and the tour concludes with a visit to the tower, the highest point of the city. The history of the city, as displayed in the cathedral, including the alpine orogenic cycle, is presented in the *Historia de Gasteiz y Vitoria. Geodiversidad incluida* (Martínez-Torres, 2013), known in English as “History of Gasteiz and Vitoria. Geodiversity included”. As well as the full history that is shown in the permanent exhibition in the cathedral, there is a route of the main squares of the city that allows visitors to see its buildings, history, and stonework (Figure 6). The visit concludes in the Natural Sciences Museum of Álava where visitors can view interesting collections of Iberian mineralogy and paleontology, and visit a special room dedicated to the amber deposit of the Peñacerrada II Geosite. Sites of geological interest in the Province of Álava are also mentioned, including the Haya de Ponata Cavern that extends for 70 km; the Délica and Gujuli Waterfalls that have drops of 220 and 110 m, respectively; the 47 eolic lagoons of Laguardia; the Salinas de Añana salt production facility and its Salty Valley; and the South Pyrenean frontal thrust in Sierra Cantabria.

DISSEMINATION

Both tours conducted around the cathedral, The Route of Stone and the History of Gasteiz and Vitoria, consider geotic aspects of the city and its surroundings. Biotic aspects such as vegetation and fauna, and anthropic aspects such as geography, archaeology, history, architecture, construction, and transport, are also considered. The integration of these themes into a single discourse has added value both to the themes as combined, and individually. For example, the rocks used in the construction of the cathedral are not particularly special in terms of local geodiversity, but the old quarries from which they were extracted are now of interest, and some are being considered as possible archaeological heritage sites (Martínez-Torres, 2009a). In an attempt to integrate geotourism, ecotourism, cultural tourism, and active tourism around the cathedral, the publications discussed in this article have been distributed to guides and tour managers. To date, the real impact of the guides has not been evaluated and their contents have not been modified since their publication. However, it has become apparent during the training of the tour guides that some of the aspects mentioned above are emphasized more than others, so it might be necessary to revise the guides to highlight the geological contents (Pasquaré Mariotto & Venturini, 2016). This case study demonstrates how geotourism can be successfully integrated into discussions about the history, culture, and construction of the cathedral.

CONCLUSION

The proposed geotourism centred around the Cathedral of Santa María in Vitoria-Gasteiz integrates the geotic, biotic, and anthropic aspects of the monument and its surroundings. The guide *La Ruta de la Piedra* (The Route of Stone) outlines the entire construction process of the cathedral, from extraction of stone from the quarry to their eventual placement, and the full history of the city from the Campanian era is related in the *Historia de Gasteiz y Vitoria* (History of Gasteiz and Vitoria). Through the rock and stone used in the construction of the Gothic temple and its foundation, geotourism has been integrated with ecotourism, cultural tourism, and active tourism. The rock types used in the cathedral construction are not of special geological relevance; however, value has been added by combining various aspects and individual geotic features that are not usually shown in traditional visits. To enable geotourism to be linked to conventional tourism, tour managers have been provided with geotourism guides. The criteria and methodology used in this example can be exported easily to other locations that do not enjoy a rich geodiversity.

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INFORMAL SECTOR CITY TOURISM: CROSS-BORDER SHOPPERS IN JOHANNESBURG

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Abstract: Informality is a distinguishing trait of economic life across much of the global South. In terms of the tourism sector several researchers examine the informal sector of leisure tourism. In this article the aim is to focus upon business tourism and more specifically the segment of informal sector business tourism. The growth of informal sector business tourism is particularly important in sub-Saharan Africa. An analysis is undertaken of recent research on South Africa's major city of Johannesburg where the importance of informal sector business tourism is demonstrated. The results show Johannesburg is the focus for transnational entrepreneurship in the form of the growth of cross-border shopping. The organisation of this manifestation of informal business tourism, the nature of its participants and business challenges form the focus of discussion. It is argued that despite many benefits that flow to the city of Johannesburg from informal sector of business tourism the local state has yet to fully acknowledge the multiple positive impacts of these international visitors upon the urban economy and plan to accommodate the needs of cross-border shoppers.

Key words: informal sector tourism; business tourism; migrant entrepreneurs; cross-border shopping; Johannesburg

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INTRODUCTION

Informality is a distinguishing trait of daily economic life across much of the global South. Although the precise definition of the term 'informality' is contested usually it applies to "a range of behaviours and practices that are not regulated or controlled by the state or formal institutions, including those related to income generation, service provision and settlements" (Chen et al., 2016: 336). In particular, across sub-Saharan Africa the historically unique aspect of labour markets is the extent of such informality (Golub & Hayat, 2014). Several studies attest to the fact that the informal economy is "a major force" across Africa (Benjamin & Mbaye, 2014: 1). Grant (2015: 135) contends that the mass of urban dwellers in Africa "work outside of the formal economy, live in informal housing, and conduct business without using banks". Employment in the continent "remains overwhelmingly informal" accounting for at least 80 percent of total employment (Golub &

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Hayat, 2014: 2). Across Africa a substantial proportion of the urban poor pursue livelihoods which are carved out of gaps in formal rules and of gaps in the use of (especially) urban space both of which are defined by local states (Chen et al., 2016; Rogerson, 2016a).

Arguably, informality is a dimension of all sectors of the economy including of the continent's expanding tourism sector (Rogerson & Rogerson, 2018). The objective in this paper is to investigate one distinctive facet of the informal economy of tourism in Africa and of the multiple challenges confronting a particular sub-group of informal tourism entrepreneurs. The cosmopolitan city of Johannesburg, South Africa's leading commercial centre, major locus of corporate headquarters and the country's second most significant destination for tourism spend (following Cape Town) provides the canvas for this investigation (Rogerson & Rogerson, 2014, 2015, 2017; Rogerson, 2018). Despite its economic strength the labour-absorptive capacity of Johannesburg's formal economy cannot match the numbers of potential work seekers, not least because Johannesburg is quintessentially a city which is a magnet for migrants (Peberdy, 2013; Rogerson & Rogerson, 2015). The city evidences a substantial and expanding informal economy which operates mostly on the street as well as inside multi-storey buildings, from backyard shacks, converted garages and resident home spaces. Recent surveys suggest that during 2013 11 percent of Johannesburg city residents owned a business and 65 percent of all business owners functioned in the informal economy. Peberdy (2016: 9) shows that in Johannesburg "retail is easily the most important entrepreneurial activity" and encompasses the sale of a variety of foodstuffs, clothes, alcohol, shoes, electrical goods, DVDs and soft furnishings. One striking component of this informal retail economy is the operations of the city's communities of international migrant entrepreneurs who were attracted to Johannesburg by potential economic opportunities that opened up especially since 1994 during the post-apartheid period (Crush & McDonald, 2000). The largest share of these migrant entrepreneurs in Johannesburg is drawn from the proximate states of the Southern African Development Community, with Zimbabwe and Mozambique the two leading individual country sources (Peberdy, 2017). Chen et al. (2016) point out that the policies and practices of local government exert a substantial impact on urban informal livelihoods. Of note is that the local state in Johannesburg assumes a critical role in regulating the activities of the city's informal entrepreneurs. At various times it has vacillated between a rhetoric of support for such entrepreneurs to the implementation of highly repressive measures which have threatened and even at times destroyed precarious informal livelihoods (Rogerson, 2016b).

In terms of the city's tourism economy Johannesburg is best understood as a 'non-traditional' destination in which business tourism assumes a critical role, albeit with some recent expansion occurring in the city's leisure offerings (Rogerson, 2002, 2013; Rogerson & Rogerson, 2016). Visiting friends and relatives constitutes the largest actual number of recorded trips to Johannesburg but business tourism is the key to high levels of tourism spend in the city (Rogerson & Rogerson, 2014, 2017). Concerning the uneven geography of business tourism in South Africa, Johannesburg is the country's leading focus for informal as well as formal sector business tourism because of the extensive operations there of communities of cross-border shoppers from surrounding countries (Rogerson, 2015a). The organisation, characteristics and challenges of these cross-border shoppers are under scrutiny in this article. The discussion falls into two further sections of material. First, the study is situated more broadly within existing literature around informal sector tourism, particularly in the context of the global South and thereafter an exploration of the distinctive nature of informal sector business tourism in Africa. Second, attention turns to examine the nature of cross-border shoppers/traders, which constitute such a significant component of the informal economy of inner-city Johannesburg, the organisation of their businesses, and of challenges confronting these entrepreneurs. The findings are

triangulated from a number of recent empirical investigations which have been conducted around cross-border shopping in Johannesburg. The analysis is informed overall by the observation made by Nunkoo et al. (2013: 5) that “a review of past research efforts is an important endeavour in all academic research areas”, not least in tourism scholarship.

THE INFORMAL SECTOR OF TOURISM

Tourism scholars ‘discovered’ and began applying the concept of the informal sector to tourism research several years after the term was first introduced into the lexicon of development studies by the ILO (1972) and Hart’s (1973) benchmark study on Ghana. In one of the earliest statements on its application Davis (1978: 303) observed that the tourism industry in developing countries could be appropriately differentiated between formal and informal activities with the latter dominated by “the underemployed residue” left over by dualistic development trajectories under the guise of ‘modernization’. Using the ILO’s classification of the characteristics of formal versus informal sector enterprises Wahnschafft (1982) sought to explore the socio-economic structure of a tourist resort in terms of the formal-informal dichotomy. In this highly influential study of Pattaya, Thailand it was observed that “the ILO has submitted neither particular studies nor policy recommendations with regard to the special case of the informal tourism sector” (Wahnschafft, 1982: 433). At Pattaya the informal tourism economy was comprised of informal transport operators, self-employed beach vendors, handicraft producers and the resort’s thriving economy of prostitution. An important finding was that government tourism policy was biased towards support for and protection of formal tourism enterprises and that “informal businesses are frequently subjected to regulations that are meant to assure their effective functioning according to the needs of the formal sector” (Wahnschafft, 1982: 449).

The subordinated nature of informal tourism enterprises in the global South was confirmed by several other investigations. Oppermann (1993: 542) conjectured that government bias towards formal sector enterprises might “eventually lead to an extinction of the informal resort sector”. Cukier and Wall (1994: 464) stressed that in Bali the role and importance of the informal tourism economy “is often ignored by tourism planners”. In Sri Lanka an examination of the ordinary lives of street guides disclosed that most were living off their wits by “seizing opportunities as and when they occur” (Crick, 1992:139). At Kandy the marginal lives and existence of these street guides was exposed by Crick (1992: 138) who highlighted that in Sri Lanka “to tourism planners and policy makers the poor are normally just a nuisance”. The neglect by planners of the informal sector in tourism and of its participants is a recurrent theme in other studies which appeared about beach masseurs, craft souvenir traders, or providers of (unlicensed) informal accommodation (Farver, 1984; Timothy & Wall, 1997; Dahles, 1998; Dahles & Bras, 1999a, 1999b; Dahles, 2001; Dahles & Keune, 2002; Hampton, 2003). Notwithstanding the increasing number of tourism plans prepared in developing countries it was stressed by Timothy & Wall (1997: 324) that “very few such plans address the needs of the informal sector or even acknowledge its existence”. Overall, the stance of officialdom was often that the informal sector and its participants was ‘temporary’ which provided a rationale for planners to conveniently neglect its needs. One important underpinning for this policy viewpoint was that (with the notable exception of sex workers) “the informal sector, including informal vendors, has not received attention in the tourism literature commensurate with its importance” (Timothy & Wall, 1997: 325).

In addressing this oversight through an examination of street vendors in Yogyakarta, Indonesia Timothy and Wall (1997) documented a heterogeneous group of street sellers who exhibited many of the ILO’s characteristics for informal enterprises. The strong local linkages of these vendors was isolated as a positive force for local

economic development. Nevertheless, these informal tourism entrepreneurs were “often viewed as a problem by tourism planners” (Timothy & Wall, 1997: 337). Overall, it was concluded that the informal sector of tourism should not be viewed as “a set of aberrant activities which will disappear with modernization” rather it needs to be understood as a fundamental structural feature of tourism in countries across the global South (Timothy & Wall, 1997: 337). Oppermann’s works (1993, 1998) direct our attention to the organisation of tourism space in developing countries. In particular, it was emphasized that the dual structure of the tourism economy “manifests itself in space with the corresponding economic and sociocultural impacts” (Oppermann, 1993: 545). It was argued that one could discern so-termed formal tourism space, a shared space of formal and informal tourism enterprises, and a zone of exclusively informal tourist space. A significant finding was that the informal tourism sector “is characterized through its high integration into the local economic structure that results in a low leakage and, therefore, a high multiplier effect on the local economy” (Oppermann, 1993: 331).

Since 2000 there has been a maturation of tourism research concerning the informal sector. The emerging scholarship around pro-poor tourism engaged with issues of upgrading opportunities for informal sector enterprises (Ashley & Roe, 2002; Rogerson, 2006; Mitchell & Ashley, 2010). Bah & Goodwin (2003) examined increasing access of the informal sector to market opportunities in tourism in The Gambia and showcased the potential for a range of win-win partnerships between the formal and informal sector enterprises. The need for such partnerships and of improved relationships between the formal economy and informal enterprises was a theme identified also in Henderson and Smith’s (2009) analysis of two beach resorts in Thailand. In research on sub-Saharan Africa Meyer (2013: 786) recorded the role of international migrants in the informal economy of Stonetown, Zanzibar where it was disclosed that informal art sellers “are mainly Kenyans dressed in Maasai attire selling Maasai souvenirs despite the fact that Zanzibar has no obvious relation to Maasai culture”. In Tanzania Slocum et al. (2011) argued that current policy agendas towards the ‘formalization’ of informal enterprises negated the economic benefits of tourism development pathways in the country. In recent research several new issues have been scrutinised concerning informal tourism enterprises. The theme of formalization of the informal sector and the contribution of poor urban vendors to tourism development in Manila, Philippines is taken up by Yotsumoto (2013). Truong (2018) explores the perspectives and experiences of street vendors in Hanoi, Vietnam regarding tourism and poverty alleviation. Biggs et al. (2012) analyse the resilience of informal (as well as formal) tourism enterprises to natural disasters through the lens of reef tourism in Phuket, Thailand. Further, Damayanti et al. (2017) utilise the concept of ‘coopetition’, defined as the simultaneous cooperative and competitive activities among actors, to revisit the organisation and workings of the informal tourism economy of Yogyakarta, Indonesia.

Overall, in observing the current state of research on the informal tourism economy it is evident there is an almost exclusive focus on enterprises and activities that are associated with leisure tourism. Only a limited scholarship exists that engages with the informal economy in non-leisure forms of tourism, not least of business tourism. Mainstream scholarship around business tourism in the global North centres upon a definition as encompassing independent business trips and travelling for purposes of meetings, incentives, conferences and exhibitions or MICE tourism (Davidson, 1994). As is argued elsewhere, at the heart of Northern literature about business tourism is the ‘formal sector’ business tourist engaged in travelling for business purposes usually on an international basis and sometimes also as a domestic business traveller (Rogerson, 2015b). Focus issues for research include, *inter alia*, the establishment of convention centres, decision-making and marketing for conferences or exhibitions, the travel behaviour and accommodation

preferences of MICE tourists, and research on the local economic impacts of MICE tourism (Weber & Chon, 2002; Ladkin, 2006; Celuch & Davidson, 2009; Horvath, 2011). Throughout sub-Saharan Africa there is a substantial informal business economy which coexists with a formal business tourism economy paralleling that of the global North (Rogerson, 2015b; Rogerson & Letsie, 2015; Tichaawa, 2017). The formal business economy in Africa is reflected in the appearance of convention centres and clusters of upmarket accommodation services which are targeted at the business traveller and mainly situated in capital cities or major commercial centres (Greenberg & Rogerson, 2015; Rogerson, 2011a, 2011b, 2013a, 2013b; Tichaawa, 2017). This said, in a seminal paper it was argued the inclusion of business travel in the scope and realm of global tourism scholarship was in essence a 'Northern concept' and centred mainly on affluent business people travelling either between developed countries or between the developed and the developing worlds (Timothy & Teye, 2005). This Northern definition of business tourism overlooks a vast array of informal sector business travel and tourists – international and domestic - which are a vital dimension of business tourism in Africa (Rogerson & Letsie, 2015). Timothy & Teye (2005: 83) issued a call for researchers to challenge the conventional view of business travel in tourism by highlighting the business operations of traders and vendors traversing borderland spaces in West Africa and yet unenumerated as tourists.

Manifestations of such cross-border trading are recorded throughout most of sub-Saharan Africa (Peberdy, 2000a, 2000b, 2007; Afrika & Ajumbo, 2012; Brenton & Gamberoni, 2013; Peberdy et al., 2015; Dobler, 2016; Tichaawa, 2017). In particular, the sub-region of Southern Africa has witnessed a major burst of such activities. It is evidenced that this kind of informal business tourism is a common phenomenon between South Africa and other countries in Southern Africa, most importantly Lesotho, Swaziland, Mozambique, Zimbabwe, Zambia and Malawi (Muzvidziwa, 1998; Peberdy & Crush, 1998; Peberdy, 2000a, 2000b; Peberdy & Crush, 2001; Peberdy & Rogerson, 2003; SBP, 2006; ComMark Trust, 2008; Masango & Haraldsson, 2010; Muzvidziwa, 2010; Rogerson, 2011; Chiliya et al., 2012; Jamela, 2013; Peberdy et al., 2015; Manjokoto & Ranga, 2017). Indeed, Peberdy et al. (2015: 207) assert that informal sector cross-border trade represents "a significant feature of regional trade flows in Southern Africa". For Timothy and Teye (2005: 83) the activities of such cross-border traders constitute a "form of business traveller that is unique to the developing world".

CROSS BORDER TRADERS AND SHOPPERS IN JOHANNESBURG

South Africa's transition to democracy and the country's re-integration into the global economy post-1994 after years of international boycotts and sanctions created a radical shift in the socio-political environment which impacted regional mobilities. Crush and McDonald (2000: 4) reflected that one of the most notable post-apartheid changes was "the sheer volume and diversity of human traffic now crossing South Africa's borders". Indeed, whilst the abandonment of international sanctions often is linked to expanding international tourism flows to South Africa from Europe and North America it must be understood that the most dramatic shift was the massive surge which occurred in flows of regional African tourists (Rogerson, 2004). Of South Africa's 9 million recorded international tourists nearly 80 percent of visitors are from the region of sub-Saharan Africa with the largest flows from surrounding countries in the Southern African Development Community (SADC) (Rogerson, 2011). In terms of business travel the demise of apartheid "inserted South Africa into regional and trans-continental informal trade networks" (Crush & McDonald, 2000: 5). The central drivers of informal sector business tourism are communities of international migrant entrepreneurs who are cross-border traders (Peberdy & Rogerson, 2000, 2003; Peberdy et al., 2015). From the earliest investigations of these

entrepreneurs there is evidence that the rise of cross-border trading certainly pre-dates the demise of apartheid (Peberdy & Crush, 1998; Peberdy, 2000a, 2000b; Peberdy & Crush 2001). For example, Peberdy and Crush (1998, p. 2) reported that “most traders from the SADC region have been travelling to South Africa to trade since at least 1990, and some before”. Nevertheless, the changed politico-economic environment post-1994 provided a massive stimulus for further expansion. These communities of migrant entrepreneurs have been shown as connected to strong informal and formal transnational networks of trade, migration and entrepreneurship (Peberdy & Rogerson, 2000, 2003). The activities of these traders carrying goods across international borders are considered “the predominant form of employment-related non-permanent migration in the region” (Nunez, 2009: 9). In one analysis these informal business tourists in South Africa are viewed as “amongst the most enterprising and energetic of contemporary migrants” (Crush et al., 2015).

The category of informal cross-border trader is not, however, homogeneous. In Southern Africa, at least five different variations of cross-border trading can be discerned (Peberdy, 2002). The most numerous are shoppers who travel to South Africa for short periods (usually 1 to 4 days) in order to buy goods from formal sector retail and wholesale outlets for purposes of resale in the home country variously on the street, in markets, to individuals and to formal sector retail establishments. Second, are communities of traders who travel for longer periods to South Africa – from one week to up to two months – carrying goods (often food or handicrafts) from the home country in order to sell in informal and retail markets. The profits from those goods are then spent on purchasing goods in South Africa for transfer and resale in the home country. Third, are traders who travel across three countries, including South Africa, to buy and sell goods on their journey. Four and five are the smallest groups and comprise respectively traders who only bring goods from the home country into South Africa for sale and South Africans who take goods for vending in other countries in the Southern African region.

Although the geography of cross-border trading in South Africa includes a number of border towns, most notably Musina on the Zimbabwe-South Africa border, Johannesburg is the main focus of operations (Rogerson, 2011). Traders are lured to Johannesburg by the variety and prices of goods that can be purchased through an estimated 3000 shops in inner city Johannesburg which service this trade (Tanya Zack Development Planners et al., 2017). Recently, of critical importance for Johannesburg’s position as a hub of cross-border trading from other countries in sub-Saharan Africa, including as far north as Malawi and Zambia, has been the establishment of several malls run by Chinese entrepreneurs. The development of these Chinese malls initially in the inner city but subsequently at other locations in Johannesburg was a response by Chinese entrepreneurs to increasing threats to businesses in the inner-city from high levels of crime. Clustering of independent businesses in these malls increased safety for shoppers and Chinese entrepreneurs. The commodities offered in these China Malls are mainly low priced Chinese imports with the dominant product clothing as well as footwear, baby goods, toys, homeware and electrical goods (Tanya Zack Development Planners et al., 2017).

Participation in the business of cross-border trading is driven by a range of factors. Nunez (2009: 10) argues that in several of the proximate countries to South Africa “the economic necessity to undertake this form of entrepreneurship is compounded by a lack of formal sector employment; many people get involved in informal cross-border trading activities as a response to unemployment”. Arguably, the absence of formal wage employment opportunities in home countries is the core reason for participating in this form of trade. In Zimbabwe in particular the implementation of successive Structural Adjustment Programmes resulting in major job losses and deindustrialization forced a search for alternative income/livelihood strategies (Jamela, 2013; Manjokoto & Ranga,

2017; Tawodzera & Chikanda, 2017). Chikanda and Tawodzera (2017: 10) revealed that the largest proportion of cross-border traders from Zimbabwe commenced business operations “during and after the economic crisis of 2008, with nearly three-quarters starting up between 2006 and 2014”. During this period cross border trading escalated “as thousands of jobless workers had no choice but to enter the informal economy” (Tawodzera & Chikanda, 2017: 912). Overall, as has been shown in several research studies the business of cross-border trading represents an important source of self-employment and income generation for those without recourse to formal wage employment (Peberdy & Crush, 1998; Chilya et al., 2012; Jamela, 2013; Peberdy et al., 2015; Chikanda & Raimundo, 2017; Tawodzera & Chikanda, 2017). This said, in the context of escalating economic crisis and hardship in Zimbabwe, many of those people in formal employment – especially civil servants and teachers – sought to combine cross border trading with their formal job in order to supplement salaries that were inadequate for household needs (Manjokoto & Ranga, 2017). Given low levels of formal wages in public service in Mozambique cross-border trading was observed as offering an income opportunity which could yield returns of “more than four times the minimum salary in the formal sector” (Nunez, 2009: 10).

In terms of exploring further who are the participants in cross-border trading, traditionally this form of entrepreneurship has been viewed as almost exclusively the domain of women who are channeled into this as “a survival strategy because of labour market discrimination” (Peberdy et al., 2015: 212). Typically, Masango and Haraldsson (2010: 2) draw attention to a “significant growth” of informal cross-border trading and that these informal business tourists, albeit acknowledged as a diverse constituency, are “generally dominated by women”. This picture of poor mainly women traders in search of a source of business income and employment is reinforced also by findings from research by Muzvidziwa (1998, 2010), Jamela (2013), Brenton and Gamberoni (2014) and, by Manjokoto and Ranga (2017). Several investigations point to the fact that the groups of women traders often comprise “the vulnerable, unemployed, orphans, refugees, the youth, school leavers and widows among others” (Masango & Haraldsson, 2010: 2). New research from the Southern African Migration Programme suggests, however, that this ‘gendered’ character of cross-border trading to South Africa is changing and that the situation is more nuanced with a much higher level of participation by males than previously thought (Peberdy et al., 2015). From a large-scale survey undertaken of cross-border traders crossing into South Africa from Botswana, Lesotho, Mozambique, Swaziland and Zimbabwe at six different border posts it was disclosed that considerable variations existed in the ratio of male to female traders (Peberdy et al., 2015). The broad result was that women comprised 63 percent of the cohort of informal cross-border traders albeit considerable variations were recorded between different border crossings with a range from 83.5 percent women from Swaziland as compared to only 48.0 percent from Lesotho. In the case of Mozambique the dominance of women in the trade is explained by Chikanda and Raimundo (2017: 948) *inter alia* “to their long experience in crossing borders dating back to the early days of Mozambique’s 16 year civil war; their business acumen; their familiarity with managers of wholesale storehouses in Johannesburg; and the fact that they find it more difficult than men to access formal employment”. By contrast, at the important Zimbabwe border crossing men comprised almost half the total cohort of traders, a finding which is explained by the country’s severe economic crisis and extraordinary high levels (estimated up to 80 percent) of unemployment (Peberdy et al., 2015; Tawodzera & Chikanda, 2017). This suggests increasingly men may be entering into the business of cross-border trading in Southern Africa, now in competition with and potentially threatening to displace women traders more especially in the most lucrative spheres of this type of informal entrepreneurship.

One consistent finding across surveys of cross-border trading is its dominance by young adults which is accounted for “by the arduous nature of the trade, which involves a great deal of travelling and spending considerable time waiting at border posts and the places where goods are sourced” (Tawodzera & Chikanda, 2017: 915). Another common observation is that many traders are not simply “ill-educated people seeking to survive but are more likely to be relatively well-educated entrepreneurs seeking business opportunities” (Peberdy & Crush, 1998: 5). Indeed, in the example of Zimbabwe, the entry of better-educated people into cross-border trading, either as main occupation or for supplementary household income source, is a direct consequence of the persistent economic hardships and high levels of unemployment in the final chaotic years of former President Robert Mugabe. The shifting complexion of informal cross-border trading from Zimbabwe is summarized by Tawodzera and Chikanda (2017: 916) as follows “an economic activity once completely dominated by low-income households and a relatively uneducated population has become a viable alternative for others reeling under economic pressure”.

Arguably, whilst the majority of cross-border traders in Southern Africa are necessity-driven entrepreneurs there is a small but notable component of (better educated often male) opportunity-driven entrepreneurs motivated by desires to run their business, prestige or enhanced status in local communities (Chikanda & Tawodzera, 2017). The rhythm of cross-border trading is well-documented and reveals a complex variety of business mobilities which varies through different crossing points (Peberdy, 2007; Peberdy et al., 2015). Length of stay was impacted variously by whether traders primarily crossed borders in order simply to shop for resale in the home country or whether they were in South Africa to sell goods from the home country which requires a longer duration of stay. As a rule, length of stay tends to be as short of possible because of cost considerations especially concerning accommodation. Frequency of visits by traders to South Africa differs greatly between border crossings with reports that traders from Mozambique undertake weekly visits whereas for those coming through more distant borders patterns of visits were fortnightly or monthly (Peberdy et al., 2015). Overall, the generally longer stay recorded by Zimbabwean traders is related to both longer distances and the fact that the majority are coming to sell as well as to purchase goods (Chikanda & Tawodzera, 2017).

During 2017 the most recent large-scale survey of cross-border shoppers/traders in Johannesburg was undertaken. Its central results in terms of the nature of the traders, how they organise their visits, products purchased and organization of shopping are summarized on Table 1. Overall, these findings confirm many of the characteristics and organizational issues raised in other recent research reported here by the Southern African Migration Project. This said, there are certain differences, most notably in terms of the proportion of male to female traders. What this points to is the existence potentially of differences in cross-border trader communities not only in terms of different border crossings but also in terms of the destinations for these traders/shoppers. Finally, some brief comments on the business challenges that confront these informal business tourists in South Africa. At start-up of business whilst the amount of capital needed is relatively small to engage in cross-border shopping many traders expressed that it was a challenge. In the case of Zimbabwean traders most obtained start-up capital from personal sources with additional funding secured by loans from friends and relatives; only a small number use loans from either micro-finance institutions or banks (Chikanda & Tawodzera, 2017). In conducting their businesses in South Africa several other challenges arise. For Zimbabweans critical issues can be the cost and time to secure a passport, long delays at border posts, high duties, restrictions imposed on the export-import of certain commodities and corrupt officialdom at customs and immigration. Verbal and sometimes physical harassment is also reported as of concern at border entry/exit (Tawodzera & Chikanda, 2017).

Table 1. : Profile of Cross-Border Shoppers in Johannesburg
(Source: Author adapted from Tanya Zack Development Planners et al., 2017)

Characteristics	Key Findings
Demography	28.4 % Male, 71.6 % Female; Average Age 37
Highest Education	22.4 % tertiary qualification, 33.7% Matric or equivalent, 35.9% secondary education, 8% primary
Length of time as trader	Majority shopping in Johannesburg regularly for between 5 and 7 years; 13 % for less than one year; maximum recorded is 31 years as trader.
Knowledge of Business	82 % learned from family or friends
Mode of travel to Johannesburg	65 % by bus. 33 % by minibus taxi; average travel time by bus 31 hours, by minibus taxi 7 hours
Major products purchased	New clothing, household goods, new shoes, bags and handbags, personal care products, electronics
Shopping strategy	For safety and financial reasons 60% shop in groups, 40% on own; 24 % buy collectively as a group
Choice of goods	48 % decide what to shop for by taking orders in the home country, 22% are led by what sells best at home and 23 % view what is available in Johannesburg.
Frequency of visits	Over half of traders visit Johannesburg more than 10 times a year; 41 % visit once a month.
Payments	For 95 % traders this is a cash economy. Shoppers tend to minimize spending in Johannesburg on food, accommodation or other expenses and maximise expenditures on goods

Xenophobia in South Africa towards non-South Africans is a further problem for these traders. Safety issues and crime in inner-city Johannesburg are major business challenges. Chiliya et al. (2012) highlight that shoppers are often assaulted and robbed of their possessions and highly vulnerable to theft of cash and goods because of operating on a cash only basis and often carrying large volumes of stock (Table 1). The most recent survey concluded that the “risk of a cross border shopper being a victim of crime in the inner city of Johannesburg is extremely high” (Tanya Zack Development Planners et al., 2017: 126). At the Zimbabwe-South Africa border the women traders are exposed to multiple difficulties in terms of sexual harassment by custom officials (Richter et al., 2014). In addition, because of the high costs of safe accommodation, often the women put themselves at risk of being robbed or raped either by sleeping in the open or at bus stations. Overall, because of its negative impacts on women’s lives, for Manjokoto and Ranga (2017: 37) this informal business tourism is “unhealthy physically, socially, emotionally and spiritually” for many women traders.

CONCLUSION

Informality is a distinctive facet of tourism economies in the developing world or global South. The informal sector of leisure tourism is garnering growing attention from tourism scholars. In this analysis attention was directed to the much less well documented informal economy of business tourism which is particularly significant in sub-Saharan Africa. As argued by Rogerson and Saarinen (2018) business travel is a critical motivation for the poor to be tourists. The business activities of traders and shoppers who cross international borders constitute a major element in inter-African trade. Over recent years the region of Southern Africa has emerged as the largest focus for cross-border traders or shoppers. The city of Johannesburg in South Africa has become established as the shopping hub of sub-Saharan Africa. Communities of cross-border shoppers mainly from surrounding countries in the Southern African Development Community are attracted to the city by the variety of goods and price competitiveness of products that can be purchased. Despite many benefits that flow to

the city of Johannesburg from this informal sector of business tourism – including job creation in retailing, transport and hospitality – the local state has yet to fully acknowledge the multiple positive impacts of these international visitors upon the urban economy. Urban planning in Johannesburg must acknowledge the city's significance as an international retail hub by physical planning interventions strategically targeted to upgrade infrastructure to support these shoppers. In addition, it must address several of the factors which currently are negatively impacting shopping in the inner city, most importantly issues of safety and crime. In this respect some planning lessons can be drawn from the experience in other parts of the world for addressing infrastructural issues and criminality in inner cities (Chen et al., 2016; Matlovičová et al., 2016; Tanya Zack Development Planners et al., 2017).

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LOCAL WISDOM OF SABANG ISLAND SOCIETY (ACEH, INDONESIA) IN BUILDING ECOLOGICAL INTELLIGENCE TO SUPPORT SUSTAINABLE TOURISM

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Abstract: One of the existing natural and environmental uses in Aceh (Indonesia) is tourism. Among the aspects that determine the development and sustainability of tourism are the institutional and community aspects. Sustainable tourism is a picture of both the ecosystem sustainability and socio-economic development of the community. This study aims to reveal and find out the local wisdom practices and explore local knowledge owned by Sabang Island community in managing and conserving of the environment to support the realization of sustainable tourism. This study uses rationalistic paradigm and qualitative research method. The data that has been collected is analyzed descriptively. The local wisdom and local knowledge are reflected in how society has a unique way of looking at and understanding of the nature and interacting with it. In the Aceh community, there are customary institutions that regulate the rules or interactions of the community with the environment, including “*panglima laot*”, “*keujreun blang*”, “*peutua seuneubok*”, “*pawang glee* or *peutua uteun*”, “*haria peukan*” and “*syahbanda*”. Local wisdom and local knowledge have great potential in maintaining, preserving and sustainability of the environment used by communities to meet their living needs. Ecological, social, and religious intelligence formed through local wisdom and local knowledge are the functional aspects in maintaining environmental sustainability in order to build sustainable tourism on Sabang Island.

Key words: local wisdom, Aceh traditional regulation, Sabang people, ecological intelligence, sustainable tourism

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INTRODUCTION

Aceh is one of the provinces in Indonesia which has a high biodiversity of flora and fauna. Those diversities spread throughout the Aceh province, both in the lowlands, highlands, and coastal and marine areas. The people of Aceh have the authority and equal opportunity in utilizing natural resources so that they can fulfil their needs while complying with the rules and norms that have been established and applied in the society. One formation in using of the nature and the environment in Aceh is the use of tourism, where the potential for tourism development has already started its analysis since 1980. This matter is obviously seen in the study conducted by a research team from the Department of Education and Culture of Aceh Province (1995), which explains that the Aceh Province is one of the tourist destinations in Indonesia and has attractiveness for domestic and foreign tourists. Besides a natural tourism, the Aceh Province also has a variety of other interesting tourism types and forms such as cultural tourism, historical tourism, religious tourism, culinary tourism, and other special interest tourism.

One of the tourism destinations in Aceh which is well-known to foreign countries is the island of Sabang. Geographically, Sabang Island located between $5^{\circ}46'28''$ to $5^{\circ}54'28''$ north latitude and $95^{\circ}13'12''$ until $95^{\circ}22'36''$ east longitude with an average elevation of 28 meters above sea surface (BPS, 2016), by administrative region includes five islands, namely Weh Island with an area of 151.752 km²; Rubiah Island with an area of 0,357 km²; Seulako Island with an area of 0.055 km²; Klah Island with an area of 0.186 km²; and Rondo Island with an area of 0.650 km² (see Figure 1). The tourism sector is the dominant sector in regional development programs in the Sabang island, which is not only used to increase foreign exchange and regional income but also become one of the mainstays to improving the income of local people.

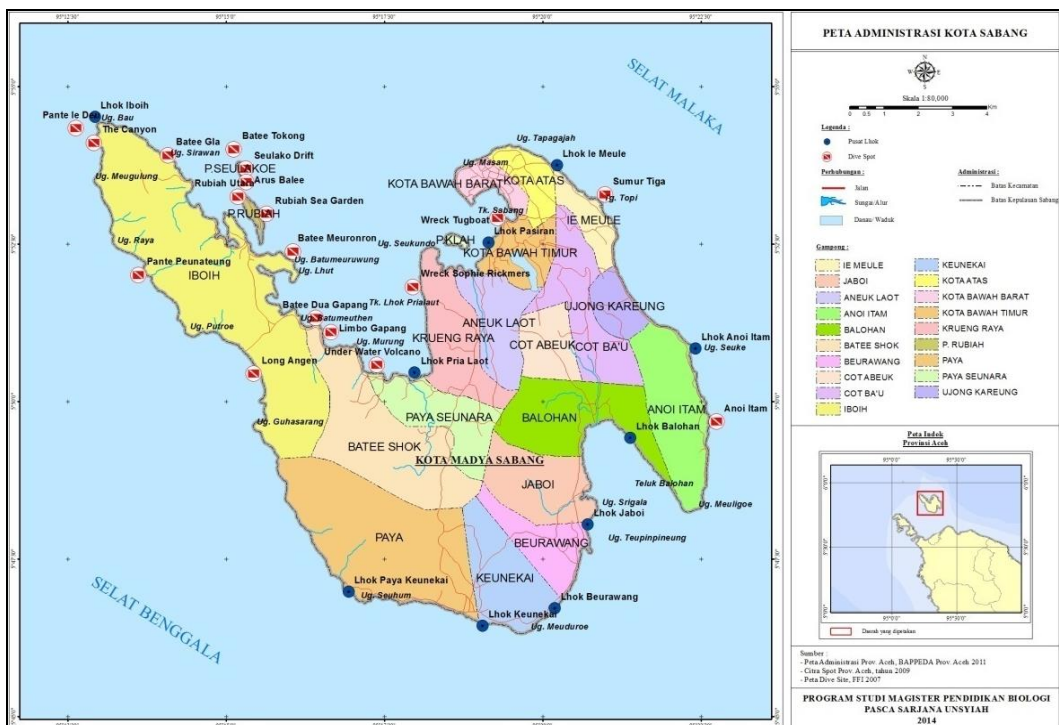


Figure 1. Administrative Map of Sabang Island (Source: Aswita, 2014)

From Figure 1, Sabang Island has some of the most interesting diving spots. The main tourism object which is very well known and much visited by tourist is a natural tourism is oriented in Rubiah Island nautical tourism of marine park, Paradiso Beach, Iboih Beach, Gapang Beach, Sumur Tiga Beach, with various activities done like diving, snorkelling, swimming, fishing and sunbathing on the shore. It is also described by Ramadhani and Rusyana (2010) in their research about Sabang tourism, the most attractive location is Gapang Beach, Tugu KM O, and Iboih Beach, with the main activities of travelers in a row, people are visiting the beach, diving/swimming, visiting the historical places, fishing, and shopping. It is also reported by Syahnur and Herlina (2015) in their research. Furthermore, Chan (2016), also mentioned that the most fascinating and most favourable attractions on Sabang Island are under the sea. More than 19 diving spots are scattered throughout the region that has natural beauty, ranging from exotic coral, fish, and other marine life. One of the most interesting diving spots is the ruins of the ship Sophie Rickmers who drowned during World War II. This place is known as Sophie Rickmers Wreck WM II, where there are many fish of various types and colour, who chose this shipwreck as their "home". Besides the marine tourism, Sabang Island also has several natural tourism attractions or landscape and culture which are very interesting, namely the park forest tourism, seashore landscape tourism, volcanic tourism and hot mud, hydrothermal, waterfall, thermal bathing places, lake, heritage, the grave of foreign victim of World War II, and religious sites. One aspect that determines the development and sustainability of tourism are the institutional and social aspects.

Sustainable tourism is a description of the sustainability of ecosystems and social economic development of society. Economically, sustainable tourism has a relationship with the ability of society to manage the existing economic potential. Then ecological sustainability has relevance to the ability of society to manage the natural resources that exist. It means that the empowerment of society and the capacity of the environment (ecology) is needed in the economic improvement and development. Fennel (1999) states that sustainable tourism has several objectives, namely: (1) the establishment of an understanding and higher awareness that tourism can contribute significantly to the preservation and economic development; (2) improve the balance of development; (3) improve the quality of life for local people; (4) improve the quality of understanding for visitors and tourists; and (5) improve and conserve the environmental quality for the next generations. The existence of society in sustainable development cannot be separated at all. Almost all societies have their own procedures to interact, relate, and use the environment which is different in each region. Traditions, customs, and the order of the local cultural values serve as a guide and benchmark for people in everyday life. The procedure is often interpreted as local wisdom. Dahliani, Soemarno, and Setijanti (2015) state that local wisdom is the culture which is produced from human thought processes to adjust its presence in nature that can be embodied in concrete works in the use of the environment. Local wisdom is always changing because it follows the cultural dynamics and cannot be separated from the human mindset. Besides that, Mungmachon (2012), also states that local wisdom is the basic knowledge gained from living in balance with nature. This is related to the culture in the society which is accumulated and inherited. This policy can be abstract and concrete, but the essential characteristic is that it comes from experience or truth gained from life. Nasir (2013), say that "local wisdom is a form to find the format of values that grow in a society".

Local wisdom is also often conceived as local knowledge because local wisdom and local knowledge have the same meaning. Although the terms are different, both are clear that local knowledge is the result of man as a cultural process in accordance with the

surrounding natural environment. Connection with nature, the main factor to be considered, is acquired in a long period of time and is passed from generation to generation (Dahlani, Soemarno, and Setijanti, 2015). WIPO (2002) defines local knowledge by citing explanations from Warren (1991), i.e., the knowledge that is unique to a given culture or society. It contrasts with the international knowledge system generated by universities, research institutions and private firms. It is the basis for local-level decision making in agriculture, health care, food preparation, education, natural resource management, and a host of other activities in rural communities.

In daily life, Sabang community has regulations which are provided in the customary form, which includes habits, obligations and restrictions which will be a guidance in their behaviour with their surroundings. These regulations are inherited from ancestors and should be passed and guarded carefully. Because for them it can maintain the balance of the relationship between human and nature in order to maintain the life sustainability. In addition, the environment that they live it constitutes one of the destinations and the development of tourism in Aceh. Then, to anticipate the widespread of exploitation activity and the disharmonious of community behaviour, so that the positive role society in managing and conserving environment is to be important.

This study aims to describe and discover the practice and explore the existence of local wisdom possessed by the people of Sabang Island in the management and preservation of the environment that supports the realization of sustainable tourism.

METHODOLOGY

This study used a rationalistic paradigm that was a research which analyzes based on the reality on the field using the analysis of qualitative methods (Moleong, 2007). The qualitative research then followed by qualitative research. The qualitative research was a process of research to find social and humanitarian issues based on efforts to build a complex and comprehensive description, formed by words or description, by containing detailed views from the resources. The data was collected by interview technique, observation, and analyzing and reviewing secondary data. The data then analyzed descriptively. The qualitative data was then processed inductively by using an interactive analysis model (Miles & Huberman, 1994).

RESULT AND DISCUSSIONS

The environmental crisis is an environmental issue that appears naturally as well as caused by human itself. However, the human factor becomes the biggest cause of environmental problems and it may arise from the direct action in the utilization of the environment or from the effects that arise in the long term use of the environment. The environmental crisis is caused by three things, that are (1) the paradigm of man against nature, where the paradigm in this matter includes the way people understand and relate to nature; (2) the modernity, which is understood as an era and a way of human thinking who see nature exist for the good of man; and (3) the industrialism, the product of both of them and have a tendency to exploit the nature itself (Simbolon, 2014).

As a result of the continuation of human interaction with nature, and to answer some issues arising from the interaction, then there is an awareness that appears to create a harmonious relationship between humans and nature. Local wisdom and local knowledge reflected from how society has a unique way of viewing and understanding of nature as well as interacting with it. In Aceh society, there are traditional institutions that regulate the procedure or society's interaction with the environment, where each institution is led by one leader cultures, among them are "*panglima laot*", "*keujreun blang*", "*peutua*

seuneubok”, “*pawang glee* or *peutua uteun*”, “*haria peukan*” and “*syahbanda*”. The job descriptions of each of the traditional institutions have been established and elaborated in Qanun Aceh Nomor 10 Tahun 2008 about Lembaga Adat, is as follows (Table 1).

Table 1. Indigenous Institutions in Aceh Society that Regulate Human Interaction and the Environment (Data source: Aceh Traditional Regulated (Qanun Number 10 Year 2008))

Indigenous Institutions Name	Title for	Authorities, Duties, and Functions
<i>Panglima Laot</i>	People who lead and manage the customs in the field of coastal and marine areas	<p><i>Panglima Laot</i> Authorities</p> <p>a) determining the order of fishing include determining the results and the days of avoidance fishing; b) resolving the dispute of indigenous and problem among fisherman; c) resolving the dispute of indigenous that occur between <i>Laot lhok</i>; d) coordinating the implementation of <i>Laot</i> customary law, increasing resources and the advocacy policy of marine and fisheries sector to increase the welfare of fishermen.</p> <p><i>Panglima Laot</i> Duties</p> <p>a) implementing, maintaining and supervising the implementation of the customs and <i>Laot</i> customary law; b) assisting the Government in the field of fisheries and marine areas; c) resolving the dispute and discord between fishermen in accordance with the <i>Laot</i> customary law; d) protecting and preserving the environmental function of coastal and marine areas; e) struggling for the improvement of the lives of fishing communities; f) preventing illegal fishing.</p>
<i>Keujreun Blang</i>	People who lead and organize activities in the field of paddy sector	<p><i>Keujreun Blang</i> Duties</p> <p>a) determining and coordinating the ordinances of going to the field; b) regulating the distribution of water to farmers' paddy; c) assisting the government in the field of agriculture; d) coordinating <i>khanduri</i> or other ceremonies related to the customs in the agricultural fields; e) giving a warning or sanction to farmers who violate the rules of indigenous <i>meugoe</i> (paddy) or do not obey other obligations in the implementation of the system of indigenous paddy farming; f) resolving the dispute between farmers relating to the implementation of the agricultural fields.</p>
<i>Peutua Seuneubok</i>	The person who leads and regulates the customary provision about the opening and using of land for cultivation/plantation.	<p><i>Peutua Seuneubok</i> Duties</p> <p>a) arranging and dividing the land within the <i>Seuneubok</i> area; b) assisting the government's tasks in the fields of plantations and forestry; c) administering and supervising the implementation of traditional ceremonies within the area of <i>Seuneubok</i>; d) resolving the dispute which occurs within the area of <i>Seuneubok</i>; e) implementing and maintaining the customary law within the area of <i>Seuneubok</i>.</p>

<i>Pawang Glee or Peutua Uteun</i>	The person who leads and regulates customs regarding the management and preservation of the forest environment	<i>Pawang Glee Duties</i> a)leading and managing the customs which relate to the management and preservation of the forest environment; b)assisting the government in forest management; c)enforcing customary laws on forests; d)coordinating the implementation of customary ceremonies which relate to forests; e) resolving the dispute between citizens in the forest utilization.
<i>Haria Peukan</i>	The person who governs the provisions of custom about market order, orderliness, security, and hygiene of the market and performs the assistance tasks	<i>Haria Peukan Duties</i> a)assisting the government in regulating market order, orderliness, security, and performs the assistance tasks; b)enforcing custom and customary law in the implementation of various activities <i>Peukan</i> ; c)maintaining <i>Peukan</i> hygiene; d)resolving the dispute that occurred in <i>Peukan</i> .
Syahbanda	The person who leads and regulates customary provisions on ship/boat moorings, outbound, and incoming traffic on ship/boat in seas, lakes, and rivers that are not managed by the Government.	<i>Syahbanda Duties</i> a)managing the utilization of public ports; b)maintaining order, security in the harbour area of the people; c)resolving the dispute which occurs in people's port areas; d)regulating the right and obligation which relate to harbour utilization.

The local wisdom and local knowledge of Sabang Island society in interacting and preserving the environment are shown in Table 2. below:

Table 2. Local Wisdom and Local Knowledge People of Sabang Island in Interacting and Preserving the Environment

Local Wisdom and (or) Local Knowledge	Intention and Restriction	Ecological Intelligence	Social and Religious Intelligence
<i>Kenduri Laot</i>	<ul style="list-style-type: none"> •Prohibition to go to sea for 3 days, starting on the first day of <i>Kenduri Laot</i> event •Prohibition of beach tourism 	<ul style="list-style-type: none"> •Allowing aquatic biota (eg. fish) to breed, incubate eggs, and grow into adulthood. 	<ul style="list-style-type: none"> •Providing an opportunity for tourists to respect the local custom •Increasing the sense of brotherhood (togetherness)
<i>Hari Pantang Melaot</i>	<ul style="list-style-type: none"> •Prohibition to go to sea every Friday, starting from Thursday night, until Friday Prayer is finished •Restriction on beach tourism on Friday morning until Friday Prayers are Finished 	<ul style="list-style-type: none"> •Allowing aquatic biota (eg. fish) to breed, incubate eggs, and grow into adulthood. 	<ul style="list-style-type: none"> •Providing an opportunity for tourists to be able to respect the local custom and religious activities •Preparing for Friday prayer (for Muslims)
<i>Meupayang (Fishing System)</i>	<ul style="list-style-type: none"> •Prohibition of trawl usage •Prohibition of using nets in certain areas •Prohibition of using explosives / other chemicals •Prohibition of poison water flow (river flow) 	<ul style="list-style-type: none"> •Avoiding overfishing •Avoiding excessive coral reef damage •Avoiding pollution of the water and the environment •Avoiding pollution of rivers that empty into the sea and surrounding environment 	<ul style="list-style-type: none"> •Growing a sense of concern for the environment by working together to protect the environment

Local Wisdom of Sabang Island Society (Aceh, Indonesia)
in Building Ecological Intelligence to Support Sustainable Tourism

Fishing Area	<ul style="list-style-type: none"> •Banning on fishing in spawning areas and conservation areas 	<ul style="list-style-type: none"> •Avoiding overfishing •Avoiding exploitation of protected fish and other marine biotas •Providing opportunities for fish and other marine biotas to grow and develop 	<ul style="list-style-type: none"> •Growing a sense of concern for the environment by working together to protect the environment
Land Opening System	<ul style="list-style-type: none"> •The ban on cutting trees at a radius of about 500 m. from the shore of the lake, 200 m. from the edge of the springs and left-right rivers in the swamp area, about 100 m. from the left-right of the river, about 50 m. from the edge of the creek (<i>Alue</i>). 	<ul style="list-style-type: none"> •Avoiding environmental damage due to land clearing 	<ul style="list-style-type: none"> •Growing a sense of concern for the environment by working together to protect the environment
<i>Peudong Jambô</i>	<ul style="list-style-type: none"> •Prohibition of setting up huts (landed places on land) on wild animal tracks or places believed to be spirits of the jungle. •Materials used for buffer huts should also not use the wood of the roots (<i>uroet</i>), as it is feared will invite snakes into the <i>Jambô</i>. 	<ul style="list-style-type: none"> •Avoiding development in the migratory areas of animals. •Avoiding the use of materials that are the habitat of an animal 	<ul style="list-style-type: none"> •Growing a sense of concern for the environment by working together to protect the environment
<i>Pantang daruet</i>	<ul style="list-style-type: none"> •It is forbidden to hang a cloth on a tree and to set a machete on a tree stump •Do not cut (<i>ceumeucah</i>) in the rain 	<ul style="list-style-type: none"> •Avoiding making incisions, damage that makes plants feel pain •Eliminating the aesthetics of plants and environment. •Avoiding the destruction of grasshopper habitat (<i>daruet</i>) that will eventually end up like pests 	<ul style="list-style-type: none"> •Growing a sense of concern for the environment by working together to protect the environment • Having a sense of affection towards other living things
<i>Gotong Royong Activities</i>	<ul style="list-style-type: none"> •<i>Gotong royong</i> activities, both on the commemoration of religious holidays and state holidays, marriage ceremonies, deaths, post-fishing, and post-harvest rice fields 	<ul style="list-style-type: none"> •Maintaining cleanliness of the environment and cultivate a sense of concern for the environment 	<ul style="list-style-type: none"> •Fostering a social sense of community (togetherness) •Creating harmonization and harmony of life to the community

The human survival depends on how people interact and relate to nature and the environment. Local wisdom is all forms of knowledge, belief, understanding or insight, customs, and ethics of guiding human in behaving with the ecological community during his lifetime. Local wisdom is holistic because it deals with the knowledge, understanding and human insight in a relationship with nature and the environment. Kongprasertamorn (2007), states that, in order to live in harmony with the environment, local society use the accumulated local wisdom that derives from their ancestors to manage natural resources. Utilization of local wisdom can be seen in terms of daily activities. In addition, Brook & McLachlan (2008), states that the use of local knowledge gives a lot of opportunities that are diverse in ecological research and conservation.

Local wisdom and local knowledge that is used by the island of Sabang (Table 2), has great potential in maintaining, preserving and environmental sustainability used by the society to fulfil their needs, including the improvement of the economy through tourism. Moreover, the tourism object offered is nature tourism, marine tourism, adventure tourism, historical tourism, religious tourism, culinary tourism, and other special interest tourism. Thus, the existence of local wisdom and local knowledge can be an aspect in maintaining the environmental sustainability in order to build a sustainable tourism on the island of Sabang.

The same thing is also described by Singsomboon (2014), he finds that, in Thailand, local wisdom has been employed to promote tourism through creative tourism process and to create conservation and development in various forms of projects. Using local wisdom to promote tourism through creative tourism process in order to create sustainable tourism development is targeted at the community. Equilibrium must be created in terms of economy, society and environment so that the community, with this equilibrium, can develop sustainable tourism. The concept of sustainable development that focuses on people-centered is applied to create equilibrium, stability and sustainability in these 4 sides; 1) Life - human from individual, family and community level are affected by external environment, resulting in risks and instability, 2) Economy of people in the community, 3) Society – community and society of human beings living together, having relationship and responsibility in the change of the society and 4) Environment around human beings and social environments.

The potential of local wisdom also gives a different opportunity in tourism that is cultural tourism. Cultural tourism in Sabang Island is also demanded by tourists because it offers a different form of tourism. Tourists can enjoy the simple life, peace bound by customary rules. Custom, culture and the religion of society run hand in hand in harmony to form the local identity of the society that inspires society life and interaction among the people residing in it. The existence of local wisdom can be used as a social institution in managing the development of tourism, so as to keep providing an opportunity for local society to maintain the authenticity of custom and culture, although they have interacted with the outside society.

In their study, Yi-fong (2012), discusses the socio-cultural influences of ecotourism, which integrates cultural revitalization, ecological conservation, and social development. Many cases in various parts of the world indicate that indigenous peoples have developed patterns in the use of resources and management practices that reflect the detailed knowledge of local geography and ecosystem and contribute to the conservation of nature through the practice of their lives. For indigenous peoples, to affirm their identity as a media in preserving their cultural identity and to develop their socio-economic potential is the way to survive in the modern industrial world. Environmental sustainability is inevitably tied to the configuration of the structure of economic, social, cultural and political. As the tourism industry gains strength in the economic development strategy, the requirement to involve local society in the process of sustainable tourism management becomes indispensable. Cappucci (2016), based on her research in Suriname, explained that in order to develop and promote sustainable tourism, all relevant stakeholders have to: 1) support the integrity of the place; 2) conserve resources; 3) respect local culture and traditions.

The sustainability concept is also applied in education through education for sustainable development. The concept of sustainability in an educational context is illustrated by Sterling (2001), which identifies the key concepts of sustainable development as follows:

- a. The interdependence of society, economy, and natural environment, from local to global;
- b. Citizenship and management, including the rights and responsibilities, participation and conservation;
- c. Needs and rights of future generations;
- d. In the concept of Cultural, social, economics, and biodiversity;
- e. Quality of life, equality, and justice;
- f. Changes in sustainable development, and the carrying capacity;
- g. Uncertainty and precaution in action

Environmental sustainability, education sustainability, and the sustainability of human life is a unity that cannot be separated one from another, where each dimension contributes to other dimensions. Environmental sustainability is certainly contributing to the sustainability of tourism, which eventually gives its own contribution to the sustainability of human life through economic growth. Environmental sustainability is also inseparable from how local society is habitable by values, rules, and certain norms. Environmental sustainability must also be supported by the development of education in introducing local society about how they should relate to nature, even though they have gained the knowledge and insight from the previous generation, in the form of local wisdom and local knowledge. Aswita (2018), say that “an understanding of environment can be obtained from environmental education, which later becomes a determining factor in people's interaction with their environment”. Bâca (2015), say that "because education is the basis for all planning activities, recovery and conservation of natural heritage".

Studies on environmental education and tourism have been conducted by many researchers, such as: Ilieş, et al., (2017), where their study of using Valea Roşie Nature 2000 tourist map in print and digital form as an instrument for environmental education activities. Tisdell & Wilson (2005), also explores the role of ecotourism in promoting environmental learning and in sustaining conservation of nature.

CONCLUSION

Local wisdom and local knowledge reflected from how society has a unique way of viewing and understanding of nature as well as interacting with it. In Acehese society, there are customary institutions that regulate the procedure or society's interaction with the environment, where each institution is led by one leader culture among them are “*panglima laot*”, “*keujreun blang*”, “*peutua seuneubok*”, “*pawang glee* or *peutua uteun*”, “*haria peukan*” and “*syahbanda*”. Local wisdom and local knowledge have great potential in maintaining and preserving environmental sustainability used by the society to fulfil its needs. Ecological, social and religious intelligence formed by local wisdom and local knowledge can be an aspect in maintaining environmental sustainability in order to build a sustainable tourism on the Sabang Island.

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CURRENT STATE OF THE FIRST UNESCO GLOBAL GEOPARK: A CASE STUDY OF THE GEOLOGICAL AND MINING PARK OF SARDINIA, ITALY

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Abstract: This article deals with the Geological and Mining Park of Sardinia, the first park in the world to be included in the network of Geosites/Geoparks established by UNESCO in 1998. The main purpose of this research paper, given the absence of up-to-date official documents, is to map mining sites allocated to tourist use. It also registers the number of visits per year, amount of human resources occupied and methods of management and financing. After a brief description of the birth of tourism in Sardinia and the history of the Park, the findings of a desk and field study within a comparative analysis are presented and evaluated and best management practices highlighted.

Key words: Heritage tourism, Geological and Mining Park of Sardinia, industrial mining tourism, Geopark, Geosite

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INTRODUCTION

This research paper is part of a wider study whose final aim is the creation of cultural/tourist paths following the theme of production in Sardinia, from industrial archaeology to business tourism, leading the visitors from the past to the present and linking industrial mining tourism to other sectors such as food and wine and handcraft.

The growth of tourism in Sardinia (Figure 1) in the last sixty years has been considerable and vertiginous. The decisive factors contributing to its development

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include, primarily, the defeat of malaria in the first half of the last century (Tognotti, 2008; Carcassi & Mura, 2009), secondly, the establishment of the Region with special statutes (Gherardini, 1991; Brigaglia, 2002, p. 38-65; Chessa & Pinna, 2008), thirdly, the consequent constitution of *Ente Sardo Industrie Turistiche* (ESIT - Local Board for Tourism Industry) and, finally, the important interventions of foreign capital and the foundation of *Consorzio Costa Smeralda* by the Saudi Prince Karim Aga Khan II (Roggio, 2002, p. 224-245). Thanks to all these factors, Sardinia has succeeded in establishing itself as an international tourist destination.



Figure 1. Map of Sardinia in the world
(Source: Geological Mining, Historical and Environmental Park of Sardinia)

The vocation of Sardinia for tourism can be traced back to 1862/63, years leading up to the birth of the first bathing establishments in Alghero and Cagliari. In the forties, the island resort system consisted of 700 hotel rooms, of which only 50 had bathrooms; this was the result of experiments of hotel business in the resorts of Alghero, Bosa, Porto Torres and Cagliari. In 2014 the hotel sector boasted 100,000 beds in the island's 920 hotels, 75% of which were in the hands of Sardinian entrepreneurs (Ruju, 2014, p. 7-20).

According to official data released in May 2017 by SIREN – the data collection and processing system provided by the Region of Sardinia – 2016 was a record year for tourism with 2.9 million arrivals, 13.5 million occupancies and an average stay of 4.6 days, with an increase of 10.5 percent in arrivals and 9 percent in occupancies. Another significant aspect emerging is the rise in foreign visitors and the growth of arrivals in the off-peak months, spring and autumn (CRENoS, 2017). Surveys conducted in 2013 show that the perceived image of Sardinia is that of a beach resort destination where the sun-sea-beach trinominal is the main motivational factor and attraction for those who choose it as a holiday destination. To first time visitors to the island, it appears an interesting, wild and uncontaminated site that fascinates them (Battino, 2013, p. 56).

Sardinia, however, is not just sea, it is also an ancient land that has much to offer to visitors (Castagna, 2008; Lavazza, 2008). Culture, for instance, understood as a hypernym for many tourist segments, offers different opportunities for development. The report *Io sono Cultura – 2016* (Unioncamere and Fondazione Symbola, 2016), describes in details the value of culture in Italy, one of the primary factors of the economy and to benefit greatly from its push is especially tourism; in fact more than one third (37.5%) of

spending on national tourism is activated by the culture itself. This same topic also recurs in the annual report by *Federculture*, the national association of public and private bodies, institutions and companies operating in the field of cultural policies and activities (Federculture, 2017). As is known, for tourist areas highly characterized as beach destinations, it is important to emphasize their cultural and social identities, which we can refer to as identity tourism (Fadda, 2001, p. 10). This fact is highlighted by a recent study (Centro Studi Mezzogiorno, 2016), which groups all themes that can be developed or strengthened to mitigate seasonality in Sardinia, such as cinetourism, sport and cultural events, congress tourism, sport tourism (golf and cyclotourism), cruising, wellness and food and wine tourism (Di Gregorio et al., 2014). Regional policies have been put in place (Dettori, 2002, p. 246-264) to tackle the problem of seasonality, which has always been an obstacle to the full development of the tourist sector of the island (Cannas, 2010), and to help the flourishing of various forms of tourism towards rejuvenation in order to escape the notorious decline, as described by the theory of the life cycle of the tourism area (Butler, 2011). Hospers (2003, p. 636) emphasizes the growing interest in cultural and natural heritage, for an authentic Sardinia, which he calls 'real Sardinia', an interest which also affects the industrial heritage. The search for original experiences by tourists offers the opportunity to take advantage of all landscapes understood as cultural landscapes¹, testaments of various sectors of human production.

Historically in Sardinia the exploitation of mineral resources played a key role and the collection of obsidian (Figure 2) dates back to the 6th millennium BC in the prehistoric mining district of Monte Arci, (Mezzolani & Simoncini, 2001).



Figure 2. Obsidian on the *Sentiero Sennixeddu*, in the area of Pau's *Museo dell'Ossidiana*

All of these places – that have seen the ancient Sardinians as protagonists of economic, social and cultural changes (Olita, 2007; Associazione Minatori e Memoria, 2008) – represent real opportunities to be pursued for a wider and more effective development of tourism and culture in general. In this context the creation of a park in

¹ Here we refer to the definition of 'landscape' proposed by the European Landscape Convention (Cartei, 2007), which conceives landscape based on people's perceptions, natural, rural, urban and periurban spaces that embrace not only exceptional landscapes, but also those of everyday life and degraded ones.

Sardinia represented an excellent opportunity, given the influence of the parks in the economic development of a territory (Forleo et al., 2017, p. 231-233).

Finally, the concordant awareness shared by Sardinian public and private sectors of the historic-cultural, archaeological-industrial heritage value of the mines led to the birth of the Geological and Mining Park of Sardinia (Fadda, 2003).

BIRTH OF THE GEOLOGICAL AND MINING PARK OF SARDINIA

The birth of the Geological and Mining Park of Sardinia is the result of a long journey whose embryonic seed can be traced back to the ideas that emerged during a conference held in Iglesias in 1983 dedicated to mining industrial archaeology (Castelli & Pintus, 2005, p. 7-15). It was here, in fact, that the participants began to speak of an industrial archaeology park, mineral park and exploitation for tourism purposes and that significant proposals emerged regarding the preservation, conversion and reuse of abandoned industrial facilities. On May 1 1987, *Legambiente* and the Unions held a large public demonstration at the abandoned mining village of Arenas in Fluminimaggiore. Public consensus led to the creation of a cultural program and two years later a small group of people gathered in Iglesias calling themselves *Comitato promotore del Parco* (Organizing Committee of the Park), later becoming *Associazione per il Parco Geominerario, Ambientale e Storico dell'Iglesiente, Sulcis-Guspinese* (Association for the Environmental and Historical Geo-Mining Park, of Iglesiente, Sulcis-Guspinese).

In 1997, the *Ente Minerario Sardo* (EMSA – Sardinian Mining Authority) invited UNESCO officials to visit the mining areas and one suggested submitting a proposal, with a dossier of information and statement of purpose, to the General Assembly of the Organization of the United Nations to be held in Paris in November of that year. The Dossier gained attention and got full recognition for its universal and cultural values, so much so that, that very day witnessed the establishment of a global network of Geosites/Geoparks with the direct incorporation of the Geological and Mining Park of Sardinia (from this point onwards Park). Thus it became the first geo-mining park in the world and its area extended to all historic mining areas of Sardinia. Since then Geoparks have prospered and Geotourism constitutes a growing market segment with a prosperous future (Farsani et al., 2011; Poch & Llordés, 2011; Yolal, 2012); at present in the network there are 127 UNESCO Global Geoparks in 35 countries.

On September 30 1998, in the presence of representatives of UNESCO, the Italian Government, the Region of Sardinia and EMSA, the Declaration presented in Paris on July 30 was confirmed and the *Carta di Cagliari* (Charter of Cagliari) (UNESCO, 1998) signed. In the latter, the Government pledged to pass a law to establish the Park, however, two years later the law to formalize it had still not been approved. There followed protests that erupted on November 5 2000 with the occupation of the mining gallery Villamarina-Sella; it lasted 366 days and ended only in October 2001, when the Minister for the Environment, in agreement with the President of the Region of Sardinia, signed the law and the decree establishing the Park (Castelli & Pintus, 2005, p. 31-35). The Park is a non-profit public body which acts under the supervision of the Ministries of Environment and Protection of Land and Sea, Economic Development, University and Research, Culture and Heritage, the Autonomous Region of Sardinia, the provinces and municipalities included in the Community of the Park and the Universities of Cagliari and Sassari. Eight zones were destined to become part of the Park, with a very extensive total area of approximately 3,500 square kilometres, involving various municipalities. The localities, chosen based on geo-mineral, archaeological and natural values are as follows: (1) Monte Arci, (2) Orani, Guzzurra, Sos Enattos, (3) Funtana Raminosa, (4) Argentiera, Nurra, Gallura, (5) Sarrabus,

Gerrei, (6) Arburese, Guspinese, (7) Iglesiente, (8) Sulcis. In the panorama of national parks it represents an atypical case given the discontinuity of the areas included in its perimeter and the presence of mineral deposits in so many different zones of Sardinia (Figure 3).

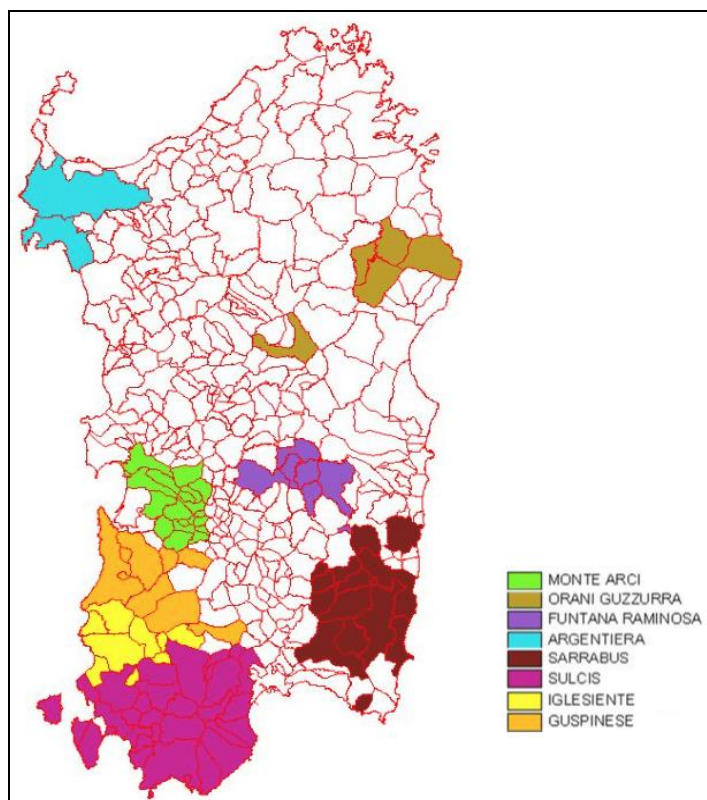


Figure 3. Map of the Geological and Mining Park of Sardinia
(Source: CRENoS - Centre for North South Economic Research)

As reported in the socio-economic plan elaborated in 2008 by the *Centro Ricerche Economiche Nord Sud* (CRENoS – Centre for North South Economic Research), the study of the eight territories that form the Park made it possible to analyze a portfolio consisting of 383 various types of assets that were classified by the adoption of six functional macro-categories, diversified by type and geographic location: geomorphology and environmental, archaeology, civil archaeology, industrial archaeology, architecture and didactic-museum (CRENoS, 2008, p. 115-118). Those strictly related to the objective of our study are industrial archaeology, incorporating structures related to mining facilities, such as mines, washery (Figure 4), foundries, shafts and civil archaeology, which includes all the support buildings such as houses, guest quarters, surgeries etc. and didactic-museums.

CRENoS' first level of analysis showed that most of the studied properties belonged to the mining category, 57% in total, summing 10% for civil and 47% for industrial archaeology. Thus, in order to allow a perspective of study suited to a deeper analysis of the 383 surveyed assets, it was necessary to focus on a smaller sample. First of all, only those for which there were conceivable actions of enhancement by the Park were taken into consideration. This led to the identification of 65 sites accounting for approximately

20% of the assets initially estimated; subsequently, the sample of 65 was divided into five standard categories: abandonment, partial recovery, complete recovery, open to the public, industrial activity (CRENoS, 2008, p. 119-125).



Figure 4. Principe Tomaso washery, Cantieri Piccalinna

METHODOLOGY

Among these categories, in this research paper we focus on the ‘open to the public’ category and, applying a further selection, we seek out sites that can be considered tourist products, that is, which rely on guided tours and a ticketing system. As is well known, in fact, tourism is a commercial activity whose goal is to earn, as reported by all marketing manuals (McKercher & Du Cros, 2002). Given the absence of official documents with a comprehensive and detailed overview of the Park’s assets since 2008, we visited the headquarters in Iglesias and interviewed the press officer to obtain up-to-date information. It was revealed that the Park Authority has no ownership whatsoever of any part of the territory, it does not directly manage any of the sites (apart from two non-profit associations in Sulcis) and that almost all dismantled mining sites have been entrusted to Igea Spa, an in-house company of the Region of Sardinia, born as a legal entity operating in the area of security, environmental restoration and reclamation of mining areas abandoned or in the process of disposal. Given that the Park was found to lack comprehensive information and data regarding the open to the public category, these were to become the focus of this study. Therefore it became necessary to undertake an in-depth investigation to record the evolution of those abandoned mining sites which have benefited from recovery works and subsequently been allocated to cultural/tourist use, and a desk and a field study within a comparative analysis were carried out.

As a starting point we chose the 2008 Socio-Economic Plan, as it is the latest official document available with exhaustive and complete data. Subsequently, we chose to use the webpage of the Park (www.parcogeominerario.eu) as a reference source to allow a comparative analysis with data reported in the 2008 Plan. Later a field analysis was carried out through telephone interviews and email enquiries to stakeholders of all the open to the public assets. Since in some case we received no answer to phone calls or emails, it was necessary to organize site inspections to those places. Furthermore, in order to verify the reliability of the information collected for the other sites, visits were organised at random. The assets visited were Pau’s *Museo dell’ossidiana* museum, *Miniera di Funtana Raminosa* mine in Gadoni, *Miniera dell’Argentiera* mine in Sassari,

mining route of Montevecchio in Guspini (*Palazzo della Direzione, Cantiere Piccalinna, Cantiere Sant'Antonio and officine/workshops*), *Galleria Porto Flavia* gallery in Iglesias, *Centro Italiano della Cultura del Carbone* (CCIC – The Italian Centre for Coal Mining Culture) in Carbonia and the mining district of *Miniera di Rosas* in Narcao.

In this phase we also investigated number of visitors per year, amount of human resources occupied, methods of management and financing.

ANALYSIS AND OUTCOMES

Desk Analysis

Taking into account only the sites used for tourism and museum activities which provide a ticketing system, we could identify in the Plan thirteen assets in eight municipalities, as shown in the summary table below (Table 1):

Table 1. Assets open to the public used for tourism up to September 2008
(Data source: Socio-economic Plan, CRENOS 2008)

AREA	MUNICIPALITY	ASSET
Monte Arci	Pau	Percorso museale dell'ossidiana
Funtana Raminosa	Gadoni	Miniera di Funtana Raminosa
Sarrabus-Gerrei	Villasalto	Borgo minerario Villasalto
Arbus-Guspini	Guspini	Palazzina della Direzione – Miniera di Montevecchio
		Cantiere Piccalinna – Miniera di Montevecchio
		Galleria Anglosarda – Miniera di Montevecchio
	Arbus	Pozzo Gal – Miniera di Ingurtosu
Iglesiente	Iglesias	Galleria Porto Flavia – Masua
		Galleria Villamarina – Miniera di Monteponi
		Grotta Santa Barbara – San Giovanni
		Museo delle Macchine da Miniera
	Buggerru	Galleria Henry – Miniera di Malfidano
Sulcis	Carbonia	Miniera di Serbariu -CCIC
Tot. 13 assets in 8 Municipalities in 6 areas		

Then we compared these data with the Park's official webpage, which provides general, historical and institutional information and at the same time dedicates a single space to each of the eight areas of the Park divided into six topics: mining sites, cultural sites, trails, geological sites, natural sites and the part for booking a visit. The majority of these sections are under construction and lack content, the only one complete for all eight areas is the mining sites. After examining the information contained on this website for each area, we were able to build the following picture: of 377 municipalities in Sardinia, 81 are reported to be in the Park, 27 of them host 58 assets; 22 of these can be placed in the territory of 14 municipalities (Pau, Masullas, Lula, Gadoni, Guspini, Arbus, Gonnosfanadiga, Iglesias, Buggerru, Domusnovas, Fluminimaggiore, Carbonia, Narcao, Carloforte) and are officially presented as visitable, i.e. open to the public. The table below summarizes the information offered by the website as follows: area, total number of assets in that area, municipalities mentioned, number and name of only those offered as visitable, according to official sources of the Park (Table 2). Taking into account the visitable assets in this latest table (Table 2), built on data according to the official website and updated to December 2017 and comparing them with those in the previous one (Table 1) created on data presented in the Park's Socio-Economic Plan of 2008, the following differences were detected in terms of new openings or the absence of museums/sites. New openings in Areas

1 and 2 are detected: the *GeoMuseo* museum of Masullas and the mining asset *Miniera di Sos Enattos* in Lula; the mining village *Miniera di Villasalto* in Area 5 is still mentioned but as non-visitabile, while in the Plan it was among the open sites. In the Iglesias area we notice four new assets: *Museo del Minatore* of Genna Luas (Iglesias) and *Museo del Minatore* of the Malfidano mine (Buggerru), also the *Miniera di Antas* mine (Fluminimaggiore) and the mine *Miniera di Perda Niedda* (Domusnovas).

Table 2. Assets open to the public used for tourism up to December 2017
(Source: Authors' elaboration of data from the Park's official website)

	ASSETS IN THE WEBSITE	MUNICIPALITIES MENTIONED	VISITABLE	VISITABLE ASSETS' NAME
Monte Arci	4	Pau	1	Museo dell'ossidiana
		Masullas	1	GeoMuseo Monte Arci
Orani, Guzzurra, Sos Enattos	4	Orani	-	-
		Lula	1	Miniera di Sos Enattos
Funtana Raminosa	2	Gadoni	1	Miniera di Funtana Raminosa
		Seui	-	-
Argentiera Nurra Gallura	2	Sassari	-	-
		La Maddalena	-	-
Sarrabus Gerrei	4	Masullas	-	-
		Villasalto	-	-
		Villaputzu	-	-
		San Vito	-	-
Arburese Guspinese	9	Guspini-Montevercchio	2	Galleria Anglosarda, Palazzo della Direzione
		Arbus-Montevercchio e Ingurtosu	3	Museo Multimediale, Pozzo Amsicora, Musei di Montevercchio
		Gonnosfanadiga	1	Perd'e Pibera
		Villacidro	-	-
Iglesiente	25	Iglesias	5	Galleria Porto Flavia Galleria Villamarina Grotta di Santa Barbara Museo delle Macchine di Masua Museo del Minatore di Genna Luas
		Buggerru	2	Galleria Henry Museo del Minatore di Buggerru
		Domusnovas	1	Miniera di Perda Niedda
		Fluminimaggiore	1	Miniera di Antas
		Gonnesa	-	-
Sulcis	8	Carbonia	1	CICC - Museo del Carbone
		Narcao	1	Miniera di Rosas
		Carloforte	1	Museo di Capo Becco
		Nuxis	-	-
		Villamassargia	-	-
		Assemmini e Capoterra	-	-
	58	27	22	
Tot. 58 assets in 27 municipalities, 22 are visitabile				

Two new sites also appear in the area of Sulcis: the mining district of *Miniera di Rosas* in the Municipality of Narcao and the museum *Museo di Capo Becco* in Carloforte. Special attention has to be dedicated to the zone Arbus-Guspini, where the mining site of

Perd'e Pibera is offered as new open asset in the Municipality of Gonnosfanadiga, whilst the assets located in the Municipalities of Guspini and Arbus are grouped and presented in two different ways on the website and in the Plan.

Outcomes after desk analysis show a growth of nine visitable assets involving a further six municipalities from 2008 to 2017. At this stage it was not possible to make a comparison with regard to human resources, annual inputs or methods of management and financing as these data exist only in the Plan but not on the website.

FIELD ANALYSIS

As already mentioned, in the field analysis we carried out investigation into the open to the public sites through phone interviews and email enquiries, together with site inspections and direct interviews with the aim of determining the number of visitors per year, amount of human resources occupied, methods of management and financing.

As a result we obtained an insight into the current state of the Park, i.e. which museums dedicated to the mines' culture or geology and which mining assets rehabilitated and turned into a cultural tourism product following the closure of mines are presently accessible to the public with a guide and ticketing system and which, despite having been opened since the institution of the Park are at the moment closed. We discovered that some assets, while presented as visitable on the website, cannot be referred to as a tourist product, as they are in a state of disrepair/neglect or are unmanaged, or are administered by volunteers in a discontinuous manner. The outcome is reported in the following table (Table 3). On reviewing data obtained after inspecting the website and in light of the field analysis results, we confirmed that the *GeoMuseo Masullas* museum, the *Miniera di Antas* mine in Fluminimaggiore and the *Miniera di Rosas* mine in Narcao are new visitable assets, whilst all the others, for various reasons are not. The *Miniera di Sos Enattos* in Lula was open in 2010 but closed in 2014; *Miniera di Funtana Raminosa*, *Musei di Montevecchio*, *Galleria Anglosarda*, *Museo delle macchine da miniera* of Masua are all closed. The *Museo del Minatore* of Genna Luas is managed by volunteers with free entry; the *Museo del Minatore* of Buggerru is rarely open and failed to supply any information about visits per year, human resources or other. In *Miniera di Perda Niedda* in Domusnovas a recovery was implemented and some miners' houses were transformed into an *agriturismo*, housing a small museum dedicated to the mine, this can be visited for free and on demand. In the *Miniera di Perd'e Pibera* in Gonnosfanadiga, the recovered assets are destined for other uses. Finally, there is no trace of the existence of *Museo di Capo Becco* in Carloforte.

Table 3. Open assets/products in the Park

AREA	COMMON ASSETS /PRODUCTS	NEW ASSETS/PRODUCTS (WEB AND FIELD)	ASSETS/PRODUCTS IN THE PLAN BUT NOT IN THE WEBSITE	NEW RESOURCES IN THE WEB - NOT A PRODUCT	TOTAL PER AREA - EXCLUDING RESOURCES THAT ARE NOT A PRODUCT AND CLOSE ONES
Monte Arci	Museo dell'ossidiana	GeoMuseo Masullas			Museo dell'ossidiana, Geomuseo Masullas
Orani, Guzzurra, Sos Enattos		Miniera di Sos Enattos			-
Funtana Raminosa	Miniera di Funtana Raminosa				-
Sarrabus /Gerrei			Museo Su Suergiu		Museo Su Suergiu

Arburese Guspinese	Palazzo della Direzione	Cantiere Sant'Antonio	Cantiere Piccalinna	Miniera di Perd'e Pibera	Palazzo della Direzione, Cantiere Piccalinna, Cantiere Sant'Antonio, officine, Pozzo Gal, Museo Multimediale, Pozzo Amsicora
		Officine			
	Pozzo Gal	Museo Multimediale			
	Galleria Anglosarda	Musei Montevecchio			
		Pozzo Amsicora			
Iglesiente	Galleria Porto Flavia	Miniera di Antas		Museo del Minatore di Genna Luas	Galleria Porto Flavia, Galleria Villamarina, Grotta Santa Barbara, Galleria Henry, Miniera di Antas
	Galleria Villamarina	Museo del minatore Buggerru		Miniera di Perda Niedda	
	Grotta Santa Barbara				
	Museo macchine da miniera Masua				
	Galleria Henry				
Sulcis	Miniera di Serbariu/CICC	Miniera di Rosas		Museo di Capo Becco	CICC, Miniera di Rosas

17 open

As shown in the table 3 above, the findings of the field analysis research led us to affirm that there are currently 17 open sites (between museums and sites/mining villages) managed by companies with guided tours and a ticketing system, in the territory of 10 municipalities. Some assets that were in the Plan as open to the public but not present on the website, are currently open such as: *Cantiere Piccalinna* and *Museo Su Suergiu* of Villasalto. It is necessary to specify that both in the Plan and on the website the mine of *Su Suergiu* is mentioned, however the mine is not visitable whilst the open resource is the museum dedicated to miners – *Museo Su Suergiu* – set in the management building of the mine of *Su Suergiu*. Regarding Area 4 – Argentiera, Nurra, Gallura – their assets do not appear in the tables because in both the Plan and Park's website, the *Miniera dell'Argentiera* in Sassari and the cave of *Cala Francese* on the island of La Maddalena have never been presented as open to the public/visitable, a condition confirmed by field analysis. In Argentiera, recovery works were carried out at the washery and *Pozzo Podestà*, but these can only be visited once a year and free of charge, during the event organized by the Municipality of Sassari *Monumenti Aperti*. *Cala Francese*, on the other hand, is on private land and it is possible for groups to visit it for free with advance booking. In some cases, restoration had been completed, but the facility plan for tourist-receptive purposes has never been implemented, such as at the *Miniera di Orbai* in Villamassargia or the *Palazzo della Direzione of Ingurtosu*, which remain closed (and therefore not included in the tables).

The *Palazzo della Direzione of Canale Serci* was renovated but used as offices of the Forestry Authority of Sardinia. The *Palazzo Bellavista* in the Monteponi mine was for a while a seat of the University of Cagliari and hosted the faculties of Material

Science and IT, as well as the Master's Degree in Geographical Information Systems. It is important to mention *Grotta San Giovanni* in Domusnovas, in the Plan as a non-product as accessible for free, because in September 2017 the management of the cave, jointly with the *Nuraghe s'Ormu e s'Orcu* was assigned to the *Consortium Natura Viva* ensuring a ticket office to regulate access to the cave, equipped with a train (*trenino verde*), that will travel 900 meters and will connect it to the *Nuraghe* and other attractions. There are also other places dedicated to mining heritage all over the island, but they cannot be referred to as products because they are open only thanks to the local community's pride in the millenary mining heritage of Sardinia.

These are managed by volunteers and provide free guided tours, and include *Museo dell'Arte Mineraria* in Iglesias, which was in the Plan, although not on the website. Also included is the *Museo Mineralogico e Paleontologico* inside the mining school of Iglesias, which houses an ancient collection of fossil minerals and rocks from Sardinia and other parts of the world and, unfortunately, can only be visited during the cultural manifestation *Monumenti Aperti* and a few other occasions, and the *Miniera di Su Zurfuru* in Fluminimaggiore. As stated above, our analysis focused also on number of visits per year, method of management and financing, human resources. The results obtained regarding visitors per year in 2016 report 112,312 entrances for 16 assets out of 17 (lack of numbers for *Galleria Villamarina*); we also calculated the average of visits in the last 5 years in order to allow a comparison with average number presented in the Plan: in 2008 the average was 62,201 for 13 assets in 2016 it was 90,949 for 17 assets, with a small growth of 28,748. It is noteworthy that a shared detailed model for the registration of entries to sites does not exist, even if it represents a necessary tool for analyzing the composition of targeted demand and supply marketing strategies.

Only the CCIC uses such a model and reports the type of visitors (individual, school groups), provenance, educational qualification, age group, and means of communication. As regards human resources occupied, despite the increase in number of open sites, these still number 73 as in 2008, even though they may increase in high season. Outcomes concerning methods of management and financing, show that the sites' management model is totally fragmented, both with regard to financing conditions and legal composition. As already mentioned, the Park constitutes two non-profit associations, one with the Municipality of Carbonia – the Italian Centre for Coal Mining Culture (CCIC) and another with the Municipality of Narcao – Rosas Mining Association. The majority of the mines have been entrusted to Igea Spa, an in-house company of Region Sardinia. In recent years we are witnessing the passage of ownership of the assets from Igea to the municipalities. The ownership of the other sites can be attributed to municipalities and these are managed by cooperatives or cultural associations with municipal funds.

Table 4. Park status in 2017

AREA	ASSETS	OWNERSHIP	MANAGEMENT	HR	VISITS 2016	AVERAGE LAST 5 YEARS (2012/2016)
Monte Arci	Museo dell'Ossidiana	Municipality of Pau	Associazione Culturale Menabo	3	3.157	2.248
	Geomuseo Masullas	Municipality of Masullas	Cooperativa Il Chiostro	5	2.394	1.925
Sarrabus/ Gerrei	Museo archeologico – minerario dell'attività mineraria Su Suergiu	Municipality of Villasalto	Cooperativa Agorà Sardegna	3	200	200

Arburese/ Guspinese	Miniera di Montevecchio: Palazzo della Direzione, officine, Cantiere Sant'Antonio, Cantiere Piccalinna	Municipality of Guspini	Società Cooperativa Lugori	5	10.321	7.210
	Miniera di Ingurtosu e Montevecchio: Pozzo Gal, Museo Multimediale, Pozzo Amsicora	Municipality of Arbus	Ceas di Ingurtosu Associazione Zampa Verde	5	5000	5.000
Iglesiente	Galleria Porto Flavia - Masua	Municipality of Iglesias	Municipality of Iglesias	10	24.611	16.584
	Galleria Villamarina - Monteponi	Igea	Municipality of Iglesias	5	-	2.076
	Grotta Santa Barbara	Igea	Municipality of Iglesias	8	4.256	4.694
	Galleria Henry	Igea	Municipality of Buggerru	6	9.200	6.181
	Tempio di Antas	Start-uno	Municipality of Fluminimaggiore	6	21.019	17.919
Sulcis	CCIC - Centro Italiano della Cultura del Carbone	Italian Center of Culture of Coal (Municipality of Carbonia and Park)	Associazione Centro Italiano della Cultura del Carbone	7	20.894	17.400
	Miniera di Rosas	Rosas Mining Association (Municipality of Narcao and Park)	Associazione Miniere di Rosas	10	11.260	9.512
				73	112.312	90.949

Regarding method of promotion, it has emerged that the Park website performs only an institutional role, it is static and written solely in Italian, none of the places presented in it are linkable and no information on opening hours and prices are provided. On the other hand we verified that each museum, mining site/village has its own webpage for promoting their resources. From our analysis it emerged that the best practice is represented by the CCIC – Italian Centre for Coal Mining Culture (Figure 5) in the *Grande Miniera di Serbariu* and the mining district of *Miniera di Rosas* (Figure 6).



Figure 5. CCIC-The Italian Centre for Coal Mining Culture.



Figure 6. Mining district of *Miniera di Rosa*

The CCIC is the site of the Park with more recognition, services and greater accuracy in collecting incoming data flows, whilst Rosas stands out for services offered, including accommodation facilities and catering and a winning economic model. Both of these are located in the Sulcis area and are open all year round, but above all they share the same management and financing method. Given the importance of these two places, we provide a more detailed description of them. The CICC arises in the former coal mine of Serbariu and belongs to the territory of the Municipality of Carbonia, a center that developed around the coal mining activity. The presence of coal in this area was noticed by General Lamarmora already in 1834, although the city was founded by the Fascist regime to host the workers occupied in the mine. The museum includes the lampstand, the underground gallery and the winch hall. In the museum there is also a bookshop, a cafe and a conference room with 130 seats and an audio-video system, the website is offered in five languages. It gained Tripadvisor Awards in 2014 and 2015 and it represents Italy in the European Network of Mining Museums, currently composed of seven European mining sites in Europe. It is also one of the anchor points of the ERIH (European Route of Industrial Heritage). The mine, which was active from 1937 to 1964, was transformed into a tourist resource and opened to the public on February 8 2006 following the establishment of CCIC by the Municipality of Carbonia and the Park.

The mining village of Rosas is located in the municipality of Narcao. This metallic field has been known since the nuragic era and was exploited in both Roman and Pisan times. In 1851 it was granted by King Vittorio Emanuele II as the *Società dell'unione miniere Sulcis e Serrabus* for the extraction of galena. Among the extracted minerals we must mention rosasite, discovered in 1929 and named after the place where it was first found. Mining activities ceased definitively in 1980 (Sabiù, 2007) and the site faced a lengthy transformation resulting in the birth of an open-air museum, officially accessible from July 1 2009. The former miners' lodgings have been transformed into a split-site hotel, consisting of 19 houses and a hostel for a total of 110 beds, including a cafeteria, a restaurant and a picnic area. There are many events organized every year in the mine such as *Pianeta Terra, Rosso in miniera, San Valentino in miniera, Capodanno in miniera, Festival di Santa Barbara* and various shows in summertime. A recent study (Cannas, 2016) has dealt with the management project in place, concluding that "the organisational model that grew out of this project was based on a combination of public and private initiatives and remained true to its goal of creating conditions of development of a publicly owned asset using a private business model. This is known as an open economic model..." (Cannas, 2016, p. 54). This model identified by Cannas (2016) in Rosas is part of the more general concept according to which in order to transform a cultural heritage into a tourist resource, stakeholders need to work together and have a common goal (McKersher & Du Cros, 2002). Therefore, we can state that an integrated and organized network between Region, Park and municipalities is desirable; an integrated and organized network between the public and private that shares one unique recognizable brand. Furthermore, a dynamic, multilingual and up-to-date website is still required. It may be taken for granted nowadays when demand is mostly placed on the net and it creates user-generated contents (Ejarque, 2015) but, due to the current state of the Park's website, we must highlight the importance of a tool which provides updated information about all activities and attractions of each area, including accommodation and restaurants and the possibility of booking them, where possible.

CONCLUSIONS AND SUGGESTIONS

Since the drafting of the Socio-Economic Plan until now, advancements in open sites have been registered. At the same time regressions have been recorded, because of the closure

of pre-existing places. Taking into account the average, a small increase in visitors per year has been detected, and no growth in human resources occupied which remain unchanged. Heterogeneity in management has been noticed, as well as the lack of an integrated network and a consequent fragmentation of communication, all of which are factors that reduce the potential of the Park as an opportunity in the tourist market as a niche product. The best practices are represented by the *Villaggio Minerario di Rosas* and by the CCIC – Italian Centre for Coal Mining Culture. Hence, we suggest applying this model to all the resources of the Park (Cannas, 2016). The value of this research paper can be identified in the collection of information that has led to building an up-to-date picture of the Park with data that are unpublished. It can be a starting point for the stakeholders involved in decision-making processes at a regional level if they decide to invest in an incisive way in the Sardinian mining industrial tourism sector. As we believe has emerged in the course of this article, the retrieval of the data and information reported here has not been easy and is the result of lengthy investigation work and in some cases the desired collaboration on the part of the subjects involved was limited. The absence of a single and up-to-date database has constituted a huge limit for this research whose initial aim was a comparative analysis of analogous parks in the European panorama in order to identify best practices and create a tourist-cultural path that, starting from the mining industrial archaeology, would allow the visitor to discover small and medium enterprises operating in the vicinity of the Park, focusing on emotions and experience. The emotional component of tourism is, in fact, crucial (Villamira, 2001; Pini, 2016; Prayag et al., 2017) and heritage tourism raises emotions and creates new experiences, and as such is a real opportunity to exploit alongside not only seaside tourism, but also other sectors such as: food and wine, sports events, folklore, archaeology and architecture. Unfortunately, it was necessary to change the direction of our research and we had to focus on the recognition of basic data such as mapping open sites or annual inputs. We are at the moment working on a further level of research to reach our original goal.



Figure 7. Narrow gauge train, *Piscinas*, Arbus

We conclude by reporting that cultural heritage tourism is an integral part of the *Sardegna – isola della qualità della vita* strategy (2014-2017), of the Tourism Department of the Sardinia Region, in which it occupies an absolute important place. Following the vision of the strategic plan for regional tourism, Sardinia - in balance with identity, traditions, culture and nature - is a place where the beauty of the landscape, environmental sustainability and cultural identity can make a territorial system unique and able to generate an optimal quality

of life for the residents, attract new tourists and investors, generate jobs, re-integrate into the working circuit those who are temporarily excluded and ensure social well-being. The island where it is possible to have a holiday experience is oriented towards the definition of a new territorial product with a tourist vocation, to be positioned on the national market and on the international scenario, in which cultural tourism assumes a fundamental value. Hope for advancements can be found in the information appearing on the Park's website in December 2017. It states that in 2018 the Park, in synergy with the Region of Sardinia and the municipalities concerned, based on the approved Management Plan of October 2017 from the Community of the Park, is committed to carrying out improvements in *Porto Flavia* and *Galleria Henry* and re-opening *Galleria Anglosarda*, *Miniera di Sos Enattos*, *Funtana Raminosa*, as well as opening *Miniera di Su Suergiu*, *Orbai* and *Argentiera*.

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TOURISM – A VIABLE ALTERNATIVE FOR THE DEVELOPMENT OF RURAL MOUNTAINOUS COMMUNITIES. CASE STUDY: EFTIMIE MURGU, CARAŞ-SEVERIN COUNTY, ROMANIA

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Abstract: Tourism represents a viable alternative for the development of rural mountainous communities, because it can act as an integrating force, capable of revitalising other economic sectors through its multiplicative effect and help improve the populations' quality of life. The Eftimie Murgu commune benefits from generous and variate nature tourism potential and most important from a cultural heritage site: the Rudăria Watermill Complex which is the most significant complex of watermills in south-eastern Europe and is included in the UNESCO heritage list. This study aims to analyse the potential of the commune and the degree in which it is being valued. The objectives of the study included: evaluating the tourism potential with the help of analysis trees; analysing the community members and tourists' perceptions about the degree in which the potential of the area is being

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capitalised, and proposing recommendations on the better capitalisation of the local tourism potential. The research methodology consisted in: field observations, analysis trees, social surveys (semi-structured interview), and GIS mapping. The results emphasised an insufficient capitalisation of the local tourism potential proven by a weak accommodation offer and deficient access network in the area, a reduced promotion of local ethnic-folkloric traditions and brands, specific activities (like festivals) or crafts. The authors concluded that local authorities must be convinced tourism is a viable and valuable activity that can economically revitalise the area and generate additional income for the local population.

Key words: tourism potential, natural heritage, cultural heritage, capitalisation, promotion, Rudăria Watermill Complex, Eftimie Murgu, România.

* * * * *

INTRODUCTION

In the last few decades, tourism defined as “*a form of cultural-educational and recreational activity of the human society*” (Bojan, 2009) became an economic branch that is rapidly growing (Cheng et al., 2011; Önder et al., 2014; Cucculelli & Giffi, 2016). Many of the world’s regions rely on tourism to secure their development as it is the only viable alternative to the rest of economy’s activities (Glössing et al., 2017), while others see it as an activity of equal importance to various economic domains (Chindriș, 2014).

Romania, as many countries from Eastern Europe, made considerable efforts to develop its tourism since having to restructure its economy after 1989 (Matei et al., 2016). In the same time, Romania - the EU member country - had to respect the European norms of durable tourism which include: decreasing pressure on crowded destinations, stimulating new forms of tourism such as slow tourism (Conway & Timms, 2010) or soft tourism, adapting tourism management to new requirements and criteria, ensuring a balance between tourism activities and environmental protection, improving the quality of life of local communities, conserving traditions, and achieving tourists’ satisfaction (Matei, 2016). In this context, tourism is recognised as a viable alternative to the economic development of Romanian rural communities, especially mountainous ones, where it can act as an integrative force, create new jobs, and improve the inhabitants’ quality of life (Sharpley, 2000). Also, it can harmonise the other economic sectors through its multiplicative effect, or its different specialisations such as agro-tourism or ecotourism (Matei et al., 2014), and also reduce migration.

But tourism is not a panacea of rural development anywhere and anyhow (Matei & Caraba, 2010), it also needs potential resources such as heritage elements, or specific and general infrastructure (Ielenicz & Comănescu, 2006), marketing, and supportive policies (Stăncioiu, 2009). According to the World Tourism Organization as well as other organizations of the European Community, the tourism potential of mountainous regions is made out of an ensemble of natural, cultural, and socio-economic elements that can pique the interest of tourists thus creating visitors flows (Câdea et al., 2000; Ielenicz & Comănescu, 2009; Pop & Marin Pandelescu, 2009; Chindriș, 2014).

The purpose of the study lies in analysing the capitalisation of the tourism potential of the Eftimie Murgu commune. The objectives include: i). evaluating the tourism potential by using analysis trees; ii). analysing the community members and tourists’ perceptions about the degree in which the potential of the area is being capitalised; iii). outlining recommendations on how to better capitalise the local tourism potential.

STUDY AREA

The Eftimie Murgu commune, known as Rudăria, was first documented in 1410 (Ghinea & Ghinea, 2000), and is located in south-western Romania in the Almăjului/Bozovici intra-mountainous depression, at the base of the Almăjului Mountain and it administratively belongs to Caraș-Severin County (Figure 1).

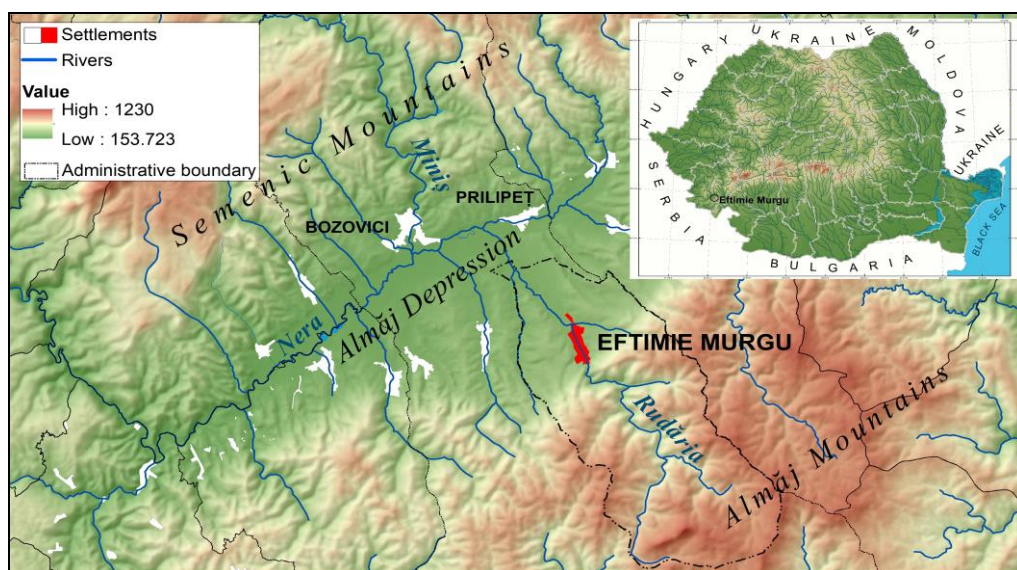


Figure 1. The geographical position of the Eftimie Murgu commune
(Source: Topographic map, scale of 1:50.000, Military Topographic Survey, 1989)

The study area pertains geologically to the Danubian Domain, as the Almăj unit is made out of metamorphic rocks and magmatic intrusions. The Quaternary deposits from the Holocene era are made out of sands and gravels, but they can be found only scarcely, respectively in the riverbed of the Rudăria creek (Săndulescu et al., 1978).

The relief is varied and develops into concentric steps in which the hydrographic network deepened. There are three distinctive relief depression increments: piedmont hills, terraces, and the floodplain which appear more often as you get closer to Almăjului Mountains. The stepped relief offers a large view from hills toward the depression and vice versa from the floodplain, but this variety, having as a masterpiece of the nature the Rudăriei Gorges, is an asset that raises the tourist attraction of the area, knowing that it refers to the scenic/aesthetic, scientific, cultural/historical and social/economical values (Pralong, 2005; Reynard et al., 2008). The climate of the area is temperate - continental with many sub-Mediterranean influences (Ianăș, 2011). The average annual temperature varies between 9°C and 10°C and with 700-800 mm of precipitation falling every year.

The hydrographic network develops around Rudăria, a tributary of the river Nera. It formed with the confluence of two smaller creeks Rudăria Mare and Rudăria Mică, each of them flowing from the southern mountainous area. Before entering Eftimie Murgu, the Rudăria creek forms a sector of narrow gorges dominated by steep and huge cliffs with two of them called Adam and Eve due to their anthropomorphic forms. The Rudăriei Gorges house the most massive watermill complex in south-eastern Europe included in the UNESCO heritage list (Popovici, 2013). Flora and fauna of the area are varied. Flora includes beech forests (*Fagus sylvatica*), but also a highly diversified mix of species that

contains: common hornbeam (*Carpinus betulus*), Turkish oak (*Quercus cerris*), Hungarian oak (*Quercus frainetto*), lime tree (*Tilia sp.*), flowering ash (*Fraxinus ornus*), oriental hornbeam (*Carpinus Orientalis*), smoke tree (*Cotinus coggygria*) and lilac (*Syringa vulgaris*) and also meadows specific to rocky regions with *Poa nemoralis*, *Festuca valesiaca*, *Festuca rupicola*, *Alium flavum*, *Genista ovata* etc. (Arsene et al., 2015). Beyond the beauty of the landscape given by the mixed forest, the degree of forestation is 51,4% which enriches the touristic value of the commune.

The dominant soils are represented by haplic luvisols, and also eutric cambisols, luvic and albic stagnosols in the lower floodplain areas (Moca & Filipov, 2015). The soils make possible the cultivation of some plants that can partially support the local economy and, implicitly, the tourism business. According to the 2011 census, Eftimie Murgu's population rose to 1.628 inhabitants showing both a decrease in number compared to the previous census as well as a more ageing population. The primary economic activity of the inhabitants relates to livestock breeding (sheep and bovine), wood exploitation, and orchard tending (apple and plum trees) (Ianăș, 2011) despite the fact that holdings are made by more plots, resulting an agricultural fragmentation (Vijulie et al., 2012). Other notable activities include wood processing: carpentry, coopery, wheelwright's work, pallets producing, wooden moulding, as well as furrier's trade, tailoring, smithing, bricklaying, miller's trade, and bakery (Mayorality of Eftimie Murgu, 2017).

RESEARCH METHODOLOGY

The *research methodology* consisted of field observations, analysis trees, social surveys (semi-structured interviews), and GIS mapping. The first step of the research was, of course, the documentation phase when the specialised literature was consulted. This step was followed by successive field visit between May and June of 2017 in order to identify and inventory the main tourism resources in the study area and to fill in observation charts. Based on field data from the observation charts the analysis tree method was used for the evaluation of the tourism resources available in Eftimie Murgu.

This method implied selecting the main criteria and sub-criteria according to which evaluating qualifications attributes were given for a total maximum of 100 points, starting from various tourism components: tourism resources - 50 points, specific tourism infrastructure - 20 points, and technical infrastructure - 30 points (Urban Proiect, 2007).

When appreciating the attractiveness factor of tourism resources, an equal score was given to elements pertaining to nature tourism potential as well as anthropic tourism potential with each of them being able to accumulate a maximum of 25 points (Urban Proiect, 2007). A series of natural resources were selected in order to *evaluate the nature potential* of the area, which included: its position on the relief steps, the existence of spectacular geomorphic elements (Ilieș, 2009), the forest vegetation, endangered species, fauna species of great hunting importance; other elements considered were hydrologic ones (lakes, mineral springs, waterfalls, and specific landscape) or natural protected areas (Table 1).

In order to *evaluate the anthropic potential*, the anthropic resources were classified into: museums and collections, art elements, and traditions (festivals, local holidays, and crafts), etc. The maximum score for this section is 25 points (Table 2). Additionally, this score can only be achieved if UNESCO monuments are present in the study area. The *evaluation of tourism specific infrastructure* required the analysis of the accommodation units which received scores depending on their distribution, according to the number of rooms per each accommodation structure, functioning accommodation capacity, and their room distribution based on comfort level. This section can receive a maximum of 20 points (Table 3).

The *evaluation of the technical infrastructure* can receive a maximum of 30 points. This analysis was based on multiple criteria: assessing the accessibility to administrative units by using the existing transport infrastructure, provision of public amenities by local authorities, and provision of communication services through the telecommunication networks (Table 4). During the field visits from June 2017 semi-structured interviews were conducted on a sample of thirty subjects, with half of them being tourists and the other half locals. The authors elaborated an interview guide when creating the semi-structured interviews in order to cover a more complete panel of aspects.

Table 1. Evaluating the nature tourism potential
(Data source: According to Urban Project methodology, 2007)

Category	Score
Position on the relief steps	
Plain	1
Hills and Piedmont	2
Sub-Carpathians	3
Mountains	4
Seaside and Danube Delta	4
Geomorphology	
Gorges, steepes, karsts, vicinity to imposing natural units	1
Vegetation	
Forests covering more than 30% of the area	1
Fauna	
Species of great hunting importance	1
Hydrography	
Lakes, fisheries, mineral springs, waterfalls	1
Landscape	2
Natural landscape, flora, fauna	
Protected areas	5
	25

Table 2. Evaluating the anthropic tourism potential
(Data source: According to Urban Project methodology, 2007)

Category	Score
Historical monuments of national interest (archeologic, architecture, memorial houses)	8
Museums and public collections	9
Popular art and traditions, crafts, holidays and rituals	8
Total	25

Table 3. Evaluating the tourism specific infrastructure
(Data source: According to Urban Project methodology, 2007)

Category	Score
Accommodation units	7
Treatment facilities	5
Conference rooms, exhibitions centres	6
Sky slopes, cable transport installations	1
Other tourism installations (golf courses, water facilities, amusement parks, herds of horses) etc.	1
Total	20

The local population sample was selected using the "snow-ball" technique (sampling through identification) while trying to achieve a diverse representation in terms of level of education and economic profession and also respecting the age and gender structure of Eftimie Murgu's population. The local population sample included two representatives of local authorities, one guesthouse owner and twelve farmers, who are also employed in maintaining the watermills. Each of watermills is owned in an associative type enterprise by multiple families. Their interviews included questions meant to identify: the level of tourism investments in the area; the degree in which authorities are involved in the development of local tourism; the type of activities relating to the watermills they are managing that could be provided by them or locals in general and could increase the overall satisfaction of tourists; the difficulties they face when dealing with heritage value assets, etc. The interviews aimed to analyse the subjects' perception about the degree in which the locality's tourism potential is being capitalized.

The tourists' sample was selected randomly from the available visitors of the site. As for their interviews, the questions were meant to identify the reasons why they chose to visit this particular destination, what information methods they used to prepare themselves for this visit, their level of satisfaction with the tourism objectives they visited, their impressions on the local tourism infrastructure, etc. The interviews have been processed manually. The *limits of the study* stem from the low number of tourists interviewed which is directly correlated with the overall low number of tourists that reach Eftimie Murgu due to an insufficient accommodation network and generally reduced accessibility. GIS techniques, respectively Arcgis 10.3.1® based on Google Earth were used for spatializing well-bucket mills within the Rudăria Watermill Complex and the Topographic map, scale of 1:50.000, Military Topographic Survey, 1989 for the geographic location of the area.

Table 4. Evaluating the technical infrastructure
(Data source: According to Urban Project methodology, 2007)

	Name	Maximum score		Score
Direct access to the main infrastructure network	Port	1	Yes No	1 0
	National / international airport	5	Yes No	5 0
	Access to European roads	5	Yes No	1 0
	Access to national roads or railways	5	Access to national roads and railways Access to national roads or railways Without access to main transport networks	1 0,5 0
Housing amenities		7	Centralized water supply system and sewerage waste system One of them None	5 2,5 0
		2	Natural gas supply network No	2 0
Electronic communications services		5	Mobile networks Internet One of them None	5 2,5 0
Total		30		

RESULTS AND DISCUSSIONS

Evaluating the tourism potential of Eftimie Murgu commune based on analysis trees

Analysis trees outlined a series of aspects useful for our study. The *nature tourism potential* of Eftimie Murgu is extremely valuable and rich in landscape variety, as it combines diverse relief forms (steeps as well as gorges), vegetation (forests and rocky meadows), hydrology (Rudăria creek), and high-interest fauna elements. Rudăriei Gorges are included in a nature reserve area since 1982 and is part of a Natura 200 Site (ROSCI0032) since 2007. The terrestrial habitats of local fauna include beech forests, secondary associations formed by Mediterranean shrubs (șibleac) usually located on the site of former oak forests, grasslands, rocky slopes and screes, as well as a pine tree (*Pinus sylvestris*) plantation. The aquatic habitats are related to the Rudăria creek and its tributaries. The main threats to the species living here and their habitats are uncontrolled logging, poaching, excessive grazing, infrastructure works, and water dams. Based on the evaluation of the nature tourism potential, the area received a score of 15 points (Table 5).

Table 5. Evaluating nature tourism potential in Eftimie Murgu (Data source: Observation chart, 2017)

Category	Score
Position on relief steps	4
Almăjului Mountains - Almăjului Depression	
Geomorphology	1
Rudăriei Gorges, steeps, relief developed on metamorphic rocks	
Vegetation	1
Forested areas occupy more than 30% of the study area, beech (<i>Fagus sylvatica</i>), common hornbeam (<i>Carpinus betulus</i>), turkey oak (<i>Quercus cerris</i>), Hungarian oak (<i>Quercus frainetto</i>), oriental hornbeam (<i>Carpinus Orientalis</i>), smoke tree (<i>Cotinus coggygia</i>), lilac (<i>Syringa vulgaris</i>), rocky meadows with <i>Poa nemoralis</i> , <i>Festuca valesiaca</i> , <i>Festuca rupicola</i> , <i>Alium flavum</i> , etc.	
Fauna	1
Wild cat (<i>Felis Silvestri</i>), lad turtle (<i>Testudo hermani</i>), horned viper (<i>Vipera ammodytes</i>) etc.	
Hydrography	1
Rudăria creek, waterfalls and dams in the Rudăriei valley	
Landscape	2
Natural landscape, varied fauna and flora	
Protected area	5
Rudăriei Gorges – nature reserve, Natura 2000 site	
Total	15

Another strong point of the study area is its *anthropic ethnic-folkloric heritage* which is highly diversified and very well preserved. Among the anthropic resources of the area the most important is the Rudăria Watermill Complex located along the Rudăriei Gorges Reserve; with others numbering the ethnographic museum, as well as the immaterial heritage of traditions and rituals specific to this Romanian village (e.g. the Lilac Festival, the “Lunea Cornilor” Festival that reproduces wedding rituals with the help of masks or “maimozi/corni”, the Milk Measuring festival - “Smâlzul”, or Negaia which is the local village festival that incorporates folk dances and other traditions).

Our analysis awarded 25 points for the anthropic tourism potential. This score was validated firstly by corroborating all the indicators calculated for the study area and secondly by the presence of a UNESCO monument, namely the Rudăria Watermill Complex, which is the only way a maximum score could have been achieved (Table 6).

The Rudăria Watermill Complex is located in the Eftimie Murgu commune, on Rudăriei valley and consists of 22 functional watermills (Figure 2), a unique site in the country and one which elevates the area even more in terms of tourism potential (Iancu & Turdean, 2001). The well-bucket watermills (horizontal wheel with radial cups) were built here in order to grind grains (Figure 3 a, b) using hydropower energy (Zagoni et al., 2013) and they were utilized in an associative type enterprise by families in the commune (“devălmășie”) called in the area “rândași” (with each mill still bearing a table with the grinding schedule for each family) (Iamandescu, 2005). They are still managed by the local population who pass along generations “*their turn at the mill*”.

Table 6. Evaluating the anthropic tourism potential of the Eftimie Murgu commune
(Data source: Observation chart, 2017)

Category	Score
Historic monuments of national interest (archeologic, architecture, memorials)	8
Rudăria Watermill Complex (traditional techniques)	
Museums and public collections	9
The Eftimie Murgu village ethnographic museum	
Fold art and traditions, crafts, holidays and rituals	8
The Lilac Festival, the “Lunea Cornilor” Festival (reproduces wedding rituals with the help of masks or “maimozi/corni”), the Milk Measuring festival (“Smâlzul”), Negaia - folk dance festival	
Total	25

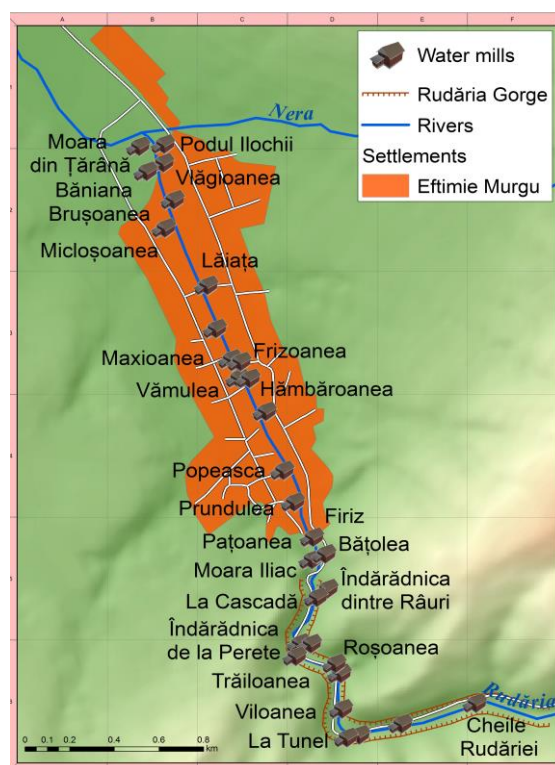


Figure 2. Location of Rudăria Watermill Complex
(functional and non-functional watermills) (Source: Google Earth, 2017)

In terms of *tourism infrastructure*, the area offers very few accommodation units: the Casa Valea Morilor Pension, the La Moara din Grădină Guesthouse, as well as housing provided by locals in their own homes; the limited accommodation offer is one reason for reduced tourists flow. As a result, Eftimie Murgu functions more like a transit tourism destination. There are more accommodation units that could serve the study area, but most of them are located 25-30 km away from Eftimie Murgu. The score obtained for the evaluation of the tourism infrastructure was of 2 points (Table 7).



Figure 3. Watermill on Rudăria valley (a);
Functioning mechanism of a watermill (watermill wheel - "ciutura") (b)

Table 7. Evaluating the tourism infrastructure in Eftimie Murgu
(Data source: Observation chart, 2017)

Category	Score
Accommodation units - Casa Valea Morilor Pension, La Moara din Grădină Guesthouse	2
Treatment facilities	0
Conference halls, exhibition centres	0
Sky slopes, cable transport facilities	0
Other recreational facilities (golf courses, nautical recreational facilities, amusement parks, horse herds)	0
Total	2

Table 8. Evaluating the technical tourism infrastructure in Eftimie Murgu
(Data source: Observation chart, 2017)

Name		Score
Access to national roads / railways	Access to DN 57B, DJ 571F	0,5
Access to amenities (centralized water supply system Access to a sewerage waste system		2,5 0
Natural gas supply system		0
Communication services	TV, phone, internet	5
Total		8

When *evaluating the technical infrastructure*, the authors considered how accessible the commune is, the transport infrastructure, the quality of civil amenities

provided by local authorities, the housing infrastructure, and communication services provision (TV, phones, and internet). The main access routes for Eftimie Murgu are DN 6 (Caransebeş-Orşova), and DN 57B towards Oraviţa. Coming from Pripileţ tourists need to follow DJ 571F up to Eftimie Murgu and access the nature reserve itself along the Rudăriei Gorges on an asphalt road. Railway access is possible just as far as Oraviţa or Caransebeş. Amenities of the commune include a centralized water supply system, but no sewerage or natural gas supplies. Communication provisions were marked as “good”, and the technical infrastructure gathered a score of 8 points (Table 8).

Tourists and locals' perception about the capitalisation of local tourism potential

The degree in which the commune's tourism potential is being capitalised was analysed both from the perspective of the local population as well as the tourists visiting Eftimie Murgu. The interviewed tourists declared overwhelmingly (80%) that they came to visit the Rudăria Watermill Complex (Figure 4).

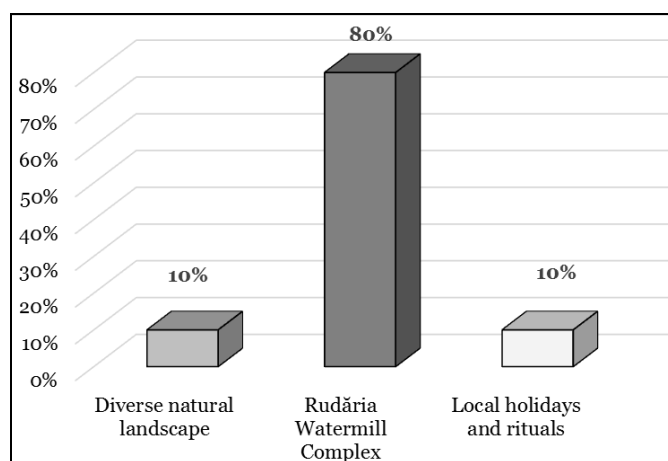


Figure 4. Tourists' motivation in choosing Eftimie Murgu as their destination
(Source: Information drawn from semi-structured interviews, 2017)

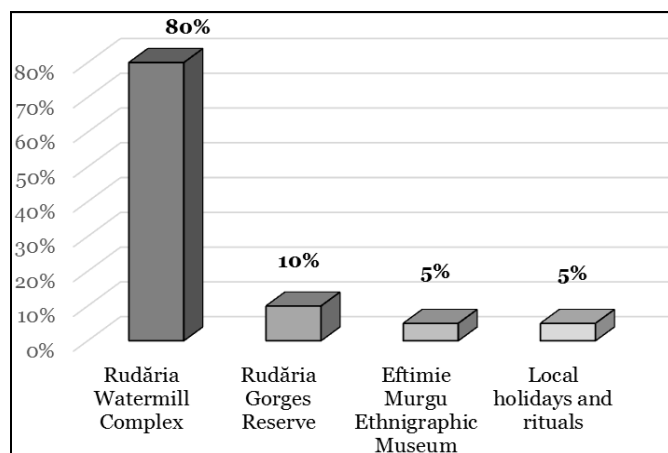


Figure 5. Tourists' satisfaction with the objectives they visited
(Source: Information drawn from semi-structured interviews, 2017)

The main information source was the internet, with 80% of them searching the World Wide Web for guidance (either the city hall official page - <https://www.primariaeftimiemurgu.ro/prezentarea-comunei/>; <https://rudaria-turistica.ro/> or the official page of the Rudăriei Gorges Reserve - <http://www.cheilerudariei.ro/>, and others) and 20% being directed here by friends and family. The interviewed tourists declared they were fully satisfied with the attractions of the area (Rudăria Watermill Complex, Rudăriei Gorges Reserve, the ethnographic museum, local traditions, and rituals). When asked to provide a hierarchy of the attraction points in the area in terms of importance they placed the Rudăria Watermill Complex first as their main source of satisfaction stating the novelty and uniqueness of it (Figure 5), while being equally (100%) disappointed by the weak promotion of the nature and anthropic tourism potential of this commune.

Local authorities expressed their support for promoting tourism in the area and their wish of increasing tourist flows. As such, they consider that promoting the area in “*Banatul Montan*” (periodical printed tourism guide as well as on website) is a priority and a resource worth harnessing. Discussion with local authorities also brought forward the problems that they are currently facing and need solving: the inadequate roads network, lack of a centralized sewerage system, insufficient accommodation units, weak promotion of other interest points around the area (apart from the Rudăria Watermill Complex), etc. Locals declared in their interviews that they were unhappy (70%) with authorities’ initiatives in terms of tourism promotion. They also pointed out their own difficulties in ensuring the maintenance of heritage type sites and items, like the watermills. The mills were restored with the help of the Sibiu Astra Museum in 2001 through local effort and European funds after which the local population had to ensure the continuous function of the watermills by individual means. Meanwhile, the watermills deteriorated or were partially destroyed by floods (like for example the one of September 2014) and the locals repaired them having had to recourse to the elderly's knowledge on this matter.

The material used most frequently in mill construction is wood which easily deteriorates and as such requires continual replacement works. In order to increase their life span and for operational efficiency both the traditional gutter that directs water – which is usually made of alder wood –, as well as the watermill wheel, were replaced with metal parts. In spite of all difficulties they face managing the watermills; locals mentioned that a series of activities could bring added value to tourists’ experience. These include setting up organized visits to both the watermills on Rudăriei Valley (this would ensure a presentation of the traditional operating system) which is presently difficult to do as many of the mills are locked so tourists cannot enter, and to the small village museum (where one watermill is dismantled in all its components) which would help tourists better understand how they function. Another activity suggested by locals consists of grinding the grains in the presence of tourists (“*grinding our grains is a tradition that we still keep alive*”) and using the flour and other local products when preparing a traditional dinner, etc.

Recommendations on better capitalising the tourism potential of the study area

Due to the unic value of the site, we highly reccomend several solutions for a better capitalisation of the tourism potential, which could be applied by the local authorities, as the followings:

- Increasing local authorities' interest in tourism investments with some incentives regarding rules for rented land, low fee for reinvestment of profit or those hiring local workforce, etc.;

- Achieving a higher degree of acknowledgement on the part of the local population about the benefits that agro-tourism can have on the economy;
- Diversifying the tourism offer (mountain hikes along Rudăriei Gorges, training the locals as tourism guides, giving tourists the opportunity to participate in everyday events of the commune, or specific folkloric manifestations such as - the Cornilor Festival, the Lilac Festival, the Milk Measuring festival);
- Increasing the accommodation capacity in the study area, and also possibly modernising the existing shelters and transforming them into agro-tourism farms;
- Improving accessibility to the area, by modernising the access ways to the commune;
- A better promotion and marketing for local products and tourist offers are subsequently needed it.

The practical and scientific importance of the study consists in the analysis tree method used for the evaluation of the tourism potential of the Eftimie Murgu commune based on its four components: nature and anthropic tourism potential and tourism and technical infrastructure. Also, by analyzing the tourists and locals perception about the degree in which the study area's potential is being capitalised the authors were able to identify weak points in terms of tourism promotion of the area and determined that tourism is an activity that would lead to supplementing the income of the local community. The practical importance of the study is that its results can be disseminated among local authorities which can adjust their local development strategies to incorporate solutions to the problems identified by the authors in this study.

CONCLUSIONS

Eftimie Murgu has a diverse range of resources for tourism development, but they are poorly capitalised. This translates into an ineffective environment for creating new entrepreneurial enterprises (e.g. agro-tourism).

The tree analysis method showed a deficient tourism infrastructure in the study area and a low accessibility degree due to precarious road networks.

The analysis of tourists and locals perception on the capitalisation of the tourism potential of the study area pointed out a weak effort to use the tourism potential of the area, and a lack of vision on the part of local authorities, who focus on the watermill complex and neglect other existing attraction points. The financial future of the local population will depend heavily on the presence of a tourism offer as diverse as possible and with a high attractiveness factor. A fundamental measure in achieving this is putting tourism in the front and centre as an activity that could economically revitalise the area and generate extra incomes for the local population.

Aknowlegments

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SOCIODEMOGRAPHIC INFLUENCES ON RESIDENTS' PERCEPTIONS OF TOURISM DEVELOPMENT IN ZIMBABWE

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Abstract: This study sought to determine the sociodemographic influences on residents' perceptions of tourism development in Zimbabwe. The study emanates from a concern over the lack of such a research angle in the context of sub-Saharan African tourism research. Adopting an explorative quantitative design, a structured survey was used to generate 246 valid responses from the residents in Harare. The results obtained showed that there were both similarities and differences in the perceptions of residents with different sociodemographic characteristics. The study brought to light that sociodemographic characteristics are an important variable in determining the influences of residents' perceptions of tourism development. This article offers developing destinations augmented insight into the influence of demographic characteristics on residents' perceptions of tourism development, as well as discernments respecting tourism planning, policy formulation, strategy implementation, and tourism marketing in transforming communities and enhancing destination's image.

Key words: Socieodemographic profiles, residents, tourism development, Zimbabwe

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INTRODUCTION

An investigation of how the sociodemographic characteristics of residents influence their perceptions of tourism development is a neglected phenomenon within the context of tourism development in a developing destinations context. The existing research has shown that a key shortcoming in the tourism development process is the lack of involvement of the residents in the tourism planning and development stages. However,

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the research foci on the residents' perceptions of tourism development and tourism impacts, in both the developing and the developed context, have gained the attention of a number of scholars (Brougham & Butler, 1981; Dieke, 1989; Ap, 1992; Jurowski et al., 1997; Chen, 2000; Chen & Hsu, 2002; Lui, 2003; Dyer et al., 2007; Nunkoo & Gursoy, 2012; Mutanga et al., 2015; Tichaawa & Mhlanga, 2015; Moyo, 2016; Makoni & Tichaawa, 2017), who, in their studies, suggest that, as the residents are an integral part of tourism development, their perceptions can be of great value in developing the relevant developmental strategies. Surprisingly, though, scant analysis exists of how sociodemographic characteristics influence such perceptions of tourism development (Brougham & Butler, 1981; Allen et al., 1993; Lindberg & Johnson, 1997; Andereck et al., 2007). More worrying than the above is the fact that much of the existing literature, in the same regard, has been conducted from a developed community perspective. Wang (2013) identifies the lack of interest in sociodemographic characteristics when studying residents' perceptions, especially from a developmental perspective. Within the context of sub-Saharan Africa, there is a limit of empirically based studies that have been conducted focusing on the above-mentioned research angle. Moreover, sociodemographic variables, and their influence on the perceptions of tourism in the African context, have been largely researched from a tourist point of view (Mhlanga et al., 2015; Tichaawa & Makoni, 2018). Consequently, the current study sought to examine the influence of the sociodemographic characteristics of residents' perceptions and attitudes on tourism.

In the extant literature, sociodemographic characteristics have been viewed by a number of scholars (Easterling, 2004; Byrd, 2007; Sinclair-Maragh, 2017), as the size, distribution, and structure and development of the human population, taking into account issues of gender, age, racial background, marital status, place of residence, educational background, occupation, and economic status, and/or a combination thereof. Sinclair-Maragh (2017) is concerned that very few studies have made the above-mentioned characteristics the focal point of their research inquiry. Sinclair-Maragh (2017: 5) argues that it is important to study specifically how demographic profiles influence perceptions, because their "individualistic nature" makes doing so a complex activity for destination planners to undertake in developing tourism development strategies that cater for all. Moreover, Sinclair-Maragh et al. (2015) argue that such profiles are useful when understanding perceptions, and the level of support, of tourism development. Furthermore, examining residents' demographic characteristics is very important in terms of developing destinations, especially those in sub-Saharan Africa, since, in recent times, they have become heavily dependent on tourism (Sinclair-Maragh et al., 2015) for economic transformation (Rogerson & Rogerson, 2018; Rogerson & Saarinen, 2018). Consequently, the current study aimed at investigating how the residents' sociodemographic characteristics influence their perceptions on tourism development, using Zimbabwe as a case study. The broader objective of the study was to supplement the extant studies with the same focus with a sub-Saharan African example. The theoretical contribution relates to articulating how the changing demographics influence the views held by the concerned residents.

LITERATURE REVIEW

Significance of the residents' perceptions of, and attitudes towards, tourism development

Tourism is handsomely embraced in developing countries, due to its power to transform economies and livelihoods (Sinclair-Maragh, 2017). Therefore, it is of great significance for any future-oriented tourism development to be planned in cognisance of the residents' perceptions and attitudes, so as to enable their influence to be felt in terms of their support for any future development of tourism (Choi & Murray, 2010; Canizares

et al., 2016; Deng et al., 2016). Elsewhere in the literature, some studies (Sharma & Gursoy, 2015; Makoni & Tichaawa, 2017) opine that, since the residents are those who are employed directly/indirectly in the tourism sector, and who reside in the environments within which tourism performs, the need to examine their perceptions of, and their attitudes toward tourism development is vital. Besides, such residents are directly impacted on by tourism developments (Easterling, 2004), and hence, their attitudes toward tourism are crucial for the tourism developers to bear in mind (Lankford & Howard, 1994; McGehee & Andereck, 2004; Latkova & Vogt, 2012; Sinclair-Maragh, 2017). In the light of the above, Byrd (2007) considers residents as the most important tourism stakeholder group, and argues that their support for tourism is required if sustainable tourism development (STD) is to be achieved.

Tourism, with its associated benefits and shortcomings in relation to a specific community, plays a significant role in shaping the perceptions and attitudes of residents on its impacts (Wober et al., 2003; Aliaskarov et al., 2017; Turanligil & Altintas, 2018; Tuzunkan, 2018). In view of the above-mentioned finding, Sharma and Gursoy (2015) advance that the positive influences of tourism result in the residents' support of tourism development, whereas conversely, negative influences detract from their support in such regard. The primary determinants of the residents' support of tourism development are their perceptions towards, tourism (Sharma & Gursoy, 2015). Therefore, the residents' perceptions and attitudes must be monitored on a regular basis by the destination's tourism authorities (Sharma & Gursoy, 2015). According to Gursoy et al. 2011, monitoring perceptions helps in the development of appropriate plans, initiatives and strategies to influence their perceptions, as well as motivating them to support tourism development. Wang (2013) maintains that the residents must be given priority in tourism development, because their involvement can result in achieving sustainable tourism development. In addition, taking into consideration the residents' perceptions of tourism is seen as an assurance of the enhancement of existing livelihoods (Wang, 2013). With regards to the above, the tourism authorities must develop a sound understanding of the residents' perceptions of tourism development, as a way of gaining their support on tourism projects (Harrill, 2004). The factors that affect residents' perceptions of tourism development are worthy of identification (Sharma & Gursoy, 2015). These factors are argued to be: the distance of the residents' homes from the tourism attractions concerned (Jurowski & Gursoy, 2004); the type of tourism destination in which they reside (Dogan, 1989); their length of stay in the community (Gursoy et al., 2002); and their sociodemographic characteristics (Pizam & Pokela, 1985). The present study, however, focuses on the sociodemographic characteristics involved as factors influencing the residents' perceptions of tourism development.

Residents' sociodemographic characteristics versus their perceptions of, and attitudes towards, tourism

To determine the residents' perceptions of, and attitudes towards, tourism development, and their level of support of tourism, it is important to assess how their sociodemographic characteristics influence their perceptions. Sharma and Gursoy (2015) argue that the possibility of gaining the residents' support for tourism is influenced by their sociodemographic characteristics. For example, the residents' involvement in tourism with the aim of enhancing their socioeconomic benefits influences their perceptions of, and attitudes towards, tourism (Sharma & Gursoy, 2015). In addition, Deery et al., (2012) argue that the educational background, employment status, ethnicity, and marital status of residents affect their perceptions of tourism development. According to Brougham and Butler (1981), age and gender are two of the most important sociodemographic characteristics influencing residents' perceptions. In addition, Long

and Kayat (2011) argue that age plays a significant role in influencing residents' perceptions of tourism development, in terms of which they indicate that young people tend to participate more in tourism than do older people, with the perceptions of the former being likely to be more positive than are those of the latter.

Some studies (Chen, 2000; Teye et al., 2002; Long & Kayat, 2011) agree that the relationship between the residents' sociodemographic characteristics and their perceptions is non-conclusive, due to the age, gender, occupation, and economic status differences among them. Concurring views from other studies (Andereck & Nyaupane, 2011; Sharma & Gursoy, 2015) advance the proposition that, inasmuch as the sociodemographic characteristics of the residents tend to influence their perceptions, no consistent relationship exists between the two, perhaps owing to their changing nature. In their study, Sharma and Gursoy (2015) found that the economic benefits of tourism for the residents have a relatively great impact on influencing their perceptions. In other words, the residents whose positive economic status is due to tourism usually have positive perceptions of tourism, compared to those whose status is not. In addition, the earlier research conducted by Irwin et al. (1990) shows that people with different sociodemographic characteristics have different needs and wants, as well as perceptions and attitudes. Thus, sociodemographic characteristics affect perceptions through the associated values (Lindberg & Johnson, 1997). Wang (2013) opines that such sociodemographic characteristics are relevant to the determining of similarities and differences regarding various geographic segments of a resident population. Various views have been presented in relation to how the sociodemographic profiles of residents influence their perceptions and attitudes towards tourism.

In terms of gender, Harvey et al. (1995) illustrate how the differences between men and women, and their attitudes towards tourism development, depend on the context. For example, on the one hand, women tend to be more negative regarding tourism than are men, due to tourism's perceived negative impacts (Mason & Cheyne, 2000), while, on the other hand, men tend to be sceptical of tourism spinoffs, while women have a high level of perception in such regard (Harvey et al., 1995). In a related study, Harrill and Potts (2003) found that women are more concerned about tourism benefits than are men, which has prompted the argument from Sinclair-Maragh (2017) that the differences in the perceptions of men and women towards tourism could be based on their biological differences. Accordingly, Sinclair-Maragh (2017: 6) states "maleness associated traits are manifested by being agentic and controlling, while female traits are demonstrated through being nurturing and sensitive". In view of Sinclair-Maragh's assertion, Nunkoo and Gursoy (2012) and Fischer and Arnold (1994) contextualise that women tend to be more pro-tourism development, due to tourism's associated economic benefits that enable women to take care of their families. Thus, Sinclair-Maragh (2017) argues that women are more supportive of tourism development than are men, in general.

Researchers have also examined the effects of age as a factor influencing the perceptions of tourism. For example, in a narrative on perceptions and implications linked to tourism planning, Harrill (2004) argues that age plays a significant role in influencing the perceptions of tourism development. However, the extant literature reveals a lack of consensus as to the differences in perceptions between young and old residents. While some scholars (see, for example, Cavus & Tanrisevdi, 2002) are of the view that the older a resident grows, the more negative their perceptions of tourism development tend to become, whereas others (Deng et al., 2011) argue that the opposite is true. Tomjenovic and Faulkner (2000) support the view that the older residents tend to have more positive perceptions of tourism development than do the younger ones. The authors further argue that, as people age, they are likely to become more sensitive to the environment, and,

hence, come to support the development of tourism for purposes of environmental protection. In McGehee and Andereck's (2004) study, the most laborious tasks in tourism were noted to be performed by young people, while the more senior individuals were likely to be promoted to higher posts, and/or managerial positions, due to their years of experience in the industry. The above, according to Harrill (2004), suggests that there are more associated benefits of tourism for older people than for younger people, which results in the former being more supportive of tourism development.

Within the context of perceptions of tourism linked to economic status, various researchers (Saarinen, 2003; Moyo, 2016; Makoni & Tichaawa, 2017; Tichaawa, 2017) are of the view that tourism plays a vital role in enhancing livelihoods and in boosting the socio-economic status of the host community citizens. According to Torres and Momsen (2004), tourism development allows for a multiplier effect to take place in communities, which accrues benefits to the residents, both directly and indirectly. Despite the above, Sinclair-Maragh (2017) argues that the benefits differ, as inequality is ever-present in the distribution of the resources and economic spinoffs of tourism among the residents concerned. In addition to the above, Sinclair-Maragh (2017) indicates that tourism businesses tend to use expatriate labour in less laborious and more managerial positions, where they can earn relatively high wages, whereas local labour tends to be used in more strenuous and laborious positions, with low wages, resulting in more of the locals employed in tourism having average, or below-average, economic status. The above-mentioned situation may result in the development of some resentment towards tourism development among the locals, despite its power to create employment (Mbaiwa, 2003), and to raise their economic standing. Haralambopoulos and Pizam (1996) hold that the wealthier residents tend to be more pro-tourism development than are the economically average, or less than average, residents.

The level of skills and education plays a vital role in the ability of residents to understand the phenomenon of tourism. According to Sinclair-Maragh (2017: 6), "one's level of education can influence their ability to communicate any concerns they have regarding tourism development". In view of the above, other researchers (Andriotis & Vaughan, 2003; Sinclair-Maragh et al., 2015) concur that, the better a person is educated, the more likely they are to be able to articulate their tourism development concerns. According to Sinclair-Maragh (2017), as well as Sinclair-Maragh et al. (2015), those residents who are relatively well educated have positive perceptions of, and attitudes towards, tourism because of their level of awareness of the associated spinoffs derived from tourism development. While the above subsection has illuminated what is currently known as far as the perceptions of tourism linked to resident sociodemographic profiles go, the relevant literature can be seen to be dominated by the Global North perspective, and by a focus on the analysis of impacts. Therefore, the need to obtain views from the developing context should be recognised, which is what the current study sought to do.

RESEARCH METHODOLOGY

The current study was conducted in Harare, Zimbabwe. The country was considered as the study focus, as it is currently involved in efforts to revive the once flourishing tourism industry, which was severely impacted on by the political shenanigans and by the economic downswing (Chibaya, 2013; ZTA, 2014). Specific attention was given to Harare, the country's capital and the main gateway city to the country, as well as the centre of development in the nation. As the study was conducted to examine the relationship between the existing variables, a quantitative design was deemed appropriate. The researchers employed a quantitative research design, as they wanted to refrain from bias and the control of alternative explanations, as well as to be

able to generalise and replicate the findings made. In terms of the variables measured, the study focused only on the residents' gender, age, economic status, educational background, and employment/occupation status. The attributes were used to ascertain their sociodemographic characteristics. In the survey instrument that was developed, the respondents were asked to indicate which item they considered best suited their demographic profile. Gender was measured by the items 'male' and 'female'. An age range with three groups, consisting of groups 1 (24 years old and younger), 2 (between 25 and 34 years old), and 3 (35 years older and above), was used to measure the respondents' age profile. The economic status of the respondents was measured by the items 'below-average', 'average' and 'above-average'. The educational background of the respondents was measured by the items: (1) 'completed primary/secondary school'; (2) 'completed diploma/certificate'; and (3) 'completed undergraduate/postgraduate degree'. Lastly, the respondents' employment status was measured by the items: 'full-time employed'; 'part-time employed'; 'student'; 'I cannot find a job'; 'retired'; and 'business person'. As indicated in Table 1 below, nine variable statements were given in relation to which the respondents were asked to indicate their level of agreement on a 5-point Likert scale (1 = strongly disagree; 3 = neutral; 5 = strongly agree), so as to ascertain their perceptions of tourism development.

Table 1. Variable Statements on Residents' Perceptions of Tourism Development

Item	Statement
V1	Tourism creates employment / income opportunities for me.
V2	Tourism development creates opportunities for entrepreneurship / encourages locals to open a tourism-related business.
V3	Tourism development encourages foreign investment and facilitates infrastructural development.
V4	I trust the tourism authorities (ZTA) and the role that they play in my community.
V5	Tourism authorities have identified my community as being an important tourism stakeholder group, and community members' perceptions and expectations of tourism development are being considered in tourism planning and policy formulation.
V6	Tourism development leads to improved standards of living in my community.
V7	Tourism stimulates training and skills development for members within my community.
V8	Public places are maintained at a better standard of hygiene due to tourism development.
V9	Tourism development has contributed to the preservation of the natural environment, and to the protection of the wildlife within my community.

Data collection, capturing and analysis

The data obtained for the current study were collected from the Harare residents. To obtain the relevant data, the researchers used a stratified random sampling technique, in terms of which Harare was stratified into seven strata, with the residents in each stratum being randomly selected to participate in the study. Thereafter, a questionnaire technique was used to obtain the required data from the respondents. In the above regard, the researchers utilised a paper-based questionnaire, because such a questionnaire is known to be the most effective means of data collection, with it providing a high response rate (Sekaran & Bougie, 2013). In the above sense, 246 paper-based questionnaires were distributed across the seven strata of Harare (with an average of 35 questionnaires being distributed per stratum), according to the researchers' design, to ensure that the research undertaken represented not only the overall Harare populace, but also the key subgroups in the population, and especially the minority groups in the neglected areas. The SPSS, version 24, software was then used to capture and analyse the obtained data. Firstly, the data were examined to determine both the mean and the standard deviation, based on each sociodemographic profile item. In addition, a cross-tabulation analysis was used to

determine the demographic profile of the respondents, and the extent to which they agreed/disagreed with the concept of tourism development, with their agreement level ranging from 'strongly disagree' to 'strongly agree' with the tourism development variable statements indicated in Table 1. Cross-tabulation was used to determine the specific sociodemographic profile who supported, or who did not support, tourism development.

RESULT

Respondents' demographic characteristics

The respondents' demographic characteristics are presented in Table 2 below.

Table 2. Respondents' demographic profile (Data source: Based on fieldwork)

Demographic variable	n=246 (in %)
Gender profile	
Male	42
Female	58
Age profile	
Group 1 (-24)	22
Group 2 (25-34)	39
Group 3 (35+)	39
Economic status	
Group 1 Below average	36
Group 2 Average	50
Group 3 Above-average	14
Educational background	
Completed primary/secondary school	35
Completed diploma/certificate	27
Completed undergraduate/postgraduate degree	38
Occupation /Employment	
Employed full-/part-time	25
Student	22
Cannot find a job	25
Retired	2
Business person	23
Other	3

Cross-tabulation analysis of results in terms of the sociodemographic characteristics and the residents' perceptions of the available tourism offerings

Gender

As shown in Table 3, the results obtained show that there was a significant difference in the gender-related scores obtained regarding the given nine variables. Evidently, the male respondents tended to be more aware of the implications of the statements involved than were the female respondents. The above suggests that the male respondents rated the preceding statements more positively than did the female respondents. Men and women tend to exhibit different attitudes and behaviour, and, thus, their perceptions might well differ (Sinclair-Maragh, 2017). The study found out that the male respondents were more exposed to tourism development in Zimbabwe than were the female respondents, making them more aware of issues regarding tourism in their communities. The male respondents rated the given nine variables more positively compared to how the female respondents rated them. More women than men participated in the study, resulting in the obtained perceptions being largely negative. The finding does not concur with those made by previous researchers (Ryan et al., 1998; Wang, 2013;

Sinclair-Maragh, 2017), who were of the view that women are more pro-tourism development than are men, on average. However, the previous studies were conducted in a developed context than was the current study. Thus, the above could imply that the men in developed countries tend to have positive perceptions regarding tourism development, compared to the women in developing countries, whereas the situation is vice versa in the case of men. Considering that it is usually the responsibility of women to take care of their families in developing societies, their negative perceptions of tourism, as shown in the current study, could be that tourism has not done enough justice in enhancing the livelihoods of those living in Zimbabwe. Therefore, in developing destinations, the tourism authorities should engage differently with the female and the male residents when developing tourism. Based on the findings made in the current study, strategies need to be developed as to how to transform the female residents' perceptions from negative to positive, while also ensuring that the developments taking place continue to appeal to the male residents.

Table 3. Cross-tabulation results (Data source: Based on fieldwork)

Demographic variable	Responses to variable statements																	
	V1		V2		V3		V4		V5		V6		V7		V8		V9	
	M	S D	M	S D	M	S D	M	S D	M	S D	M	S D	M	S D	M	S D	M	S D
Gender profile																		
Male	2.22	0.74	2.29	0.81	2.35	0.69	2.33	0.89	2.39	0.80	1.94	0.94	2.22	0.90	2.86	0.78	2.30	0.84
Female	1.89	0.77	2.00	0.74	2.00	0.73	1.92	0.86	1.94	0.73	1.84	1.02	2.03	0.96	2.62	0.92	2.06	0.88
Age profile																		
Group 1 (-24)	2.33	1.11	2.44	2.02	2.09	0.771	2.11	0.934	1.88	0.988	2.08	0.893	2.72	0.862	2.14	0.793	2.15	0.872
Group 2 (25-34)	1.77	0.76	1.96	0.72	2.09	0.771	2.11	0.934	1.88	0.988	2.08	0.893	2.72	0.862	2.14	0.793	2.15	0.872
Group 3 (35+)	2.31	0.90	2.11	0.784	2.09	0.771	2.11	0.934	1.88	0.988	2.08	0.893	2.72	0.862	2.14	0.793	2.15	0.872
Economic Status																		
Group 1 Below -average	2.02	0.771	1.86	0.795	2.09	0.733	1.84	0.75	1.88	0.988	2.08	0.893	2.72	0.862	2.14	0.793	2.15	0.872
Group 2 Average	2.02	0.771	2.23	0.783	2.09	0.733	2.31	0.75	1.88	0.988	2.08	0.893	2.72	0.862	2.14	0.793	2.15	0.872
Group 3 Above-average	2.02	0.771	2.11	0.784	2.09	0.733	2.11	0.934	1.88	0.988	2.08	0.893	2.72	0.862	2.14	0.793	2.15	0.872
Educational background																		
Completed primary/secondary school	1.67	0.75	1.77	0.81	1.72	0.80	2.11	0.934	1.72	0.934	2.08	0.893	2.72	0.862	2.14	0.793	2.15	0.872
Completed diploma/certificate	1.88	0.78	2.00	0.71	2.18	0.64	2.47	1.02	2.27	1.257	2.47	1.016	2.72	0.862	2.14	0.793	2.15	0.872
Completed undergraduate/post-graduate degree	2.43	0.58	2.52	0.66	2.51	0.51	1.96	0.67	1.88	0.988	1.96	0.665	2.72	0.862	2.14	0.793	2.15	0.872

M=Mean, SD= Standard Deviation

Age

The subjects were divided into three groups, according to their age (Group 1: 18 to 24 years old; Group 2: 25 to 34 years old; Group 3: 35 years old, or above). Table 3 shows that no statistically significant difference was found in the scores between the different age groups relating to variable statements 3 to 9. The age of the respondents caused no difference in the rating of the various statements. However, there was a statistically significant difference in the scores for the age group concerned, in terms of the first two variable statements provided. However, according to the results portrayed in Table 3, age was also found to play a crucial role in influencing the residents' perceptions of tourism development in Zimbabwe. Noteworthy, the urban areas of Zimbabwe, despite being

found mostly to be resided in by the young, which was typical of African urban areas, exhibited generally negative perceptions of tourism development, as proven by the current study and other contemporary related studies (Moyo, 2016; Tichaawa & Mhlanga, 2015; Makoni & Tichaawa, 2017; Mudimba & Tichaawa, 2017). The above could mean that tourism development has more negative implications for the young, who constitute the majority of the urban populace of sub-Saharan urban areas. The picture obtained portrays a serious threat to the achievement of sustainable tourism development. In the present study, more negative responses in the study were obtained from the younger populace (34 years old and younger), who constituted the majority living in Harare at the time of the study (Countrymeters, 2015). The perceptions obtained in the study were generally negative, since the respondents who were 34 years old or younger outnumbered the older respondents. The above-mentioned finding is consistent with that of Sinclair-Maragh (2017), who indicates that older people tend to be more pro-tourism development than are younger people, due to the earlier remarked upon increased benefits to be gained from tourism as they grow older, as well as due to their comparatively environmentally sensitive nature.

Level of education

The respondents were divided into three different groups according to their highest qualification (Group 1: primary, or secondary, school completed; Group 2: diploma/certificate, completed; and Group 3: undergraduate/postgraduate degree completed). As portrayed in Table 3, the more educated the respondents were, the more negatively they tended to rate the statements presented to them. The respondents with a certificate/diploma rated the statements more positively than did the respondents with an undergraduate/postgraduate degree, who rated them negatively. The above could imply that the tourism development planning that has been undertaken in Zimbabwe up until the present has not satisfied the requirements of the communities concerned. The more highly educated respondents tended to be relatively aware of such concerns, so that their disagreeing with the given variable statements could reflect the current state of tourism development in the country. Therefore, the residents' educational background was found to be a major influence of their perceptions. In the present study, the more educated respondents gave negative responses compared to the responses provided by the less educated respondents.

The socio-economic status of residents in relation to the variables

The respondents were divided into three groups according to their socio-economic status (Group 1: below-average; Group 2: average; and Group 3: above-average). Table 3 shows that more positive responses were given by the respondents whose economic status was above-average, while the respondents who were average and below-average were generally negative in their outlook. The finding is consistent with those made in the previous studies conducted by Ap (1992), Dieke (1989), Haralambopoulos and Pizam (1996), Latkova and Vogt (2012), and Mudimba and Tichaawa (2017), which suggests that one of the main indicators of tourism's contribution to communities is its economic impact. With regards to the above, the residents whose economic status had been enhanced through tourism development tended to be more pro-tourism. The negative responses given could indicate a lack of tourism development in Zimbabwe, in terms of enhancing the socio-economic status of the residents. The findings, however, imply that tourism in Zimbabwe has not yet been maximised to the extent that it is capable of transforming the residents' socio-economies, hence the negative responses received. Therefore, in developing destinations, the tourism authorities should engage with the residents differently to how they have engaged with them in the past, based on their current socio-economic status when developing tourism. Based on the findings of the study, tourism strategies need to be developed in such a way that they are capable of

creating employment and entrepreneurial opportunities for the locals, while also ensuring that tourism projects in the communities contribute towards improving their living standards. The above could help change the prevailing negative perceptions of tourism.

DISCUSSION AND IMPLICATION

The results of the cross-tabulation analysis showed that those residents who had positive perceptions of tourism were, on average, men. The respondents aged 35 years old and above tended to offer more support for tourism than did the younger people. Further, the respondents whose economic status was above average, and who were highly educated, proved to have a positive perception of tourism development, compared to that of others. The above-mentioned results are important for policy, planning and strategy decisions in the sub-Saharan African countries involved, for they greatly rely on tourism for economic growth and development. In the light of the above, such destinations are advised to take cognisance of the implications of the current study described in the following paragraphs.

The current study offers the understanding that the residents' experiences with tourism development in their community are largely influenced by their age, gender, economic status, educational background, and employment/occupation status, among other sociodemographic variables. Accordingly, the study presses that, for destinations to achieve STD, they must not only measure the residents' perceptions with regards to tourism offerings and their development, but they must also take cognisance of how the mentioned demographic factors influence the residents' perceptions. The above should be so, because demographic characteristics play a central role in influencing the residents' attitudes and perceptions, thus paving the way for predicting the socio-economic and environmental requirements of communities when developing tourism. The study also gives direction for the improvement of tourism development plans and strategies that appeal to the communities concerned. Through understanding the different sociodemographic characteristics of the residents, the tourism planners should be able to employ strategies that cater for different sociodemographic profiles. In the above regard, tourism planners should come to focus more on catering for the needs of the residents based on their age, gender, income status, educational background, and employment/occupation status, among other variables. Developing tourism so as to cater for the needs of the residents involved could be seen as a way of gaining and sustaining community support for tourism, as well as of it becoming an effective mechanism by means of which to achieve STD. In the light of the above, the findings made in the current study are consistent with those revealed in the previous studies conducted by Andriotis and Vaughan (2003), Mbaiwa (2003), Sinclair-Maragh (2017), and Sinclair-Maragh et al. (2015), which suggest that sustainable tourism development at any destination relies on community support. In addition, community support of tourism should result in providing competitive advantage in relation to the destination, as well as in improving tourists' experiences while visiting it (Mhlanga et al., 2015).

In addition, the current study cautions destinations not to overlook the influence of demographic characteristics on the residents' perceptions of tourism. The findings of the study allow for tourism planners to identify areas of improvement in tourism product development, based on the requirements of the different sociodemographic profiles concerned. In addition, the present study also gives insights into the importance of residents' sociodemographic characteristics on the tourism authorities' plans, policies and strategies. As tourism should be developed to cater equally well for both the residents' sense of well-being, and the tourists' needs and expectations, tourism development in Zimbabwe must be driven to accommodate the needs of both residents and tourists. The above means that the public sector should actively involve the communities in every step along the way of following through on the procedure of

tourism planning, tourism policy formulation and tourism strategy implementation, as well as in establishing positive and viable partnerships between the tourism-related private sector and the host communities concerned. Further, the findings of the current study imply that, for tourism development to be achieved, different views and concerns emerging from the different sociodemographic characteristics of the residents, relative to tourism development and its future at a destination, must be considered and incorporated into tourism planning, policy and strategy. Incorporating such views could provide one of the key pillars of transforming the community livelihoods, as well as of enhancing a country's/region's profile as a tourist destination.

Various studies (see Zengeni & Zengeni, 2012; Chibaya, 2013; Mutana & Zinyemba, 2013; Chingarande, 2014; ZTA, 2014) concur that, despite the economic and political challenges involved, tourism continues to form a major economic sector in Zimbabwe. In the above regard, the findings in the present study have implications for the tourism authorities, as well as for the destination managers, planners and developers concerned. Destination planning and management require taking cognisance of the powerful role that tourism plays in the economic transformation of sub-Saharan countries. As the findings suggest, the negative responses given were likely to have been due to the lack of involving communities in the tourism development processes, as perpetrated by the relevant tourism authorities involved. For tourism in the sub-Saharan region to realise its full potential, the community's resident must be viewed as a central stakeholder group for tourism development, with their perceptions, as well as their expectations, in the above regard being considered in terms of tourism policy formulation and strategy implementation. The findings of the current study show that there is great need for community involvement in every aspect of destination planning and management within the developing context. The findings also imply that the management of destinations must have strong support from the residents concerned, in relation to which plans and strategies should be developed, and implemented, with due consideration of the residents' sociodemographic characteristics. Based on the significant role played by the residents age, gender, economic status, location, and educational background in influencing their perception, the destination managers/developers/authorities must: (1) be consistent in implementing strategies that continue to promote positive perception by the residents; and (2) propose actions that help identify the influences of negative perceptions, and strategise accordingly, in terms of addressing the situation. In the case of Zimbabwe, tourism development should, in short, be community-based. Zimbabwe is, at present, a distressed destination that is engaged with efforts to recover from, among other challenges, political obstructions and an economic downswing. Therefore, at such a destination, the community-based tourism's benefits should be twofold: on the one hand, they should be **cost-effective**, thus allowing for the locals to promote their destination to tourists through "word of mouth, e-marketing and limited advertising" (Wang, 2013: 179), while, on the other hand, they should serve to assist with the **addressing of socioeconomic ills**, as the communities concerned are encouraged to engage in tourism-related entrepreneurial activities.

CONCLUSION

The current study gauged how the sociodemographic characteristics of residents influence their perceptions of tourism development within the developmental context, which, until now, has been a neglected phenomenon in terms of the tourism research undertaken in Africa. The study argues that the residents' perceptions of tourism development in the developing communities were, in general, being determined holistically, with no reference to assessing how tourism impacts variably on the different

sociodemographic characteristics of the residents in the same community. In the above regard, a central contribution of the present study lies in it advocating the inclusion of the residents' demographic characteristics in considering tourism development in Africa. In relation to the above, the study argues that the lack of such could be one of the major reasons for tourism development in Africa not yet having been maximised in terms of its full potential to transform the livelihoods of all Africans. Only a limited amount of literature has, until now, focused on the residents' sociodemographic characteristics, and on how the characteristics are incorporated within tourism policy and planning. Bearing such a limitation in mind, together with the scant amount of empirically-based research outputs that have focused on the phenomenon in Africa, the present study should play a significant role in surfacing such issues within the tourism research domain. Further, the current study has been argued from the perspective that tourism is developed around: (1) creating memorable experiences for tourists; and (2) ensuring the development of a positive sense of well-being in the host communities and their environments. With regards to ensuring the latter, which was the central focus of the current study, the research involved illuminated the fact that, for tourism development to be successful, and for sustainability to be achieved, the host communities must be at the centre of every decision that is made. In addition, such critical variables as their sociodemographic status should receive much consideration in the process. In the light of the above, the findings of the current study prove that the residents' perceptions of, and attitudes towards, tourism development are crucial to both tourism policy formulation and strategy implementation. Their sociodemographic characteristics are also seen as being major influences of their perspectives on tourism.

With one of the main findings of the current study having been the vast range of differences existing among the different demographic characteristics with regards to the perceptions of tourism development, the present researchers have explored the implications of their findings not only from a Zimbabwean perspective, but also from a broader African perspective. Tourism policy, planning and strategy have been considered in terms of how to incorporate the ramifications of the residents' sociodemographic influences in relation to their perceptions and attitudes in future. The study has also indicated that incorporating the different residents' perceptions and attitudes, based on their sociodemographic differences, in future policy, planning and strategy is crucial for the African continent to be able to maximise its full potential as a tourism destination, as well as for it to achieve sustainable tourism development. In addition, the study has highlighted that the concept of the sociodemographic characteristics of residents in the developing communities is a key variable that requires being taken cognisance of by the destination managers concerned, as they try to identify areas of improvement in their tourism product development. The key issue of significance that emerges with regards to the above is that tourism must be developed based on the requirements of the residents, in terms of their respective sociodemographic profiles, if the spinoffs are to benefit all members of the host community. In addition, the study exposes the fact that treating residents as a homogenous stakeholder group disadvantages most groups that might, therefore, be exposed to the negative effects of tourism development, and be able to benefit only minimally from tourism development (see also Lui, 2003; Wang, 2013). Considering the scarcity of the available empirically-based studies of the above-mentioned ramifications within the African context, the current study could prove to be a pioneer contribution to the literature regarding the aforementioned phenomenon.

LIMITATIONS AND FUTURE RESEARCH

The present study was limited to only five sociodemographic characteristics of the residents: their geographic setting; their age; their gender; their economic status; and

their educational background. Future research focusing on the residents' sociodemographic characteristics should incorporate other important sociodemographic details that might influence their perceptions. The variables involved could, among others, pertain to: the residents' marital status; their racial category; their length of stay in the local community; their quality of life; and their satisfaction levels with the tourism development taking place in their communities. A similar study focusing on the rural residents in the above regard is also envisaged in the study.

The current study was also limited to the perceptions of residents in only one city. Similar, but more in-depth, research could undertake a comparative analysis of the sociodemographic characteristic influences on the residents' perceptions of tourism development in two or more regions at a single destination. Lastly, future research should also be directed towards determining the tourists' sociodemographic characteristics, and how they influence their perceptions of destinations and travel patterns.

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DEVELOPING A FRAMEWORK OF CORPORATE GOVERNANCE BEST PRACTICE FOR THE MALAYSIAN TOURISM SMALL AND MEDIUM-SIZED ENTERPRISES

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Abstract: This paper presents a framework for corporate governance best practice in Malaysia tourism small and medium-sized enterprises (TSMES). Based on the reviewed literature regarding TSMES and corporate governance, this paper presents nine major elements of corporate governance best practice in a form of framework namely; Shareholders, Ownership and Board Structure, Top Management, Board of Directors, Conflict of Interest, Stakeholders, Social Responsibility, Remuneration and Transparency. The implementation and adaptation of this framework in managing TSMES would significantly assist the administration, management and shareholders to accomplish and achieve performance excellence. Additionally, the framework would also contribute as guideline which could be used for further research in determining whether these elements are being practiced by the TSMES Board of Directors.

Key words: Corporate governance best practice, Malaysian tourism small and medium-sized enterprises, framework

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INTRODUCTION

The tourism industry in Malaysia is currently playing an essential role particularly in the country's economy. Thus, it is believed that tourism industry can assist Malaysia to achieve sustained economic growth and contribute to social development through the

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establishment of tourism small and medium-sized enterprises (TSMEs). The definition of small and medium-sized enterprise (SME) varies from country to country. In such a country, for example Egypt, SME is defined as having more than 5 and fewer than 50 employees (Dalberg, 2011). According to Natarajan and Wyrick (2011), countries in Europe define SME as having manpower fewer than 250 employees while in the United States, SME is defined as one with employees fewer than 500 standard definition. Apart from the key role in delivering tourism products to the tourist, TSMEs also play an active role in advancing the local community. Hence, TSMEs performance and survival in the industry are found to be particularly important to Malaysia (Set, 2013). Malaysia is doing its best in promoting tourism industry through TSMEs, for instance, by implementing various TSME programmes and policies. Additionally, the funding for the development allocated to TSMEs has been increasing over the last few years.

The indication that TSMEs play vital component in increasing the country's foreign exchange earning can be seen through the initiative taken by the government by placing high expectations on TSMEs performance. Generally, in 2010, the TSMEs activities in Malaysia had contributed 28.5 per cent to the country's Gross Domestic Product (GDP). Further, the government spent RM 4,677.1 million in the form of 183 trainings and financial programmes in 2011 (Small and Medium Enterprise Corporation Malaysia, 2012). Currently, there are about 239,110 active establishments of TSMEs in Malaysia with 142,721 firms (59.7 per cent) offering food and beverage services, 40,025 firms (16.7 per cent) offering transportation services and other miscellaneous tourism services. Meanwhile, accommodation services, arts, entertainment and recreation services, and travel agency, tour operator and tourism guide services are offered by 19,643 TSMEs (8.2 per cent of total TSMEs). With the increased number of tourist arrivals, the tourism industry in Malaysia has created business potential and diversification of tourism products and services which particularly involved the TSMEs. Hence, TSMEs must achieve high performance in their management through the implementation of good corporate governance practice. The purpose of this study is to identify and investigate major elements which are considered important in the process of practicing corporate governance in TSMEs. Hence, it intends to come out with a framework of corporate governance best practice which can be applied throughout by the management of TSMEs.

LITERATURE REVIEW

As noted by Chittithaworn et al. (2011), the definition of an SME depends on a country's physical and economic size, cultural situation, government policy, and data collection measures to produce SME statistics. In Malaysia, SMEs are defined based on the number of full-time employees or the total sales or revenue. Similarly, this definition is applied to the tourism industry, under the services category. Compared to a larger company, TSMEs are in a good position to cater to consumers' increasing demand for more personalised services. This is supported by several researchers such as Akbaba (2012) and Sampaio et al. (2012) where they indicated that TSMEs have greater flexibility to adapt their services and products to tourists' changing requirements and preferences compared to larger companies. Hence, standardised tourism products are no longer appealing to consumers, and tourists expect providers to tailor products and services to their specific needs and tastes. According to few other researchers such as Causevic and Lynch (2013), the dominance of TSMEs in tourism will lead to higher tourist expenditure in the industry. Several studies also supported these findings by highlighting that the predominance of TSMEs will also create prospects for investment, notably in rural areas, and job opportunities for the local community (Narayan et al., 2010; Scheyvens & Russell,

2012). Furthermore, a study conducted in Fiji on the impact of small-scale tourism enterprises on poverty alleviation in the country shows that small scale tourism enterprises make positive contributions to revenue generation, job creation and community development (Scheyvens & Russell, 2012).

The definition of corporate governance exists according to various disciplines. According to Berle and Means (1932), the earliest definition of corporate governance is in connection with the protection of the interests of shareholders and has some roots in the question of separation between management and control. Generally, corporate governance can be seen as the relationships between management and shareholders. Further, the Cadbury Committee (Cadbury, 1992, p. 15) defines corporate governance as the system by which companies are directed and controlled. The OECD (2004) perceives corporate governance as more than an analysis of the effect of separation and control in a modern society thus defining it as dealing with the rights and responsibilities of a company's management, its board, shareholders and various stakeholders. In other words, corporate governance can be seen as codes and principles which typically focus on the relationship between management, the board of directors and the shareholders of listed companies. Deakin and Hughes (1997) summarize corporate governance as the relationship between the internal governance mechanisms of corporations and society's conception of the scope of corporate accountability. Previously, Shleifer and Vishny (1996) also saw corporate governance as the ways in which suppliers of finance to a firm assure themselves of getting a good return. Additionally, Keasey et al. (1997) define corporate governance as the structures, processes, cultures and systems that engender the successful operation of the organizations. Meanwhile, according to Ruin (2001), corporate governance is referred to as a collective group of people united as one body with the power and authority to direct, control and rule. In summary, it can be understood that corporate governance involves the relationships between many stakeholders and the management aspects.

A recent study conducted by Zainol Abidin et al. (2015) emphasized that there are several issues regarding corporate governance in TSMEs which must be given serious attention. They categorized these issues into three aspects namely the roles of corporate governance, the challenges of corporate governance and the significance of corporate governance to TSMEs. The roles of corporate governance consisted of four issues for instance composition of a Board, inducing more independent best practice, assessing resources for growth and introducing professional governmental practices. Additionally, the challenges of corporate governance in TSMEs included specific characteristics of the entrepreneur, the size of the organization, lack of corporate governance structure, insufficient access to financial resources, insufficient access to investment capital and lack of awareness on corporate governance matter. Further they also concluded that the significance of corporate governance to TSMEs can be acknowledged as better management practices, stronger internal auditing, greater opportunities for growth, prospects in obtaining funds, improving transparency and attracting capital at cheapest cost. Today, many firms and organizations are practicing a good governance mechanism to increase their performance. The adoption of best practices in corporate governance has a prominent place in the regulatory and developmental global agenda of capital markets. In fact, the adoption of best governance practices is particularly important in countries where, usually, ownership is well-defined, highly-concentrated, family-controlled and with an asset-oriented culture. Furthermore, the enforcement of corporate governance practices results in strict and stringent mechanisms which could dampen corporate entrepreneurship. To encourage

managers to pursue goals that are considered desirable, various mechanisms are applied within the models of corporate governance. In this respect, mechanisms are viewed as effective if they encourage those who have decision-making roles in the operation of the company to make decisions that maximize shareholders' wealth.

In the process of practicing good governance, it is very important to understand the paradigmatic change to education. Knowledge, skills and competences in the educational paradigm would create specific value for potential employees (Matlovič & Matlovičová, 2016). This eventually is the beginning for employees of TSMEs to clearly understand the significant of having good governance practice for the company. In their study, Matlovič and Matlovičová (2016) focused on the theoretical basis of paradigmatic change and presented new ways for educational paradigm to be implemented for Geography education in Prešov University. In the case of TSMEs, it is believed that education would contribute in assisting better understanding of best corporate governance practice at the university level. In designing a corporate governance system, it is important to include all the stakeholders in particular, the company and all interested parties. The system of governance could thus help or hinder internal corporate ventures. By aligning the interest of managers and all stakeholders, it is in the best interests of owners to resort to control mechanisms that move the operations of the firm to full efficiency. Several studies found that there are limited studies in the area with respect to SMEs mainly on developed economies (Bennett & Robson, 2004; Eisenberg et al., 1998). This is based on the fact that it is crucial to examine corporate governance in the SME sector from the context of a developing economy. Abor and Biekpe (2007) reasoned that the perception of higher risk, informational barriers, and the higher costs of intermediation for smaller firms explain the reluctance of financial institutions to advance credit to SMEs. For example, some empirical studies in Ghana have established a relationship between measures of corporate governance and financial performance.

Abor and Biekpe (2007) sought to assess how the adoption of corporate governance structures affects the performance of SMEs in Ghana. A year later, another study was carried out to examine corporate governance practices of SMEs in Ghana and whether there is any linkage between these governance practices of SMEs and financial performance (Kyereboah-Coleman & Amidu, 2008). They employed two levels of interaction to achieve these objectives. The first was an interview for a general understanding of governance issues in the SME sector and the subsequent design of a questionnaire for an exploration of the linkages between governance issues and firm financial performance by employing a linear model. The study revealed that governance structures in SMEs were jointly influenced by credit providers and business ethical considerations. Aguilera and Cuervo-Cazurra (2004) believed that the importance accorded to these mechanisms is reflected in some diverse initiatives aiming at explaining the good practices of the governance itself. Recently, the interest accorded to the mechanisms of governance and their effects on the companies' financial performance have taken a primary international dimension of first rank. It is worth noting that the ownership structure, the board of directors as well as the directors' characteristics constitute three central elements in the survey of the SMEs governance. The mechanisms of governance of the SMEs have for object not only the protection of the contribution of the shareholders but also the transactions between the enterprise and the different stakeholders, that it is the directors, the creditors, the salaried employees, the customers, the suppliers and, in a very general way, the social environment. The SMEs have met many obstacles of financial nature. In general, when they look for financing, they have access only to the credit banking, whereas their more important competitors can inquire

the financial markets. The complexity of an organization grows with its size. As for the internal aspect, the majority of the directors are shareholders in the setting of the ownership structure (Charreaux, 1998). Indeed, the familial SME owners could benefit from giving a lot of its involvement to their directors. This implies that the enterprise could use the exceptional facilities and the capacities that the owner uses in order to succeed (Randoy & Goel, 2003). The board of directors represents the main organ of control, complementary to the external mechanisms. The role of the board spreads to several functions within the SME: the administration of the enterprise, regaining some roles of surveillance, control of the directors and the setting up of the enterprise strategy, the organization of relations between the enterprise and its environment, the capitation of the external facilities, the recompense of the directors, their dismissal, and ratification and control of the important decisions taken by the direction (Van et al., 2006).

THE FRAMEWORK

Based on the previous literature review, nine elements are found to be significant for corporate governance practice in TSMEs. These elements are considered as best domains to be practiced by TSMEs in order to achieve performance excellence. Figure 1 presents the framework for corporate governance best practice in TSMEs.

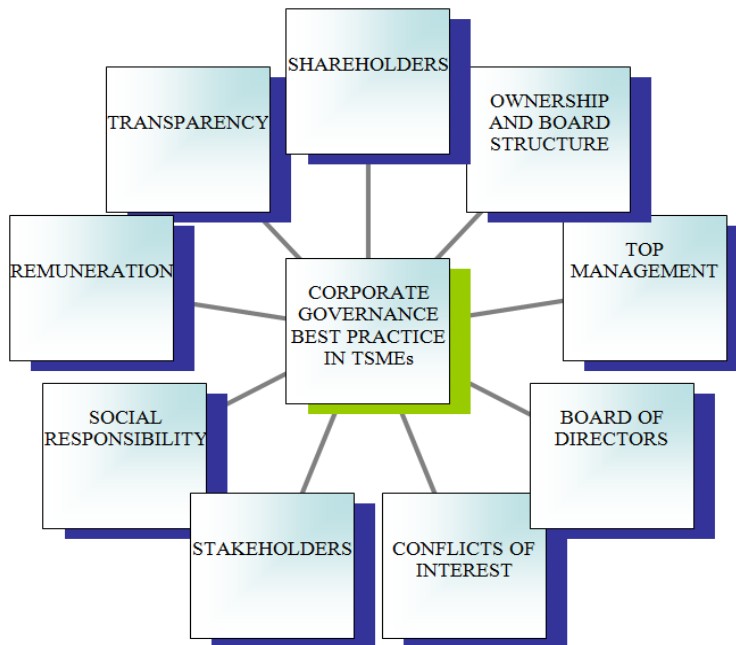


Figure 1. Framework of Corporate Governance Best Practice for TSMEs Derived from this Study

DISCUSSION

Generally, the literature in TSMEs and corporate governance suggests that good practice of corporate governance is a must in order for TSMEs to achieve performance excellence and eventually contribute to the country's economic growth. Nine elements are found in this study as good practice to be implemented in TSMEs. These nine elements are acknowledged as (1) Shareholders, (2) Ownership and Board Structure, (3) Top Management, (4) Board of Directors, (5) Conflict of Interest, (6) Stakeholders, (7) Social Responsibility, (8)

Remuneration and (9) Transparency. Taking into account the shareholders as one of the elements for corporate governance best practice, is consistent to other studies such as Eisenberg et al. (1998), Randoy and Goel (2003) and Set (2013). Several questions which commonly derive from the element of shareholders as best practice of corporate governance regard the shareholders' right to take part in the company's meetings, have a say in the appointment and dismissal of the company's administrators and also have a say in evaluating the top management performance. Further, this element also consists of the shareholders right to have full timely access to the company's information, to be informed of the company's comprehensive management plan, knowing exactly who controls the company and any other firms they may control and also examine, approve or reject year-end financial statements and balance sheets. In addition, few other aspects which should also be included in this element are the establishment of fair compensation systems for board members, the establishment of principles of business ethics and the prohibition of payments of any household or personal expenses of shareholders with company funds.

On the other hand, ownership and board structure derive as best practice for corporate governance which is in line with few studies such as Abor and Biekpe (2007), Eisenberg et al. (1998) and Randoy and Goel (2003). Several aspects should be included in this element, for instance the benefits they received, incentives, decision making and balancing the power between the Chief Executive Officer (CEO) and chairman. As for the element for the top management, most literature suggests several aspects to be considered as best practices such as effort to achieve company's objective, ensures strict compliance with legal or statutory provisions, ensures the due and proper performance of statutory auditing functions and respects and enforces the rules of corporate governance adopted by the company. In line with previous literature (Aguilera & Cuervo-Cazurra, 2004; Bennett & Robson, 2004; Eisenberg et al., 1998; Van et al., 2006), it is also highlighted that the element for board of directors commonly included the number of members, outside or independent director, meetings, establishment of policies regarding human resources, advising members on auditing, hiring and compensation and appointment of the CEO. Further, the conflict of interest as good practice for corporate governance should consist of several matters, for instance, the establishment of procedures to ensure that company procurements of goods and services are consistent with principles of efficiency and transparency, the issue where under no circumstances may company executives grant any special compensation to members of the board, use unlawfully inside or privileged information to their own advantage or to protect their personal interests or those of any third parties, to use their standing position or relationship with the company to engage in politicking and also to bring family members into the company without regard for their qualifications or for established policies. Additionally, one of the best practices suggested to be included in the corporate governance for TSMEs is regarding stakeholders (Abor & Biekpe, 2007; Randoy & Goel, 2003). The stakeholders' element should involve the establishment of mechanisms for allowing its customers to make inquiries, suggestions and claims.

It should also consider the establishment of fair procedures for goods and services based on considerations of quality, pricing and performance, the company should be liable to the creditors for debts incurred according to the terms and conditions of corresponding agreements, the establishment of mechanisms for monitoring compliance with laws and regulations governing its line of business, designing mechanisms to ensure the fair treatment of the employees and finally, the establishment of mechanisms for passing benefits along to the surrounding community. The next element in corporate governance best practice is known as social responsibility. Most literature suggests that

this element should contain strategies for preventing and minimizing environmental and human impacts and risks (Sampaio, et al., 2012; Scheyvens & Russell, 2012). Additionally, it should also involve the promoting of sound environmental management and controlling the environmental impact of their operations, products and services. Further, social responsibility should also indicate that the company will report any irregularities observed within the company or in any other enterprises and at the same time would develop programs to improve the quality of life in their local communities.

As for the element regarding remuneration, it is emphasized that this element should consider four practical remuneration aspects such as the incentives given by the top management should ensure the alignment of the management and shareholders interest, the director's remuneration should be appreciable and reflect the responsibility and commitment of the directors, the remuneration for the executive director should link rewards to corporate and individual performance and finally the remuneration for non-executive directors should link rewards to experience and level of responsibilities. Eventually, the final element of best practice for corporate governance in TSMEs is regarding transparency. This element is consistent to various studies for instance Abor and Biekpe, 2007; Bennett and Robson, 2004; Chittithaworn et al., 2011; Eisenberg et al., 1998 and Kyereboah-Coleman and Amidu, 2008. In fact, this element is considered in most literature as the major element which should be given serious attention by the company and the Board of Directors. Corporate governance is about transparency; hence, the company which does not include this element in its practice might probably not implement corporate governance. Few aspects which should be acknowledged into this element are the disclosure of financial information to the company's shareholders, board members and statutory and other auditors, as well as to any interest groups, the disclosure of compensation systems established by the Boards of Directors, the statutory audits which are designed to protect the rights of shareholders and other investors and, as such, should be conducted in good faith, with no interference from CEO, members of the Board of Directors or shareholders and the establishment of appropriate, accessible information mechanisms such as businesses host web sites and electronic media (fax transmissions or e-mails).

CONCLUSION

Corporate governance practice is vital not just for bigger companies but mostly for the small companies and entrepreneurs. Hence, it should be practiced in TSMEs based on the fact that TSMEs play essential role in contributing to the country's economic growth, particularly in the case of Malaysia. This framework should be applied and adapted by TSMEs in Malaysia to achieve better and highly effective performance in managing the company. It would significantly assist the Board of Directors to manage and control the administration of the company as well as the members towards achieving the company's objective. By understanding the importance of the nine elements presenting best practice of corporate governance, the company should be able to manage not just the tourism products or services offered to the customers but mostly the members of the board. It is suggested that further studies should be undertaken to investigate the Board of Directors' perceptions regarding the framework of best practice for corporate governance in TSMEs. Another study could also be undertaken to determine whether these nine elements are of significant importance to the Board of Directors of TSMEs and which elements are considered the most vital, which consequently would lead to better performance of TSMEs.

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REHABILITATION OF GEOGRAPHICAL AREAS FOR A TOURIST DEVELOPMENT THE CASE OF BATNA REGION'S MOUNTAINS (ALGERIA)

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Abstract: The rugged mountains of the province of Batna suffer an isolation which explains the poverty of the population and the precariousness of their living conditions. If rural and urban spaces require scientific methods for their organization and their development, mountain areas also need planning and productive development through the integration of tourism in a context of economic benefit. To this aim, our topic emphasizes the enhancement of site rehabilitation by focusing on tourism demand, within the framework of a participative and decentralized approach allowing the various actors to be involved in the decision-making processes concerning tourism, enhancement and preservation of touristic potentialities and all the territorial values of this mountainous area. This article also concluded that the feasibility study represents a tool that plays an important role in the evaluation process and determines the effectiveness of an investment project in different areas: environmental, legislative, social and financial. In drafting such an important research towards the development of this region's tourism industry, a descriptive approach was used to highlight the true image of the studied sites and the importance of their development in order to contain tourist activities connected to mountains. Followed by a conceptual approach to rehabilitate four sites and adapt them to geological, geomorphological and environmental tourism.

Key words: Batna Mountains, Algeria, mountain tourism, sustainable development, natural and cultural heritage

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INTRODUCTION

Algeria is a rich country with a diversified touristic base, but unfortunately it is not exploited in the right way. At the same time, it aims to become a coastal tourism destination with 1.200 km of sunny coastline all year long and about thirty capes and many beaches. It also intends to be a destination of green tourism with plains, forests, peaks and highlands, and an exotic destination with the second largest desert in the world and some sand dunes (oases), and of course a destination of cultural and historical tourism with its cities that have a remarkable heritage and a particularly rich and diversified past. Algeria is full of historical, archaeological and natural landscapes to discover. It is, after Italy, the richest country with splendid vestiges of the Roman era (Bezza, 2006). But unfortunately, many wonderful beaches, splendid forests, old villages and places submerged with history are nowadays ignored not only by tourists but also by the inhabitants themselves. Much closer than one can think, two hours by plane from the main cities of Europe, Algeria has the assets of a full-fledged destination: a marvelous climate, an exceptional tourist capital and an ideal geographical position, but unlike other countries around the Mediterranean Basin, Algeria has not yet given the tourism sector an important role in its various development policies (Nassima, 2013). Today, Algeria is timidly involved in international tourism and resigns to occupy the last ranks of tourist destinations in the Mediterranean basin. In international tourist flows terms, Algeria welcomed 2 394 887 tourists during year 2011, 65.35% of which are Algerians living abroad (Kouache, 2004). The 2011-2012 Economic Outlook of the Mediterranean Tourism Organization shows that the Mediterranean countries received in 2011 are approximately 300 million international tourists, or 30.52% of the tourists traveling in the world (the international tourist arrivals in the world amount to 982.2 million). Algeria's share in this market is so minimal that it does not even appear in the ranking of this organization (Bouakrif, 2012). The capacity of tourist reception has developed reaching the threshold of 80000 beds in 2010 following the advent of investment laws, and the goal of Algeria to adopt the economic reform plan at the dawn of the nineties. But, nevertheless, such figure remains very poor compared with that achieved in Tunisia, Morocco and Egypt which secured during the same year 240000 beds in Tunisia, 164000 in Morocco and 430000 in Egypt (Hammad, 2012). Compared with some of the Mediterranean countries mentioned above, the tourism indicators studied show that Egypt welcomed more than 14 million tourists in 2010, while Tunisia and Morocco welcomed 6.9 and 8.5 million tourists, and Algeria has only welcomed 2 million tourists in the same year. It also shows that tourism contributes enormously to the economic development, since Egypt had earned more than \$ 10 billion of revenue from tourism in 2009. Tunisia and Morocco recorded respectively \$ 3.47 and \$ 6.55 billion in the same year, while Algeria earned only \$ 0.33 billion. Thus tourism in Egypt contributed with 7.3% of the whole local product during 2011, and contributed in Tunisia and Morocco with respective averages of 8.2% and 8.5%, while it contributed with 3.7% to Algerian total national product in the same year (Aouinene, 2012). Hence, Egypt, Tunisia and Morocco have occupied the first places in North Africa, while Algeria is among the last, which shows, indeed, that the tourism sector in Algeria is slightly far from tourism sectors of the Mediterranean countries mentioned above. This is due to one main reason, Algeria has concentrated its economic activity on the hydrocarbon sector, relying more on its oil and gas resources.

Indeed, the incomes of the oil profits have always made the contribution of tourism to the Algerian economy not really sought, despite the delimitation and the study of 205 areas and sites of tourism expansion since 1966 to 2008. Yet, the three countries mentioned above (Egypt, Morocco and Tunisia) became aware of their tourism, coastal, mountain and Saharan potentials, as well as archaeological sites and land by building basic structures in order to promote tourism.

Plus, it should be noted that certain sociocultural factors that have emerged in recent years complicate the situation of the sector due to social degeneration caused by insecurity, delinquency, job instability and inflation. Regarding this, it is necessary on the one hand to adjust the social and security situation before starting any action to promote tourism, and on the other hand, any approach to tourism development should take into consideration the socio-cultural specificity, as well as the traditions and the cultures of the most affected local populations (Boutafenouchet, 2011). With regards to the market emitting tourists that Algeria plans to invest, it stands out first, the European market (France, Germany, Spain, Switzerland and Scandinavian countries) and the Asian market especially China. Algeria recognizes that tourism is the alternative solution to the development of its economy by establishing a master plan for tourism development by 2025. Within the framework of its general policy in setting out the targets of tourism development, Algeria emphasized on some priorities, by increasing its capacity and programming certain projects in its coastal areas. This means that it still supports the old policy based on seaside tourism, which is very poor. The public policy of tourism development is incompatible in terms of programming and orientation. Developing tourism has been focused on the coast and the international tourism movement to the south, particularly in the regions of Tassili and Ahaggar, setting aside the inland regions, rich with natural and human tourist potential, which have not been equipped with a tourism development strategy. This strategy does not consider all these regions to be tourist poles, in accordance with the law N°10-02 of June 29, 2010, approving the National Plan of Spatial Planning. Consequently, the idea of the present research highlights a case of one of the interior regions, which is the case of the Batna province, with the aim of demonstrating that the tourist development plan of the territory must necessarily go through the stage of the total diagnosis of tourism potentialities, then the analysis of the data, to arrive at a general conception of the territorial plan of the tourist development.

To this end, our study highlights an inventory of the tourist potentialities of the province of Batna, insofar that this region offers an actual opportunity for the practice of mountain, rural, geological and environmental tourism. Targeting the provision of essential equipment and devices for the development of certain sites of this province, we studied this topic in the context of our research entitled "Rehabilitation of geographical areas toward tourism development, Batna region's mountains as a template".

METHODOLOGY

The study was based on descriptive analytical and conceptual methods to project the design models that correspond to natural tourist sites. First, after examining the potentialities of mountain sites, in coordination with the representatives of tourism sector at the Tourism Directorate of the province of Batna and officials from municipalities to which these sites belong, we found a lack of reception facilities that attract tourists. Then, we chose the cave of "Sidi Mohamed Ben Taher", the source of fresh water "Ain Oucherchar", the canyons of "Berbagga" and the folds of Djebel "Elmahmel", and designed structures that fit into natural sites suitable for geological, geomorphological and ecological tourism. We used the ArcGIS program and the Architectural Photoshop program for mapping the rehabilitation of planned sites. Finally, we took the ecotourism project as a model for financial study, in order to identify its economic feasibility and investment benefits.

THE ALGERIAN STATE'S VISION OF TOURISM

The State's commitment to the development and implementation of integrated tourism and administrative policies, as well as the establishment of conditions for

ARRIS, KHENCHELA, AIN TOUTA, MEROUANA and BARIKA). At the administrative division of 1984 the limits of the province have experienced important changes, the attachment of 5 of the 34 municipalities to the provinces of Biskra and Khenchela. Redistribution has integrated the municipality of ELDJEZZAR of the province of M'sila to the province of Batna which counted then 61 municipalities distributed on 22 daïras. The province of Batna covers an area of 12 038 76Km², limited by the province of Mila on the North, Biskra on the South, Oum el-Bawaghi on the Northeast, on the East Khenchela, province of M'sila on the west and in the northwest the province of Setif.

STRATEGIC INTEREST OF A MOUNTAINS TERRITORY

The mountains of developing countries are the subject of many attentions from researchers and public authorities and international organizations, who emphasize the biodiversity of these spaces but also the poverty of a large part of their inhabitants and the environmental and socio-economic issues raised by the recent deployment of tourism. Many actors are now involved at all scales to influence the future of these mountain territories in particular through the establishment of protected areas and the encouragement of sustainable development of tourism (Isabelle, 2009). In the territory of the province of Batna, the mountains represent nearly 45% of its total area (12 038 76 km²) and are home to a population of more than 700 000 inhabitants in 44 mountain municipalities. With its 324 915Km² of forests, its immense alpine meadows and its many native species (09% of the species listed locally), it represents an enormous reserve of biodiversity and an original natural heritage (Houamel, 2012). The mountains of the province of Batna, east of Algeria, occupy an important place in environmental and cultural terms within the massifs of the Aures. They contain important and various potentialities that make them a territory of strategic interest coveted by different actors. In this region tourism has many issues and interests on both the local population and the various development actors. They can be seen as a new element of economic and social development in the region. Still, several questions arise about the conditions necessary for the establishment of a sustainable tourism development that could boost these enclave and deprived areas (Benzeroual, 2006). Given its potential and the values it contains (mineral resources, biological resources, sites and landscapes, tourism, sports, intangible heritage and local know-how); we notice that the mountain economy in Aures remains undeveloped. The weakness of infrastructure and equipment as well as the lack of investment has favored the migration of the mountain population, leading to erosion and loss of this rich cultural and natural heritage. These mountains are also home to traditional agriculture that contributes to the shaping of valley landscapes. More recently, tourism, which is being developed thanks to the existence of Ghoufi's natural balconies and hiking activities throughout the Mahmel Massif, the highest point in Batna, has been added to agro-pastoral activities. This tourism is, for many individuals remained on the spot, and used as guides, archaeologists, festival managers and salesmen, the principal means of payment. The integration of tourism activity is one of the main changes of recent years. Seasonal migration of the city labor force is also a complementary source of income.

AN ENCLAVE AREA AND A DEPRIVED POPULATION

The mountains of the province of Batna, constitute a distinct geographical entity at the level of the junction of two Atlas (Tellian and Saharan). Structurally, the Tellian Atlas by all the mountains of Hodna, BouTaleb, and the Belezma Mountains, and the Saharan Atlas by Aurès and Mount Metlili, forms the main physical structure of the province and due to this they constitute the most important physical ensemble (Meharzi, 2010). The region of Batna in its south-eastern part is characterized by a semi-arid climate with a

prolonged hot and dry summer and a cold and rigorous winter where snow falls frequently covering the mountains for several weeks during the months of December and January. The average annual temperature is 15° C. In its northern fringe the climate is sub-humid with rainfall ranging from 500 mm to 700 mm (Kentouche, 2005). Indeed, it is from this part of the Tellien and Saharan Atlas Mountains that the most important rivers of the province emerge (Oued Abdi, Oued El Abiod, Oued Fedhala, Oued Barika and Oued El Gourzi) (Figure 2), but unfortunately these valleys do not reflect the image of eco-tourism due to sewage pollution. As regards the administrative boundaries, as it can be seen from the figure mentioned above, the province is bounded on the north by the province of Mila; in the North-East, by the province of Oum-El-Bouaghi; in the East, by the province of Khenchela; in the South, by the province of Biskra; in the West, by the province of M'Sila and in the North-West, by the province of Setif. Marginal at the national level, this region suffers from a geographical isolation which was further accentuated by historical events. Populations mostly Berber (more than 15 tribes) or Arabized Berber strains (Ouled Ziane and Ouled Deradj) live in uncertain conditions; their activities are based mainly on livestock and food crops. This population is still suspicious of various invasions, and the situation has hardly changed since independence: in terms of language, the references published since 1962 can be counted on the fingers of one hand (Leveau et al., 1990). After independence, and despite the efforts of the state, the region continued to play the same role. It remains disadvantaged and under-equipped compared to the privileged areas of Algeria. The road network remains deplorable despite the rehabilitation of the weak network inherited from the colonial period (Batna-Biskra road through the Amentane gorges) and the creation of certain roads (Batna-Setif by the Belezma Mountains). A large number of towns and rural centers are reached only by difficult roads; towns located on the peaks remain totally isolated.

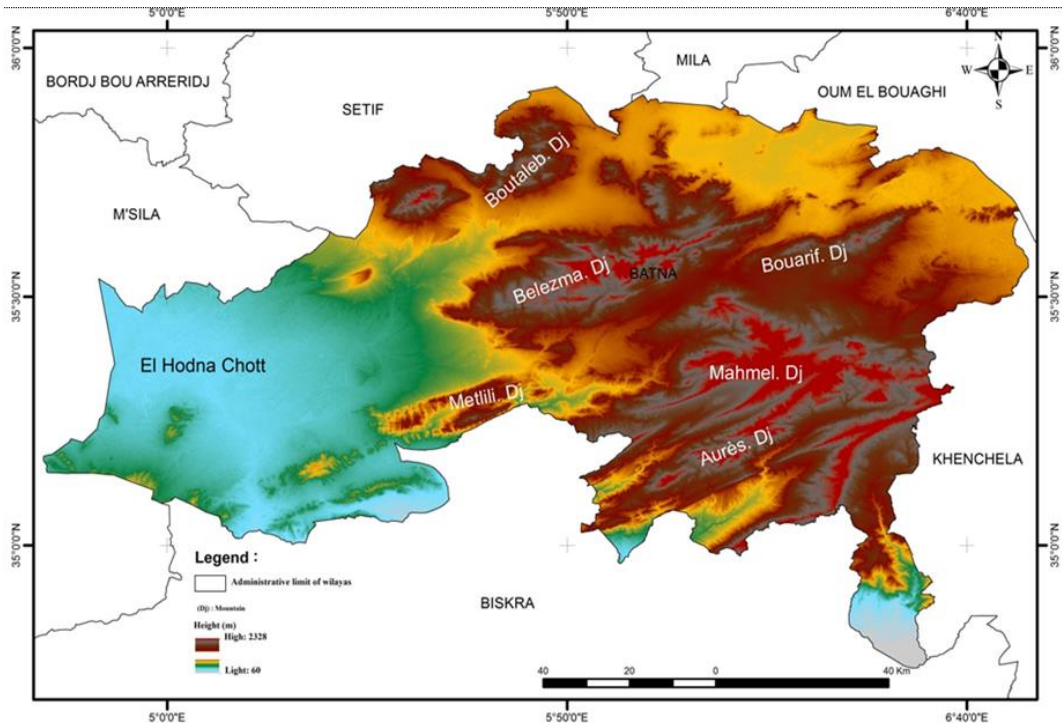


Figure 2. Morphometric map of the different reliefs of Batna province

The economy of the region remains dominated by agro-sylvo-pastoral activities with low cash flow. Equipment for education and health is also very inadequate. Nevertheless, this part of the Saharan Atlas contains important and diversified natural and cultural potentialities that can constitute a basis for a major tourist development and economic start.

AN UNDERVALUED NATURAL AND CULTURAL HERITAGE

Regardless the constraints mentioned before, the mountains of Batna province also have specific assets that make it a territory of strategic interests. It's rich with natural resources, human and cultural which constitute a support of very interesting stakes. Beautiful cedars (*Cedrus atlantica*) are still well preserved at Mount Bourdjem and Mount El Malou. The landscape heritage linked to water and karstic dynamics is an important tourist asset that must be valued. Indeed, the karstic landscapes located everywhere in the limestone formations constitute an undeniable wealth of the region and give it a remarkable identity. The conservation of Batna's forests shows that this region has about 53 known underground caverns, the most important of which are the Khenguet Si Mohamed-Tahar cave, located on Mount Timagoul at an altitude of more than 1350 m above sea level in the region of Berbaga in Oued Taga town, this cave was discovered at the beginning of the twentieth century by the French of Italian origin, Jean-Baptiste Capéletti, and it bears since 1969 his name. Or the cave of lions located in the town of Oued El Ma or that of Troglodytes commonly known as a refuge of Dihia.

While the limestone ridges, forming glacis north of the Aures, gave these mountains their ancient reputation as an inaccessible massif, the cliff more or less steep assured a safe haven for the oldest inhabitants: they found, in the middle of a dry country as a whole, water at the foot of the caves, the upper level of the marls, which formed the subsoil of depressions favorable to crops (Joleaud, 1934). The presence of these caves will inspire a working group for, among others, the creation of a caving club. Therefore, the mountains of Batna province are characterized by a clearly visible natural heritage, determined by the presence of a much diversified range of facies and a wide variety of geomorphological structures ranging from folds, gorges and cliffs. Their protection involves all types of preservation and planning measures that contributes to respect for their diversity and natural integrity.

This natural heritage will also allow the development of an ecotourism circuit, through the protection of Geosites which is now an integral part of Geoscience and landscaping. The geosites are landforms with a specific shape, which alone or in collaboration with other bioecological or anthropic elements can become objects of heritage. Scientifically, the geosites are the most clear representation of the geomorphological processes, of the existent relations between the numerous factors which lead to their occurrence (Ilieș & Josan, 2009). Geotourism has been documented as one of the important strategies to support biodiversity conservation, but its relationship with biodiversity and local people is poor (Hakim & Soemarno, 2017). Geotourism is a relatively new concept, based on the geological or geomorphological attraction of a site and increasingly involved in regional potential development (Malaki, 2006). In the chain of Aurèsin Mount Bouthlagmine and Kef El Mahmel extend some dry valleys, cones, large canyons and giant sinkholes. Some depressions are occupied by natural gorges such Tighanimine gorges between Arris and Ghoufi. The natural balconies overlooking the valley of Oued El Abiod in town of Ghassira are original in its genesis and the beauty it offers in the middle of the oasis overlooking it.

The built heritage is quite diverse, typical Berber towns are scattered all over the valleys and depressions (oued Abdi and Oued El Abiod) or hung on some slopes (Nirdi-

Bouzina). Traditional housing reflects a certain integration of local populations into their environment and thus their living conditions and customs. Most of the materials used are local, mostly from the subsoil and the forest. The structures of the houses and their modes of construction reflect the strong cultural identity of the region. Cultural heritage is also important. Aithmimoune town and Aithyahiais located in Ghoufi, a site classified since 1982. The agricultural terraces engraved on the feet of Mount Lazreg (Ouerka, Nara, Hidous) offers remarkable points of view. Traditional irrigation techniques, water resource and environmental management offer considerable tourism values. The production of natural honey and the apple trees as well as olive oil encourages Agrotourism in the region. The folklore of the local tribes is quite rich.



Figure 3. The Cave of “Mouths of stars” in the Mestawa Mountain

This mountainous region is also home to the Belezma National Park, which currently covers an area of 26 250 hectares, and offers a great diversity of flora and fauna. Located at the crossroads of the Saharan and Tellian massifs, Belezma plays a role as a biological reservoir favorable to the dispersal and migration of species, the regulation of natural balances and the producer of economic and social resources. The proximity of the vast expanses of forest areas in the Aures Mountains is an extra asset to ensure the maintenance of Belezma's biological diversity (Sahli, 2004). The landscaped paths are thus numerous and attractive; in addition to the 9 trails offered in the Belezma Park (Condorcet-Merouana, Batna-Seriana, Djerma ...); the diversity of landscapes in the region allows to consider other trails to discover a rich natural and cultural heritage (The above figure 3 is one of the Caves among the 9 caves existing in the Batna province). The municipalities of Hidoussa, Merouana, Oued Elma and Seriana offer several possibilities. According to this list of existing potentialities we perceive a great potential for rural tourism in this region, offering visitors a warm welcome among locals, with local cuisine and sports and leisure activities such as hunting and hiking. Besides, the less populated areas of the region (Tafrent, OuedNafla and Merkonda) are rather favorable to itinerant tourism (Figure 4 is the Oued Nafla).

The remarkable sites identified in the various municipalities of the region may constitute centers of interest that could fuel an important ecotourism movement that benefits the local population regarding non-agricultural job creation. Unfortunately, these sites, with the exception of Belezma National Park, are neither enhanced nor protected

against multiple forms of degradation. Ecotourism has a potentially vital role to play in conservation by generating economic incentives for nature conservation (Lindsey et al., 2007). Moreover, it must be admitted that this potential, so important, is insufficiently known, or even totally ignored in some cases. A great effort of publicity, promotion and development of different potentialities is needed, with the aim of boosting the tourism sector, which could be a catalyst for other economic and social sectors in the region.



Figure 4: Village of “Nafla” with its terraces in the heart of Belezma National Park

THE BELEZMA NATIONAL PARK (BNP) DEVELOPMENT STRATEGY

In order to reduce the pressure of indigenous peoples and their flock on protected natural resources, the BNP Administration believes that some development projects should be undertaken for their benefit. The form of programming these projects reflects an acute awareness of the administration of the indigenous population's contribution in the maintenance of natural resources. The annual renewal of these activities over the past ten years indicates that the program objectives have reached a level of success which the administration and its supervision have encouraged. The goal of development programs is to reduce anthropogenic pressure on protected natural resources by seeking alternatives to traditional forms of land use (Sahli, 2004). These operations contribute to the improvement of living standards of rural communities by encouraging their membership. The demand of this type of project is increasing on the part of rural communities. On the ground, there are new agricultural practices that are more profitable than traditional practices but require more work and new forms of qualification.

PERSPECTIVES OF SUSTAINABLE TOURISM DEVELOPMENT

The magnificent sites mentioned above constitute a real wealth of this region of Aures. For this reason, much hope can be placed in the development of tourism activities to resurrect the economy of this mountain and integrate it into the growth range of the country's favored areas. Thus, given the situation of isolation and poverty that characterizes this area and paradoxically the importance of the resources it enjoys, nature tourism can be a beneficial and significant thing regarding economic development of these deprived areas. This type of tourism does not require large upfront investments and is easily integrated with

other rural activities in mountain regions while allowing the use of temporarily available work forces (technical and economic research office of Batna, 2005). The installation of different equipment will have a direct impact on the perception of the economy and the local populations as well as on the socio-spatial organization. Thus, targeted tourism activities can provide (create) jobs for guides, route guides, caretakers and lodging owners. It can also create bridges with other economic sectors by promoting the marketing of local products and their promotion (local products: goat cheese, honey, local cuisine and crafts).

The relaunch of employment and the increase in the professional activity of local actors directly involved (guides, carriers, managers) indirectly (craftsmen, breeders, farmers, beekeepers) could create favorable conditions to maintain population on the spot. In terms of heritage, the development of tourism activities would enhance the traditional architectural wealth and local building techniques that fit perfectly with the conditions of these environments. Thus, around the great mountainous massifs of Belezma, El Mahmel, Bouârif, Bouthleghmine, the region can offer important opportunities for sporting excursions spread over many days. Nevertheless, for the establishment of this activity it is necessary to create a small number of equipment (cottage stopover, maintenance tracks) to form guides and especially to make an effort of publicity and promotion among the interested customers at national and international level and raising awareness among the local population to supervise and manage this type of activity. The water points, the forests and the karstic landscapes can constitute privileged places for walks, picnics and relaxation.

The opening of these places to tourist activities is likely to create contacts of varied nature between the local population and the rest of the national territory as well as with the outside world. Tourism activities related to the Belezma National Park, although rudimentary, have effectively established relationships between indigenous peoples and the outside world. The owners of the orchards of Ain Berbaga and the inhabitants of this town were able to meet many tourists who frequented the famous cave of Sidi Mohammed Tahar, and to accommodate their customers the state must rehabilitate the site and access to the cave in this sense, a type of spatial arrangement has been divided as shown in (Figures 5 and 6) below.



Figure 5. Access planning to Sidi Mohammed Tahar cave

The establishment of a sustainable tourism development must take place in a decentralized framework that can promote an understanding and alliance between different partners. Thus, it is a question of establishing a planning based on the consultation and the conciliation between the operators concerned by the projects of tourist development in the region of Batna. The State and its partners, the associations, the local population, and

the investors are therefore called upon to collaborate together to guarantee the success of sustainable tourism planning stemming from a common desire to unlock the tourist and economic development of tourism and provide the local population with employment conditions and additional sources of income. Disengagement from the state and poor basic infrastructure largely explain the almost total absence of tourism projects, except for the low level of activities related to Batna's Mountains. The opening up and equipment of the region can contribute to the emergence of a series of actors and notables who can mobilize themselves for the implementation of important tourism project.



Figure 6. Development and rehabilitation of village Oucherchar's Berbaga

Thus, the State must do more in reducing territorial imbalances by giving greater importance to these peripheral areas and by encouraging tourism investments. It must ensure the provision of infrastructure (roads, drinking water, electricity, sanitation, telephone). The role of the state is also indispensable in the support of communication. The famous Geomorpho-sites as shown in Figure 6 are poorly known or even completely ignored on national and international levels. Although the tourist practices of Algerians are oriented towards the mountains, rural tourism, for which the mountain is particularly well placed, can have some success by improving the offer with a great effort of advertising and promotion. The village below Figure 7 can be a scientific center for students and researchers in earth science and ecologists.



Figure 7. Site development in front of Mount el Mahmel's folds

Finally, the State could support local investors by providing them with adapted and well-targeted technical support (information, training, assistance for tourist investment) in the form of very small funds for the development of the roads, rural lodgings or camping at the farm. The inhabitants seem to be willing to collaborate in tourist projects that would bring them more income; still their poor means are very insufficient to set up and manage projects. In the town of Oued Tagga, residents who propose the creation of an Ecolodge near source (Ain Oucherchar), in the framework of rest, show at the same time their financial inability to build and manage this project. For this purpose the investment can be made and protect the source by a system of hygiene and environmental safety through a good management of fresh water and the evacuation of liquid and solid waste. Between the mountains of the high Auressian series and at the beginning of a hilly road going towards the balconies of Ghoufi, the proposed hostel is located at the foot of the Sidi Mohamed cave. The facility has 26 rooms, so that tourists can enjoy both the natural and social environment. Here, they can enjoy the charming Mountain views, go hiking and visit archaeological sites. Enjoy traditional dishes taking advantage of the natural water flowing from the mountain of Boulthgmneas well as the orchards and a traditional mill of the Roman era, in a layout of a small plot of 30 tables. Besides, it should be remembered that these spaces cannot be managed without the effective participation of their inhabitants and under the responsibility of certain local operators. To ensure a better integration of the populations in various projects, the tourist development in the region must in no case be the business of the only exogenous investors or officials of administrative services.

The local population must really take part in the development and management of projects through elected officials, local investors or associations. The government should help the various associations acting in the region and support their cohesion to avoid fragmentation. Fifty-nine associations were created within the natural sites (Toufik, 2001). Only four of the same are still operating under very precarious conditions. The association for the environment protection set up on 1999 in Hamla down town as part of the National Fund of Rural and Agricultural Development funded by the Ministry of Agriculture through the local agricultural services (subdivision and DSA) and the CRMA (financial body) and the Belezma National Park is considered among the most active ones; these associations, which are currently supported by many young unemployed graduates, are fairly well supervised and can play an important role in the management and promotion of the tourism product.



Figure 8. Development of Ain Oucherchar site for the creation of the eco-holiday village

FEASIBILITY OF PROPOSED PROJECTS

This part of the study aims to discover the role of economic feasibility in the investment decision by taking the case of the eco-motel that has been proposed in the site of AIN OUCHERCHAR (Figure 8); to understand the importance of feasibility study and its application in the field and emphasize its importance to justify the investment decision. On this basis we choose to work on our case in a period of time estimated by 5 years.

Preliminary study phase of the project:

1. Type of project: Tourism Investment Project.

2. Project classification:

A - According to the property: The private sector responds to a general need to provide services to tourists or visitors.

B - Size: A large project depends on the mountainous nature and must be:

- Self-financing: by the investor.
- External financing: borrowing from the bank.
- Experience in the field of tourism.

C - According to the economic activity:

3. Commercial service: have commercial facilities and provide tourist services.

A - Project identification: to determine if the project should be available

- Human Resources (HR).
- Financial resources.
- Material resources.

4. Stages of the study of the project

4.1. Market study: In-depth study of the market to see if there is a demand for the project because tourism consumption affects several factors (salary, environment, customs, traditions, and competitors).

4.2. Technical Study: Using the project size, the technical inputs required to produce this project are identified and mapped to the resource size and location of the project.

4.3. Financial Study: This study aims to analyze the financial feasibility of the incomes and outcomes of the tourism project.

4.4. Legal Study: Considering all legal aspects of the project, we will review a set of financial criteria and indicators including the return on investment rate and the recovery period of invested funds, the net present value at the end of all these steps are decision-making and may be based on a financial analysis, as if the profitability of the investment and which are unprofitable is discarded as it may be on a political or strategic basis. The consulting firm studied the project for the period 2019-2023 and presented the expected cash flows for this period and the amount of the investment and the data were as follows:

Table 1. Feasibility of the environmental project of the source "Ain Oucherchar"
(Data source: Technical and economic study office of Batna, 2017)

year	2019	2020	2021	2022	2023
CF _t (DZD)	48000000	56200000	76800000	79000000	82300000
Coefficient $(1+I_0)^{-n}$	0.925	0.857	0.793	0.735	0.680
New CF _t (DZD)	44400000	48163400	60902400	58065000	55964000
Σ_{newCF_t} (DZD)	267498400				

- I_0 : Amount of the investment= 225 000 000 DZD.
- I : Discount factor =8%.
- ΣCF_t : Total cash flow generated.

- n: Number of years
- DZD: Algerian Dinar

1. Net Present Value (NPV): (René, 1997):

The total net future cash flows (cash inflows minus cash outflows) received by the project at the end of the fifth year are adjusted by the discount factor representing the cost of capital or the minimum return on the investment (Aouf, 2017).

NPV (NET PRESENT VALUE) = $\sum CF_t - I_0$ (technical and economic study office Batna)

NPV = $48000000 * (1 + 8\%) - 1 + 56200000 * (1 + 8\%) - 2 + 76800000 * (1 + 8\%) - 3 + 79000000 * (1 + 8\%) - 4 + 82300000 * (1 + 8\%) - 5$ } -225 million

NPV = $(38000000 * 0.925) + (46200000 * 0.857) + (66800000 * 0.793) + (69000000) * 0.735 + (72300000 * 0.680)$ -225 million

NPV= 424 948 00 DA

2. Profitability indicator (I_p): (René. D, 1997).

$I_p = \sum CF / I_0$

$I_p = 267\,498\,400 / 225\,000\,000$

$I_p = 1.19$

3. Payback Period return on investment (ROI):

This is the period during which the project recovers its invested capital through the annual net cash flow, and the shorter the period, the more useful the project is. We collect cash flows in the project until the first digit is reached before the initial cost of the project.

DZD 22.5 million – DZD 18.1 million = DZD 44 million

ROI = $44000000 / 79000000$ (CF_t 4th year) = 0.56

$0.56 * 12$ months = 6.72 months

$0.72 * 30$ days = 21 days

The repayment period is 3 years, 6 months and 21 days

4. Rate of return (RR):

M_f : Cumulative Accumulation of Contributions in the Last Year 2023

RR: Rate of return.

$M_f = 342300000 / 5$

$M_f = 68460000$

RR = $68460000 / 225000000$

RR = 0.30

For every 100 DZD per investor, the project has an interest rate of 30 DZD.

CONCLUSION

Tourism activities can have an important contribution in the territorial development of this marginalized region of the Aures. They can constitute important economic stakes allowing the integration of the region and favoring a cultural and territorial link between the mountain societies and the outside world. Even so, the success of a sustainable tourism development requires the establishment of a real consultation between all the partners concerned, allowing to associate different actors in the decision-making processes concerning the development and the preservation of the tourist potentialities and all the territorial values of this mountainous area, in which tourism could be developed in four steps such as: mountain tourism, natural tourism, rural tourism and Geotourism. The profit rate index is a standard that measures the profitability of each unit of cash invested in the project: the net present value of the project being positive and the profitability index higher than the value of 1.19, the project is economically profitable and financially advantageous.

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FOOD CULTURE IN IBN BATTUTA'S TRAVELOGUE

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Abstract: Travelogues are valuable information sources about the period they were written. Ibn Battuta of Tangiers, Morocco, is a famous traveler of the 14th century. In his travelogue, Ibn Battuta exhibits a rich variety of information on the people, social life, beliefs and traditions of the period in the lands he travelled. The purpose of this study was to make an account of food culture in the medieval ages on the basis of Ibn Battuta's travelogue. The reason for choosing Ibn Battuta's travelogue as the basis of this study was his extensive travels starting from Africa to Middle East, Asia Minor, Europe and Asia in the 14th century. For the purpose of the study, a content analysis was conducted to determine the words about food, beverages, kitchenware used for cooking, ingredients of recipes, names of the dishes, cooking types, serving and materials for keeping food, jobs related to cooking, and places of eating mentioned in Ibn Battuta's travelogue. The lexicon was grouped on the basis of themes. A total of 13 themes were identified which were labeled as grains, flour and baked products, legumes, meat, seafood, milk and dairy products, aromatic herbs, spices and sweeteners, oily fruits and oils, fruits and vegetables, desserts, beverages, kitchenware and others. Findings revealed that factors such as geographical features, peoples' habits, economic conditions and religion influenced the food culture greatly. Conclusions were drawn on the basis of findings.

Key words: Ibn Battuta, travelogue, food culture

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INTRODUCTION

Food culture of a society is initially determined by the natural resources of the society (Tez, 2015, p. 9). Therefore, food culture is a phenomenon that changes by the geography, time and the people. People's food culture is also associated with their lifestyle

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and culture. In this regard, food is a cultural product which has individual and social aspects (Çetin, 2006, p. 107). Akarçay (2016) explains that the relation between the food culture and sociology, history and anthropology has ties to social, economic and political structures of the societies. For example in Europe, food culture has been initially studied by ethnology, anthropology and sociology, but it has long been a neglected area in historical studies. Travelogues have been both interesting and popular throughout history (Stubseid, 1993), and they represent important resources to better comprehend beliefs, social life and food culture of the past. The purpose of travelogue authors is quite simply to give correct information about a geographical area. One of the prominent travelers of the medieval ages, Abu Abdullah Muhammed bin Abdullah bin Muhammed bin Ibrahim Levati Tanci or shortly Ibn Battuta, was born in Tangier in 1304. After making several travels around the old world, he returned to Morocco in 1354, occupied the position of *qadi* (muslim judge) and died in his native land in 1368 (Barsoum, 2006). Thanks to his travel writings, he was accepted to be one of the most famous travelers of the Medieval Period. In his travels, Ibn Battuta was first a pilgrim who went on the *hajj* to Mecca. Then he was a Sufi devotee, and was also a cultured adventurer -part of an elite community of cosmopolitan, literate and mobile gentlemen, who looked for hospitality and sought employment (Dunn, 1986, p. 11). He married in many countries he visited and actively participated in the social life. Ibn Battuta covered approximately 73,000 miles. In his travelogue, he made a detailed description of the societies he had visited, and he mainly focused on human beings (Aykut, 2015). His writings have also attracted the scholars in search of historical, anthropological and geographical facts of the period. However, his vivid, enthralling, immensely detailed descriptions of the era have not been studied in detail, especially in terms of food culture in the lands he had visited.

Therefore, the purpose of this study is to make an account of food culture: food and beverages, ingredients of recipes and kitchenware used for cooking and serving in the Middle Ages on the basis of Ibn Battuta's travelogue. Ibn Battuta travelled throughout Africa, Asia and Europe and provided an extensive account of food culture of the time in his extensive travelogue. Content analysis was employed for the purpose of the study. Consequently, the food culture of the regions and countries of the 14th century was examined on the basis of Ibn Battuta's travels. Thus, the study is expected to contribute to the existing literature on the food culture of the past.

LITERATURE REVIEW

Travelogues are important historical documents as they reveal what the travelers experienced, saw and lived in the course of their travels to exotic and less-known places. However, they are also subject to criticism due to some of their exaggerated or contradictory information compared to historical facts, and found to be highly subjective (Koçyiğit, 2009; Saylan, 2014). One of the prominent travelers of the Middle Ages was Ibn Battuta, and his travelogue offers a reliable source due to its extensive and detailed account of the countries and places he visited. Ibn Battuta's travels covered a vast geography throughout Asia, Europe and Africa. His writings on these travels provided valuable information about these lands, and this travelogue has been translated and published in many languages (Dunn, 2012; Mackintosh-Smith, 2002; Abercrombie, 1991; Yerasimos, 1982; Meillassoux, 1972; Husain, 1936; Favret-Saada, 1969; Gabrieli, 1961; Gibb, 1929). When studies on Ibn Battuta's travels are examined, it is seen that these studies have focused on a specific place. For example, Koçyiğit (2009) examined Ibn Battuta's travels to Black Sea region of Asia Minor and Crimea. The author concludes that Ibn Battuta not only became acquainted with local administrators and notable individuals but also, he examined the geographical characteristics, social structures, economic and cultural

characteristics of the lands he had visited. It is also seen that some scholars have examined the food culture in Ibn Battuta's travelogue. For example, Birol (1991) notes that Ibn Battuta appraised the food culture of Kipchaks, Chagatai Khanate and Khanate of the Golden Horde. Similarly, Varlık (2010) writes on what Ibn Battuta ate and drank during his travels in Anatolia. Varlık concludes that Ibn Battuta provided little information on the food culture of the peoples living in Anatolia.

Food culture of the Middle Ages has been an important topic for some researchers. For example, Varlık (2012a, 2012b) studies Istanbul and Anatolian cuisine written in the writings of three travelers at the end of the 14th century (2012b). Similarly, Yerasimos (2011) studies food culture depicted in Evliya Çelebi's (Turkish explorer and traveler lived in the 17th century) travelogue, and determines a gastronomical lexicon of 2,246 words. The author also offers information on the eating habits of Ottoman people. Çetin (2006) examines the food culture in Mamluk Sultanate. In a similar study, Çetin (2006) also studies the food culture in Mamluks on the basis of Turkish and Arabic resources.



Figure 1. Travels of Ibn Battuta

(Source: <http://tarihvemedeniyet.org/2010/01/haritalarda-uc-ortacag-gezgini.html>, 2018)

METHODS

Ibn Battuta is a Moroccan traveler who lived in the 14th century. Ibn Battuta's travelogue was written after his return to Morocco in 1349 by Muhammed ibn Cuzey el-Kelbi. Some parts of Ibn Battuta's notes during his travels were lost in a robbery in the city of Kul, India, and some were gone when the ship he boarded in Calcutta (currently Kolkata) port in India sunk. Therefore, he penned his travels to this region on what he remembers (Birol, 1991). Ibn Battuta is accepted to be the most prominent traveler of his age due to his visits to the most important cultural centers of the era split around three continents (Africa, Asia and Europe). Human beings were in the focal point of his writings. Accordingly, he supplied valuable and abundant information on food culture

while making an account of people's social lives, traditions, beliefs and customs. Therefore, Ibn Battuta's travelogue was chosen for examining the food culture of his age. Turkish translation of the travels (Ibn Battuta, 2015) was used in the study and paging of the quotations was based on this publication. Content analysis was employed in the study. According to Cohen, Manion and Morrison (2007), content analysis is defined as the specification and the summary of fundamental contents and their implied messages in written documents. Content analysis can also be described as deductive reading of a text (Bilgin, 2014, p. 1). Content analysis aims to reveal explanations for the data and interrelationships among them. Yıldırım and Şimşek (2006) note that the data is conceptualized and the concepts are reorganized in a rational way. Further, the themes that can explain the data are determined. Content analysis require the researchers to process the qualitative data, code the data, determine the themes, organize the codes on the basis of themes, designate and interpret the findings (Yıldırım & Şimşek, 2006). For the purpose of this study, Ibn Battuta's travelogue was read in detail, and the words used for food, cooking and kitchenware were determined.

Therefore, the words on food culture in the travelogue was detected and coded. Coding denotes a process on the meaning of the message (Bilgin, 2014). In order to ensure the reliability of coding, strategies suggested by Creswell (2013, p. 250-253) were adopted in the study. In this regard, the analysis of the data was made by the contribution of two experienced researchers in the field of qualitative research. Data, which was coded by the researchers, was grouped under certain themes by the experts. Then their results were crosschecked with the results of the researchers. The discrepancies between two groups were solved, and where necessary, researchers used the codes provided by the experts.

RESULTS

A total of 13 themes were identified which were labeled as 'grains', 'flour and baked products', 'legumes', 'meat', 'seafood', 'milk and dairy products', 'aromatic herbs, spices and sweeteners', 'oily fruits and oils', 'fruits and vegetables', 'desserts', 'beverages', 'kitchenware' and 'others'.

Grains

The theme 'grains' in the travelogue included wheat, barley, millet, products and materials of wheat, vetch, oat and similar grains. While talking about the Barberi tribes on the banks of the Nile, Ibn Battuta noted that women of Berdame were tall and beautiful, and claimed that their food was 'well-grained millet and cow milk' (Ibn Battuta, 2015, p. 682). In the travelogue, a wide range of information on the grains was provided. For example, writing on the Turks: "Turkish people do not eat bread or stiff food; they cook a dish called '*dūki*' (bulgur) which is like our '*anli*'. First, they place the water pot on fire. When the water is boiled, they put some *duki* in it. If they have meat, they chop and add into pot and cook together. When the meal is cooked, they serve everyone's share in separate dishes." (Ibn Battuta, 2015, p. 313). "When we arrived in a village in Africa, black women immediately brought food that were made of millet called *anli*, milk, chicken, cedar flour, rice, '*funi*' and broad bean powder (*lubya*). Funi looks like mustard seed and it is used to make couscous and '*aside*' (flour soup). Travelers buy whichever they like." (Ibn Battuta, 2015, p. 666). Besides, Battuta noted that a community living on the coasts of Indian Ocean were harvesting a kind of wheat called '*ales*', but claimed that in fact it was a kind of barley (Ibn Battuta, 2015, p. 251). Further, he noted that Sultanate of Kastamunya (currently Kastamonu, in Turkey) hosted him and sent him oats, and he was granted wheat and barley harvest from a town which was half day away from Kastamunya (Ibn Battuta, 2015, p. 305). He also noted that Indian people lived on grains like '*kudru*' (a kind of millet), *kal*, *mût*/*mot* and *mung* (Ibn Battuta, 2015, p. 392).

Flour and Baked Products

The theme 'flour and baked products' in the travelogue included flour, bread and baked products. Ibn Battuta wrote about the dishes served in the tables of ordinary people while traveling around India: *rikak* (thin bread), kebab and sweet stuffed cakes (Ibn Battuta, 2015, p. 434). On the banquets open to public, Ibn Battuta noted: "In India and in the land of Kipchaks, there is the custom of placing small, cradle-like tables in front of *sharifs* [an adjective meaning noble or highborn], scribes, sheikhs and qadis. ... On the tables, they serve dry thinbread, roasted lamb heads, and four oily breads stuffed with a kind of sweetener. And the bread is covered with a layer of thick halvah!" (Ibn Battuta, 2015, p. 508). Bread is the most frequently mentioned baked product in the travelogue. According to his writings: In Egypt, bread and soup were served to the visitors of Melik Mansur's tomb (Ibn Battuta, 2015, p. 47); bread, cheese, olive, vinegar and capers were served to the visitors of Deir-i Farus Monastery in Latakia, Syria (Ibn Battuta, 2015, p. 92); there were dealers selling bread under trees on the way to Basra (Ibn Battuta, 2015, p. 188); people were giving bread as gifts (Ibn Battuta, 2015, p. 189); in Kuhuristan, dervishes offered the bread in their *zawiya* [an Islamic religious school or monastery] that they collected walking from house to house (Ibn Battuta, 2015, p. 168); Ibn Battuta was welcomed with bread, water and dates in Ayzab in the vicinity of Jeddah (Ibn Battuta, 2015, p. 272); bread is baked once a week in Anatolia (Ibn Battuta, 2015, p. 273), each artisan carried bread in their bags in Denizli (Ibn Battuta, 2015, p. 281), cheap bread could be found in Kastamonu (Ibn Battuta, 2015, p. 304) and visiting dervishes were offered a table of bread, meat, rice and halvah at the *zawiya* of Fahreddin Bek (Ibn Battuta, 2015, p. 306). Battuta was offered bread in almost all places he visited (Istanbul, Khwarazm, India, Baghdad, Egypt, Iraq etc.)

Legumes

Regarding the theme of 'legumes', it was seen that this theme consisted of legumes and the dishes made of legumes. According to Ibn Battuta, rice was abundant and therefore cheap in Bengal. Moreover it was noted that rice was the only diet of Hinavr people in Afghanistan (Ibn Battuta, 2015, p. 539). Regarding India, Battuta wrote about mung (a kind of small round green bean) dish: "Mung is a kind of bean. But the grains are longer, and it is lime green. Mung is cooked with rice and oil. They call this dish as *kusheri*. They use to consume *kusheri* in the mornings." (Ibn Battuta, 2015, p. 392).

Ibn Battuta mentioned the existence of chickpeas in India (Ibn Battuta, 2015, p. 392), in Delhi by the bank of Ganges River (Ibn Battuta, 2015, p. 473) and China (Ibn Battuta, 2015, p. 612), and lentil and gram in Egypt (Ibn Battuta, 2015, p. 643).

Meat

This theme consisted of types of meat such as beef, lamb, poultry meat, meat products and meat storage methods. Ibn Battuta wrote that during his voyage to Crimea, governor of Azak (today's Azov) was very hospitable to him, and offered him dishes made of horse meat and other meat (Ibn Battuta, 2015, p. 315). According to Battuta, Uzbek Turks frequently consumed mare meat and lamb (Ibn Battuta, 2015, p. 313), Sicilmâsâ people (in Africa) ate camel meat (Ibn Battuta, 2015, p. 660), non-Muslims in China consumed pork and dog meat (Ibn Battuta, 2015, p. 613), Byzantine people eat pork (Ibn Battuta, 2015, p. 332) and Kipchaks preferred beef (Ibn Battuta, 2015, p. 331). Moreover, Ibn Battuta noted that chicken and roosters of China were massive, even bigger than the geese of Morocco: "We bought a chicken, and when we wanted to cook it we noticed that the pot is small for the meat. Therefore we divided the chicken into two pots. The roosters of that place were like ostriches... I had seen such a rooster in Kavlem (in India) and was surprised, and I thought it to be an ostrich!" (Ibn Battuta, 2015, p. 613). In India, he tasted a meal called *semusek* which is cooked with almonds, walnuts, onions and spices (Ibn Battuta, 2015, p. 388). During his tour in Anatolia, Ibn Battuta arrived in Sinop, and he ate rabbit meat,

which is forbidden in Shia branch of Islam, in order to prove that he is a member of Maliki branch, rather than being a Shiite (Ibn Battuta, 2015, p. 308). Furthermore, it is understood that Battuta had tried salt-cured meat and dried meat in Saraycik on his way to Khwarazm (Ibn Battuta, 2015, p. 344) and Maldives (Ibn Battuta, 2015, p. 565).

Seafood

Three groups were determined under the theme of 'seafood': fish, fish products and fish storage methods. For example, Ibn Battuta mentioned a strange fish that he saw in Maldivian islands. The fish, which resembled lamb, was the primary food for the locals and was named as *kulbulmas*. Kulbulmas was preserved by drying, and was exported to India, China and the Yemen. The author claimed that the fish had been rumoured to have aphrodisiac properties (Ibn Battuta, 2015, p. 556). Moreover, the author wrote that he was served salted sardine in Kavlem, and noted that he had not eaten the uncooked fish (Ibn Battuta, 2015, p. 570). Ibn Battuta repeatedly mentioned fish in his visits to the lands by the sea such as Wasit city in Iraq (Ibn Battuta, 2015, p. 182), Basra (Ibn Battuta, 2015, p. 188), and Sri Lanka (Ibn Battuta, 2015, p. 579).

Milk and Dairy Products

Under the theme of 'milk and dairy products', two groups were specified: milk of camel, mare, cow, sheep and Anatolian buffalo, and dairy products such as *koumiss*, yoghurt and cheese. In Crimea for example, after the dinner, Turks drank a beverage called *koumiss* which was made of mare milk. Additionally, it was understood that they put yoghurt on a dish called borani, and poured milk in the soup made of homemade pasta (Ibn Battuta, 2015, p. 313). On the way to Jeddah, Battuta noted that an Arab child was fed by merely camel milk (Ibn Battuta, 2015, p. 272), and the meals were just the camel milk in Aydhah [a lost port city of the Red Sea] (p. 60). Ibn Battuta talked about the abundance of the milk of Anatolian buffalo in Damietta [a port city in Egypt] (Ibn Battuta, 2015, p. 41) and Cenani [a province in India] (Ibn Battuta, 2015, p. 381), *koumiss*, cow and sheep milk in Constantinople (Ibn Battuta, 2015, p. 331). Traditionally, people eat curd or yoghurt in Hinavr of Afghanistan: "When these are served, it means that nothing more will be served." (Ibn Battuta, 2015, p. 539).

Aromatic Herbs, Spices and Sweeteners

The theme of 'aromatic herbs, spices and sweeteners' included the groups of spices, salt, musk mallow, vegetation, aromatic herbs and flower juices. In the travelogue, frequently mentioned spices were clove, the *kakula*, *kumarî*, saffron, sweet basil, ginger, black pepper, cinnamon, mustard, green ginger and cemun. Salt was found in the form of rock salt and andarani salt. Vegetation used for gastronomic purposes were listed as follows: vegetables, herbs, couch grass, almond branches, camphor, sesame seed, hemp, cannabis, sugar cane, banana leaves and mung leaves. Aromatic herbs were as follows: anise, rose, essence herbs, cinnamon, orange flower, incense and carnation flower.

Ibn Battuta noted that he was hosted by sultan Aydinoglu Muhammed [sultan of state founded in the Aegean coasts of Anatolia], and the sultan ordered his men to punish the treasurer after seeing that no spices or vegetables were used while cooking the dinner (Ibn Battuta, 2015, p. 290). In his travels to Indian lands, spices were more frequently mentioned. Battuta wrote that he was served meat cooked with oil, onion and green ginger in chinaware (Ibn Battuta, 2015, p. 388). While writing about Ceylon, he noted that the city was full of cinnamon logs (Ibn Battuta, 2015, p. 577). Moreover, he noted that most of the trees in Java were coconut, Areca palm, cloves, oudh tree, apple tree, orange tree and kapur tree (Ibn Battuta, 2015, p.602).

Oily Fruits and Oil

This theme was composed of the groups of nuts and oils. Nuts mentioned in the travelogue were Buva nut, coconut, walnut, hazelnut, peanut, almond and *nargil* (a kind

of nut specific to India). Oils were found as olive oil, suet, fat, sesame oil, butter and bile oil. According to Ibn Battuta, most of the trees in Shiraz and Anatolia in which Turks mostly lived (Ibn Battuta, 2015, p. 200) were nuts. He was surprised to see a specific tree in the Yemen and described it as: “This tree called Nargil is in fact a kind of nut tree specific to India. ... At first sight you think it to be date tree or palm tree, but it bears walnut.” (Ibn Battuta, 2015, p. 255). Regarding the oils, Battuta noted that Nablus [a city in the northern West Bank north to Jerusalem] and Damascus were rich in olives, and olive oil was exported to other countries (Ibn Battuta, 2015, p. 69). In Egypt, for example there was no solid fat, and sesame oil, butter and olive oil were used for cooking (Ibn Battuta, 2015, p. 643). Ibn Battuta noted that there were no solid fat or olive oil in a town called Buda in Algeria, and that they imported these oils (Ibn Battuta, 2015, p. 686).

Fruits and Vegetables

This theme included a variety of groups such as vegetables, fruits, bananas and grapes. The vegetables mentioned in the travelogue were broad bean, almond, artichoke, pepper, radish, Indian cane, pumpkin, zucchini, purslane and onion. The fruits expressed in the book were raspberry, plum, mango, pear, quince, apricot, melon, watermelon, orange, apple, blackberry, mulberry, fig, date, lemon, pomegranate, citrus, peach, cherry, and some local fruits such as *cammun* (eugenia jambolana), Luban-i Java, *tendu* and *mehva*. In the travelogue, it is noted that Khwarazm melon, grapes and some other fruits were dried. Similarly, different kinds of bananas and grapes were mentioned.

Ibn Battuta talked about several fruits and fruit sellers in his travels to different lands. For example he liked Bukhara and Khwarazm melons the best (Ibn Battuta, 2015, p. 348). Similarly, he relished green ginger, pepper, lemon, banana and mango in Java Island (Ibn Battuta, 2015, p. 390, 602), grapes, plums, apples and quinces in Byzantine land (Ibn Battuta, 2015, p. 333), grapes, *cammun*, lemon and coconuts in Maldives (Ibn Battuta, 2015, p. 556), and dates and banana in Qalhat, Oman (Ibn Battuta, 2015, p. 261).

Desserts

This theme consisted of confectionery courses and honey. The desserts mentioned in the travelogue consisted of ashura, halvah, carob sweets, fruit paste, batter, and some local desserts such as *mukarrada*, *sabuniye*, *celd-i feres* etc. Moreover, the travelogue mentioned honey and coconut honey. When he was in Baghdad, Ibn Battuta wrote that eleven pots of halvah was prepared and offered to Sultan. He also mentioned desserts specific to this region: “Majesty! There are various kinds of desserts... ‘For example this dessert is called *mukarrada* [a kind of halvah]’ ‘And this is *lukaymatulkadi* [some sort of donut]’.” (Ibn Battuta, 2015, p. 504-505). Similarly, in India, Battuta was offered some local desserts called *sabuniye*. He noted that all the desserts were covered with *hiṣṭi*, a crust made of flour, sugar and oil (Ibn Battuta, 2015, p. 388).

Beverages

The theme of ‘beverages’ included beverages such as tea, sorbet, spirits, wines, fruit juices, *boza* (traditional cereal-based fermented cold drink with a slightly acidic sweet flavor) and grape juice. It was understood that *fuka* (a beverage made of barley) was popular in Baghdad (Ibn Battuta, 2015, p. 505). Similarly, koumiss was popular in Uzbekistan (Ibn Battuta, 2015, p. 321). It was noted that there were large leather bottles full of rose sherbet in Kanbay region in India (Ibn Battuta, 2015, p. 156), and everyone drunk from these bottles. This sherbet was also served in funerals (Ibn Battuta, 2015, p. 490). It was written that date, barley, grapes and similar fruits were pressed in cruses in Siberia, and their juices were consumed (Ibn Battuta, 2015, p. 328). People drunk Zamzam holy water in Mecca (Ibn Battuta, 2015, p. 135). In Maldiv Islands, people produced a kind of sherbet made of coconut milk and butter (Ibn Battuta, 2015, p. 556). In this vein, Ibn Battuta wrote: “I asked what people were drinking? He replied: ‘It is the

juice of boiled wheat.' I could not continue drinking when I felt tartness. *Duki* is a kind of liquor. Such a drink is called as boza by the locals." (Ibn Battuta, 2015, p. 314).

Kitchenware

The theme of 'kitchenware' consisted of groups of pots, plates, goblets, spoons, scoops and ladles, containers, beverage servers, bowls, table kits, table clothes, knives, food protection equipment, and cooking equipment. In this regard, it was seen that Ibn Battuta was served with golden and silver kitchenware. Golden and silver pots were mentioned in the travelogue. Similarly, plates and spoons were also made of gold, silver and copper, and the meals were served or delivered with copper ladles. The goblets were noted to be gold or glassware. Cooking equipment was composed of pots, saucepans, oven, barbecue, fireplace and martaban (big pans). Containers were found to be gold, copper, iron, silver, clay, chinaware. Beverages were served in glasses, carafes, tankards and pannikins, and earthenware pots and jars. Bowls were mentioned to be glass, china and earthen. Food was eaten on large salvers on the ground used as tables and they were mostly made of copper. Further, table clothes were also used under these salvers. Several kinds of small or big knives were also mentioned in the book. Finally, food was protected and saved in leather bottles, barrels and earthenware jars. Ibn Battuta mentioned golden or silver pots full of sherbet; golden or silver spoons; chinaware pots full of sherbet; and wooden spoons on his travels in Asia Minor, and his visit to sultan. He noted that "Those who do not use gold because of their religious beliefs use china bowls and wooden spoons." (Ibn Battuta, 2015, p. 291). In his travel to Khwarazm, in a house he was hosted, he observed that there were several arches in the house and people traditionally hung gold or silver plated bowls and pots under these arches (Ibn Battuta, 2015, p. 345). Ibn Battuta talked about golden tableware in the house of Kutlu Dumur, the governor of Khwarazm. Similarly, he was hosted in tables fully composed of golden or silver tableware in Dihli land, in India (Ibn Battuta, 2015, p. 487). He noted that beautiful pots and bowls decorated with gold were produced in Malaga, today's Spain (Ibn Battuta, 2015, p. 656). Copper salvers, pots, plates and ladles were used in the tables of Honavar sultan (Ibn Battuta, 2015, p. 539). Finally, he noted that copper tableware was a must in the dowries of young girls in Damascus (Ibn Battuta, 2015, p. 71).

Others

The theme 'others' includes groups of gastronomical professions, gardens, trees, aphrodisiac, narcotics, dried food, cannibalism, leaves, places and recipes. Ibn Battuta mentioned professions regarding cooking. For example, he mentioned that meat-smashers called *baruci* in Siberia (Ibn Battuta, 2015, p. 327), cooks, bakers, turnspits (kebab grilling), sweet makers, fruit juice and sherbet servers, toothpick holders (toothpick were made of a pepper tree specific to India) (Ibn Battuta, 2015, p. 447), fishermen (Ibn Battuta, 2015, p. 626), earthenware potters (Ibn Battuta, 2015, p. 612) and guest greeters (Ibn Battuta, 2015, p. 396). Since Ibn Battuta's travels covered a vast geography, he came across a variety of trees, orchards and gardens. These trees were sandalwood, pepper tree, aloes, tamarisks, walnuts, palm trees, date-trees, chestnut tree, banana trees, teasels, sweetgum trees, citrus trees, gale trees, valonia oaks, sandalwoods and cedar woods. These trees were mentioned to be in gardens and orchards. Ibn Battuta noted that there were eleven large scale sugar distillation shops on the banks of the Nile in a town called Menlevi (Ibn Battuta, 2015, p. 57). He mentioned bazaars where one could find greengrocers, cooks and bread-makers, and a bazaar of fruits in Najaf (in Iraq) (Ibn Battuta, 2015, p. 175). He also mentioned mills in Horasan (in Erzurum, Turkey) (Ibn Battuta, 2015, p. 372), soup kitchen and eating houses in Bikaner (Ibn Battuta, 2015, p. 543). Meanwhile, Battuta mentioned wild black people living on the banks of the Nile who ate a maid, and painted their faces with the blood of the maid (Ibn Battuta, 2015, p. 678). Finally, Ibn Battuta noted that coconut had aphrodisiac properties (Ibn Battuta, 2015, p. 255, 556).

CONCLUSION AND DISCUSSION

The primary purpose of this study was to investigate food culture in the Middle Ages on the basis of Ibn Battuta's travelogue. Travelogues shed light on the social, economic and cultural characteristics of the geographies of the past. Further, they act as the interpreters of the period in which the travelogue was written.

Specifically, this study contributes to the existing literature on gastronomy and food culture of our ancestors in that it uses the writings of a well-known traveler of the medieval ages, namely Ibn Battuta. Ibn Battuta was not merely a traveler as Barsoum (2006) observed. He also sought out knowledge and vividly narrated what he had seen and experienced. He made a well-structured account of the geography, people and their culture in a vast land. Although there are certain travelers that consider food as a primary motivation for their trip (Lopez-Guzman et al., 2018), Ibn Battuta traveled for other reasons but he provided valuable information on the food culture of the people he had visited. As such, Ibn Battuta offered a valuable source for understanding the food culture, cooking and storage methods, recipes, ingredients and the materials used for cooking. Consequently, he contributed to our understanding on social, economic and cultural facts of the era.

Findings of the study provided a total of 13 themes which were labeled as grains, flour and baked products, legumes, meat, seafood, milk and dairy products, aromatic herbs, spices and sweeteners, oily fruits and oils, fruits and vegetables, desserts, beverages, kitchenware and others. Even the list of these themes suggested a significant number of food lexicon was provided in Ibn Battuta's writings. This can be justified by Ibn Battuta's travels in a vast geography covering Africa, Asia and Asia-Pacific. Further, the findings suggest that factors such as geographical conditions, climate, economical status and religious practices have an important influence on the food culture in different regions.

It is understood that geography is the most influential factor determining the food culture in a certain area. Vegetation, livestock, cooking and storage methods are determined by the geography. For example, people prefer dry food in sunny and warm areas. Similarly, people living in coastal areas mostly consume seafood while people in hinterland use to prefer livestock such as lamb, veal, camel or buffalo meat. In short, it is seen that people consume mostly the food that they could find in their vicinity. Findings of the study reveal that some food is prohibited in certain areas because of the religious restrictions. In this regard, Battuta mentioned pork meat which was not eaten by Muslims, and rabbit meat which is prohibited in Shia branch of Islam. As such, it is important to understand religious practices of the people while cooking or serving food for the foreigners. Findings also suggest that economic status of the people determined the tools and materials used in cooking and serving food. Wealthier people, administrators and nobles used golden or silver kitchenware while serving their guests to show off their status and wealth. Similarly, they employed servants and cooks for cooking and serving while others cook for themselves. Further, the diversity of the menu and the ingredients of the recipe vary significantly on the tables of these people. Findings on the food culture of the 14th century provide a valuable resource for the researchers, academicians and gastronomy students. As such, people may have the chance to evaluate the evolution of the food culture in the course of centuries in different regions. In this vein, the results of the study may also be used by the practitioners to revive old, forgotten gastronomical values and recipes. Moreover, the information provided by this study can be used for those who want to diversify their menus and tastes. Accordingly, a connection between past and present can be made to develop recipes that can fit contemporary tastes and preferences. The results of this study should be evaluated in the light of certain limitations. The primary limitation of this study is that only the food culture in the travelogue of Ibn Battuta was examined. Therefore, future studies are needed to examine the writings of other travelers of the same

or other periods. As such, future studies have the potential to broaden our knowledge and understanding of the food culture of the past and its evolution in the course of time.

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IMPACTS OF TOURISM ACTIVITIES ON ECONOMY OF KAZAKHSTAN

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Abstract: Kazakhstan is an economically stable country in Central Asia, which recently began to pay close attention to the development of tourism industry. It is fact that, tourism is not a major component of country's economy, as evidence, tourism industry GDP in Kazakhstan is \$3.08 billion or 1.6 percent of total GDP. The combination of direct and indirect influence of the tourist-spending scheme determines the impact on the local economy. Usually not all the income received in every cycle of tourists' expenses is spent. The more the share of income spent within the region, the greater the multiplier effect. The ability to keep a travel in the region depends on the economic isolation of the area and the independence of the local economy. If the local economy is able to produce goods and services that are in demand among tourists, then the multiplier effect will be very significant. Based on the initial data and assumptions made, it is possible to calculate the magnitude of the indirect impact of tourism on the economy of the country and obtain a multiplicative effect of tourism. The multiplicative effect of tourism, calculated on this expression, will be of an evaluation nature, so it is advisable to use an expert approach when justifying a number of indicators included in the formula. The above methodological approaches to determine the multiplier effect and aggregate income from tourism are applicable to the conditions and standards of statistical reporting and information throughout the country.

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Key words: Kazakhstan tourism, economic impacts, multiplier effect, investment

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INTRODUCTION

Kazakhstan is an economically stable country in Central Asia, which recently began to pay close attention to the development of tourism industry. It is fact that, tourism is not a major component of country's economy, as evidence, tourism industry GDP in Kazakhstan is \$3.08 billion or 1.6 percent of total GDP (Travel and Tourism Competitiveness Report 2017). In this regard, we observe a rise of scientific interest in context of exploring opportunities, identifying indicators of the impact of tourism development on the economy of the country, and assessing the prospects for its development according of analyzing the multiplier effect. The combination of direct and indirect influence of the tourist-spending scheme determines the impact on the local economy. Usually not all the income received in every cycle of tourists' expenses is spent. Some part of it is postponed, and the other is spent outside the region. The more the share of income spent within the region, the greater the multiplier effect. The ability to keep a travel in the region depends on the economic isolation of the area and the independence of the local economy. If the local economy is able to produce goods and services that are in demand among tourists, then the multiplier effect will be very significant. Tourism has a significant impact on economy and social development of the region, contributing to the flow of currency, creating new jobs, improving infrastructure, etc. The successful development of local tourism is associated with a clear understanding of its economic significance for the country's economy, determined by direct and indirect influence. The direct influence of tourism, with some degree of reliability, is taken into account in the framework of the current national accounts of Kazakhstan. The indirect impact of tourism for the national economy of Kazakhstan has not yet taken into account, but the relevance of such accounting is undeniable (Nurgaliyev, 2013). The modern economic theory of the multiplicative effect acknowledges us to analyze a methodological tool for accounting tourism influence in the form of a tourist multiplier.

The economic contribution of tourism is felt in direct, indirect and induced routes (figure 1). These impacts and the structure of the tourism sector establish the sectors economic impact on a country. Direct economic impacts are created when commodities like the following are realized: accommodation and entertainment, food and beverages services, retail opportunities (Norjanah et al., 2014). Residents, visitors, businesses – all influence have direct tourism impacts through their spending or economic activities of various levels of governments near the tourism area (Goeldner et al, 2009). In contrast, indirect economic impacts from tourism industry realized by investment spending that surrounding a tourism, offering from private and governmental interests. This investment may explicitly be unrelated with tourism, but benefits for the tourist and local stakeholders all the same. Indirect economic impacts (supply chain, investment, and government collective) account for 51.7 % of the total GDP contribution from travel and tourism in 2016 (Turner, 2017). Induced impacts is representing the wider contribution of tourism through the expenditures of those who are directly or indirectly employed by the tourism sector (Lemma, 2014).

The indirect impact of tourism is much broader in its socio-economic nature; also, its cumulative impact far overtakes the direct economic and social effect. The reason for this is the effect of the multiplier, when the chain of "expenses - incomes" through tourism stimulates the development of economy and other related industries associated with it. If more tourists spend money at the place of the stay; the greater the

amount of transaction “costs – income than the higher the indirect (multiplicative) impact of tourism. In addition, the indirect income from tourism for the region came from that part of the money spent, that do not go beyond it. Estimate indirect revenues from tourism, allows the practice for controlling the multiplier to compare the contribution of industries with the development of the region's economy.

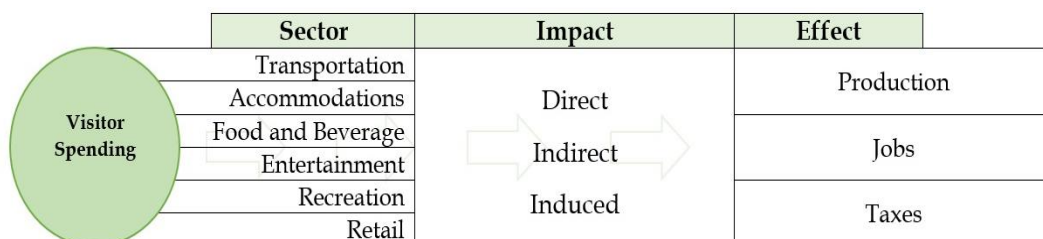


Figure 1. Tourism economic impact

THE MULTIPLICATIVE EFFECT IN TOURISM

There are many methods for calculating the multiplicative effect in tourism. They are most widely used in the United States and European Union countries, and often used to assess the overall economic effect of tourism for a

specific territory and to justify strategic decisions in the field of tourism and tourism infrastructure (Gulyaev, 2003).

Currently, there are a number of models and methods for calculating a generalized multiplier effect for various sectors of the economy, proposed in the works of foreign scientists like Keynes J.M. («The general theory and after part 1 preparation», etc.), Samuelson P. («Economics», etc.), Morishima M. («The economic theory of modern society»), Pagoso C.M. («Principles of economics») and others.

Scientists recognize the fact that the impact of the multiplier effect of tourism, in comparison with the effect of other activities, is the most significant, since it is the initial catalyst for the development of many industries (Rutter, 2001; Samuelson, 1989).

One of the most traditional areas of economic research in tourism is the assessment of its contribution to the development of the economy of individual countries and tourist destinations. These issues are dealt with the scientific works of Frechting (1999), Jones (2007), Spurr and other scientists. Over the past forty years, many studies have been carried out related to multiplicative effects in tourism using input-output models (IOM). These are the works of Archer, 1977; Fletcher, 1996 and Crompton, 2001.

In recent years, the paradigm of studying the economic impact of tourism as a result of using general equilibrium models instead of IOM models has undergone a change. General equilibrium computation models can be adapted to simulate alternative conditions, such as flexible or fixed prices, alternative exchange rate changes, differences in the degree of factor mobility, and various types of competition. The questions of general equilibrium modeling for the estimation of economic consequences were considered in the works of Adams and Parmenter, 1995; Dwyer, 2003. The economic consequences of financial crises in the sphere of tourism were studied in the works of Blake, 2003; Pambudi, 2009. The work of Blake and Arbache, 2008; Coxhead, 2008 and others are devoted to the impact of tourism on income distribution and poverty reduction. Recently, this issue involved concentrated attention in the Commonwealth of Independent States. The scientific researches in the field of tourism multiplier are reflected in scientific works of Kvartalnov, 2005; Gulyaev, 2003; Morozov, 2014; Papiryan, 2000. The multiplicative effect of tourism manifested by chain income,

received from one tourist, exceeds the amount of money spent by a consumer at the place of the stay for the purchase of services and goods.

Tourism has an impact for the economy in almost all aspects of the fundamental definition of this area of society. In economic terms, tourism is considered:

- 1) A particular set of social relations in the sphere of production, exchange and distribution of products;
- 2) A part of the national economy, including particular types of manufacturing industry and economic activity;
- 3) Economic science that studies tourism as a branch of the economy of the country or region (tourism economy);
- 4) Social science, studying behavior in the spheres of production of the tourist product, its consumption, distribution and exchange. Economists analyze the processes occurring in these spheres, predict their consequences for individuals, organizations and society as a whole;
- 5) Modern economic theory that considers the behavior of people as economic entities at all levels of the tourist economic system in the processes of production, distribution, exchange and consumption of tourist services in order to meet human needs with limited resources of the family, firm and society as a whole.

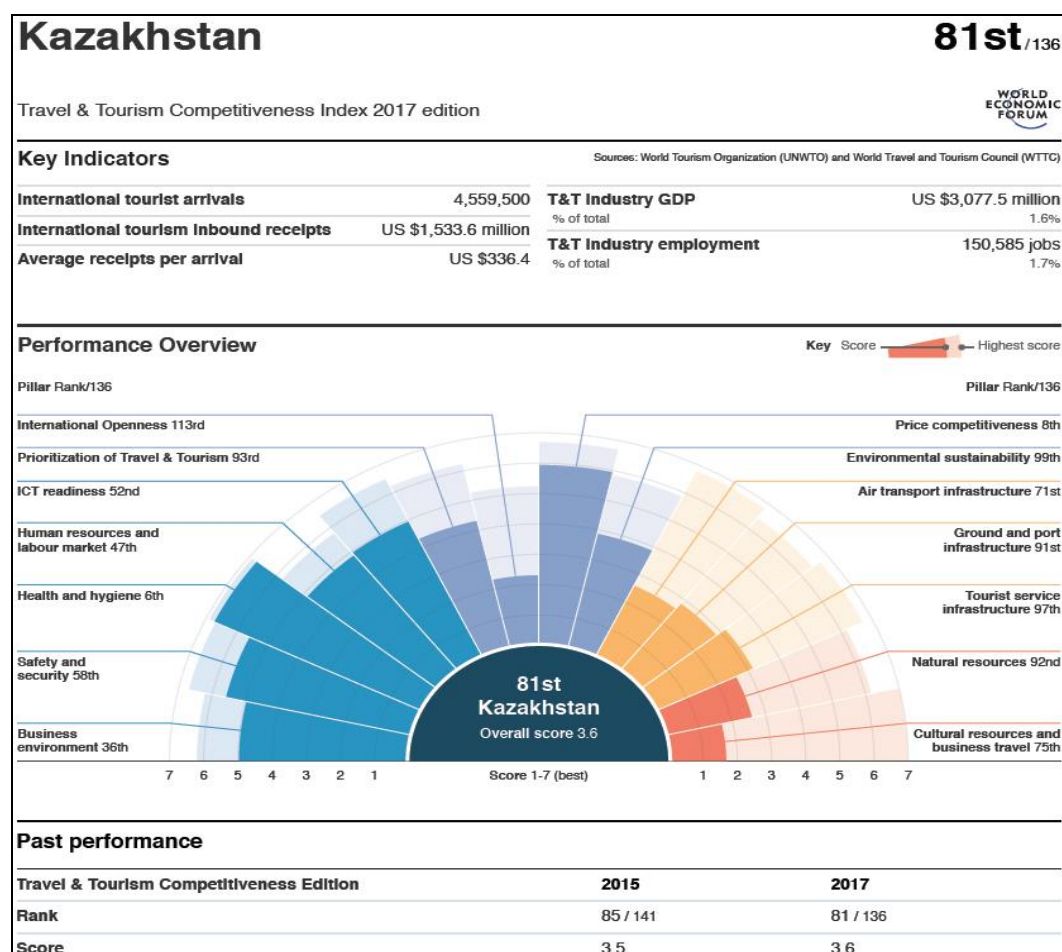


Figure 2. Tourism and travel competitiveness index 2017 (Source: Schwab et al., 2017)

The economic space of the hospitality and tourism sphere covers most of the world economy. Many developed countries regard tourism and services as a priority for their economic development, because this sector is very attractive in terms of investment. Kazakhstan occupies 81st place in the rating of tourist attraction assigning to the data of the World Economic Forum (figure 2). Economic indicators of the development of the tourism industry in Kazakhstan demonstrate an annual growth for the last five years; it shows a leisurely but steady pace. Individual indicators of economic activity are characterized by high results, such as health and hygiene, price competitiveness.

To assess the impact of tourists' expenditures on income, employment and imports, scientists expanded altered models for calculating the multiplier effect. One such models for affecting the multiplier effect of tourism was created by Brian H. Archer and Christine B. Owen (Archer and Owen, 1971), which formula looks like this:

$$\sum_{j=1}^N \sum_{i=1}^n Q_j K_{ij} V_i \frac{1}{1 - MPC \sum_{i=1}^n X_i Z_i V_i}$$

where: first part formula is direct and indirect income generated

j = each category of tourists, J =1 to N;

i = each type of business establishment, i=1 to n;

Q_j = the proportion of total tourist expenditure spent by the jth type of tourist;

K_{ji} = the proportion of expenditure by the jth type of tourist in the ith category of business;

V_i = direct and indirect income generated by unit of expenditure by the ith type of business;

Second part includes the additional income generated by re-spending of factor earnings by resident population;

X_i = the proportion of total consumer expenditure by the residents of the area in the ith type of business;

Z_i = the proportion of X_i which take place within the area;

MPC = the marginal propensity to consume.

RESULTS

We have attempted to calculate the multiplicative effect of tourism on a national scale, based on the official statistical information of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan. Based on the initial data and accepted assumptions, it is possible to calculate the magnitude of the indirect impact of tourism on the economy of the country - the multiplicative effect of tourism (Table 1).

Table 1. Expenses of entry visitors by object of expenditure in the territories of Kazakhstan

(Data source: Ministry of national economy of the Republic of Kazakhstan,
Committee on Statistics January 1, 2018)

Amount of money spent, Thsd KZT					
Accommodations	Transport services	Services of travel agencies and operators	Food and beverage	Recreational, cultural and sport events	Other expenses
141 204,1	49 971,2	2 355,9	157 361,2	10 781,9	2 014,7

Taking into account the dynamics of the turnover of tourist costs within the tourist multiplier, the calculation of the indirect influence of tourism in a generalized form will look like this (Morozov, 2014):

$$K = P + P * MPC + P * MPC_2 + P * MPC_3 + \dots + P * MPC_n \quad (1)$$

$$T = \frac{P}{(1-MPC)} \quad (2)$$

$$k = \frac{1}{(1-MPC)} = \frac{1}{MPA} \quad (3)$$

K – circulation coefficient of multiplier;

MPC – marginal propensity to consume;

MPA – marginal propensity to accumulate;

P = const;

T – producing of tourist products (services).

k – tourism multiplier.

The use of such models of calculation assumes the existence of equilibrium demand-consumption in the system of economic turnover of the country and the invariable parameter of investments for 2013-2016 (Table 2, 3). Tourism investment in 2016 was KZT 575.4 bn (in USD 1.7 bn), as a percentage 5.4% of total investment. According to the forecast, it will be raised by 4.0% in 2017 (figure 3).

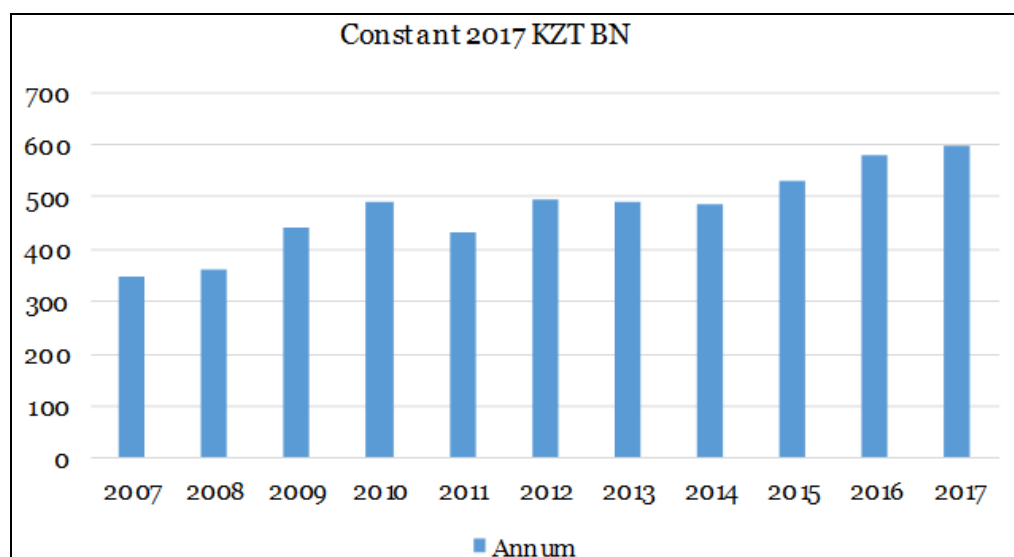


Figure 3. Capital investment in tourism industry (Source: Turner, 2017)

As an investments in the economy of Kazakhstan we are considering the aggregate expenditures of tourists and excursionists ($P = 330.7$ USD (exchange rate as of 04/06/2018)). In the given accounting period (2018), tourists' expenses assumed unchanged, as was the marginal propensity to consume.

Table 2. The level of nominal income and expenses in Kazakhstan in 2013 - 2017 years
(Data source: Ministry of national economy of the Republic of Kazakhstan, Committee on Statistics, 2018)

Years	Income level*, KZT	Expense level, KZT
2013	550 075	386 655
2014	601 541	411 260
2015	647 091	426 912
2016	719 501	462 002
2017	746 477	555 831

* Data taking into account with the adjustment of monetary indicators (social transfers, material assistance from relatives, alimony and other incomes deducted from the total indicator)

Table 3. Marginal propensity to consume (MPC) in 2013 – 2017 years

Years	Marginal propensity to consume (MPC), %
2013	70
2014	68
2015	65
2016	64
2017	74

The average marginal propensity to consume in 2013 was 70%, in 2014 - 68%, in 2015 - 65%, and in 2016 - 64%. It should be noted that the Kazakh government in 2015 agreed to a policy of inflation targeting, which may contributed to this calculation. Table 3 shows the tendency to consumption decreases last 4 years, however, in 2017, the indicators of the marginal propensity to consume of the population shows a recovery for the last five years, this indicator is 74 percent. Probably, this growth can be attributed to the improvement of the social and economic situation in the country; the rise of oil prices for the last accounting year also plays a role, political reforms were carried out, etc. Using the calculation models (Morozov, 2014), we obtained the following indicators:

$$T = \frac{P}{(1-MPC)} = \frac{330,7}{(1-0,74)} = 1271,92 \text{ USD} \quad (2017 \text{ year})$$

Direct revenues from producing of tourist products and services for 2013 in our country amounted to 1121 USD, and so it can be determined for each year (2014 year – 1051 USD, 2015 year – 961 USD, 2016 year – 934 USD, 2017 – 1272 USD).

The formula for calculating geometric parameters for identifying circulation coefficient of multiplier (Kvartalnov, 2005) and the amount of income growth at each turnover in 2017 year:

$$K = 330,7 + 330,7 \times 0,74 + 330,7 \times 0,74^2 + 330,7 \times 0,74^3 + 330,7 \times 0,74^4 + 330,7 \times 0,74^5 + \dots + 330,7 \times 0,74^{15} = 330,7 + 244,7 + 181,1 + 134 + 99,2 + \dots + 0,75 \approx 1271,92$$

Define the number of the coefficient of the tourist multiplier:

$$k = \frac{1}{(1-MPC)} = \frac{1}{MPA} = \frac{1}{(1-0,74)} = 3,84$$

In our case study, with a multiplication factor of $K = 3.84$, the money spending of each tourist and excursion in the rate of 330,7 USD generate an additional revenue in the rate of 1271,9 USD in the Kazakhstan's economy, making more than 17 turnover transactions. According to the World Tourism and Travel Council, the share of the

tourism industry in the country's total GDP is 1.6 percent with a total of \$ 3,077 million USD, which recruits 150,585 people, who are able to work of country's population. The total influence of multiplicative effect from tourism for the economy of Kazakhstan is about 900 million USD, and an average 2 million USD from them, is returned directly to tourism sphere from the country's budget.

CONCLUSION

The combination of direct and indirect influence of the tourist-spending scheme determines the impact on the local economy. Usually not all the income received in every cycle of tourists' expenses is spent. Some part of it is postponed, and the other is spent outside the region. The more the share of income spent within the region, the greater the multiplier effect. The ability to keep a travel in the region depends on the economic isolation of the area and the independence of the local economy. If the local economy is able to produce goods and services that are in demand among tourists, then the multiplier effect will be very significant. The more goods imported from other regions, the less the multiplier effect. The Kazakhstan has plenty to offer travelers, from tours designed to highlight the natural beauty of its mountains, lakes and deserts to more offbeat itineraries, including space tourism at the Baikonur cosmodrome and a visit to a Soviet-era gulag prison camp. Despite all the options, the tourism industry in Kazakhstan is hugely under-developed. Limitations associated with an unsustainable supply may become a limiting factor in the number of offers and the quality of goods and services, which is actively affected by the increase in tourism development costs. As we know, if excessive demand is not satisfied by local production, additional tourist spending creates inflation and missing products and services are imported from other places. Besides, the size of the multiplier is reduced.

In addition to the multiplier effect, there are accompanying economic phenomena. The growing costs of tourists cause the need for additional labor, which is expressed by the employment rate. As the tourist region expands, its infrastructure is improved, new buildings and structures are being built. Therefore, you can calculate the income ratio. Let us consider these coefficients in more detail. A detailed analysis of the multipliers is carried out to analyze the effectiveness of public or private sector investments in tourism projects at national and regional levels, to check the relative magnitudes of the impact of different types of tourism and the impact of tourism in comparison with other sectors of the economy. Based on the initial data and assumptions made, it is possible to calculate the magnitude of the indirect impact of tourism on the economy of the country and obtain a multiplicative effect of tourism. The multiplicative effect of tourism, calculated on this expression, will be of an evaluation nature, so it is advisable to use an expert approach when justifying a number of indicators included in the formula. The above methodological approaches to determine the multiplier effect and aggregate income from tourism are applicable to the conditions and standards of statistical reporting and information throughout the country.

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TEORETICAL APPROACH CONCERNING THE DEVELOPMENT OF SUSTAINABLE TOURISM AS TOURIST DESTINATION IN KOSOVO

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Abstract: Tourism is an economic activity or a set of co-ordinated activities aimed at meeting the needs of individuals related to leisure and movement of people. Tourism has a great potential and plays an important role in meeting the main objectives related to, employment, sustainable economic and social development. Kosovo's tourism economy is dominated by small and medium-sized economic operators, while large economic operators are still in the process of privatization, and therefore it is required to find a favorable sectorial strategy that in the long term will ensure the sustainability of tour operators, offering a diversified tourist product. The findings of this study give special importance to institutional challenges that require identification of responsibilities and coordination of all actors involved in the tourism planning and development process. The surveyed tourism region offers critical reviews on how to assist tourism planners to improve their methods in community-based tourism planning and development, while pointing to directions for future research into tourist regions. The main focus of the paper is the treatment of tourism development theories in Kosovo and the analysis of the practices of other countries to increase the economic development of the country, the right information about the natural resources of the country in order to be a local tourist attraction not only for tourists but also for foreigners. The methodology used in the work has focused on the theoretical and practical aspect, the comparative aspect, and the logical link between the paragraphs. This paper is intended to provide theoretical and practical knowledge of the tourism in Kosovo of natural resources, regulations and benefits that tourists will achieve during their visit to Kosovo. Knowledge offered for theoretical and practical lexus and all other scientific research through reading this work to gain knowledge and to pass those knowledge to use and practice during their professional exercise.

Key words: Tourism, strategy, planning, development, resources, etc

* * * * *

INTRODUCTION

This paper will enable the recognition of the appropriate strategy, based on the analysis made, the development and implementation of the strategies in practice,

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compared to the strategies encountered in scientific literature, tourism as well as good practices implemented by the developers of tourism in countries with consolidated tourism economies. Through this study will be determined the role and importance of sustainable tourism model for tour operators operating with their tourism activities in a competitive environment that can face the opportunities and loopholes that the surrounding environment brings to you. As the paper will define the best possible way to achieve goals through defined objectives and detailed plans, tour operators will find the way through which they can achieve their business goals, not just the introduction and survival in the market, but the maximum profit and growth of enterprises by increasing the market share, meeting the tourist requirements.

Sustainable Tourism

At a time when the global economy is in a very varied period of time, the efforts for orientation for sustainable economic development have the advantage of providing new solutions for decision-makers who, encourage debate on sustainable economic development. Economic development provides citizens with a development that can meet the needs of the present, but without hurting the capacity to meet the needs for future generations. This new economic thought, its priority is the citizen who places it in the spotlight for political decision-makers. The concept of sustainable development, which is being built today, is very different from previous economic concepts, especially the economy after the economic crisis of the '30s of the last century, because this concept of sustainable development offers new ideas about how to organize the foundations of a stable economy in these critical moments, and when there are clear signs that the global economy can not move toward industrial growth without ending in the disaster anyway. Sustainable development is defined in different ways by different thinkers. The most recognized and accepted definition: "Development that meets the needs of the present without harming the ability of future generations to meet their needs. The economy is, first and foremost, a subsystem of human society, which is itself, in the second place, a subsystem of the whole life of life on Earth. And, there is no subsystem that can be expanded beyond the overall system capacity, part of which is" (Porritt, 2004).

The principles of the new economies include:

Systematic empowerment of people as a basis for people focused on development. This is based on a realistic picture of human nature, recognizing that people are selfish, cooperative, and competitive. Systematic conservation of resources and environment, as a basis for sustainable development for the environment. Evolution, from a "wealth of nations" model of economic life, into a model world and from the international economy into an ecologically sustainable economic system. Restoration of political and ethical factors for a central place in economic life and respect for quality values, not just quantitative ones, respect for female values, not just male ones. These principles are important for every segment of economic life, thought in every level, ranging from personal and family. New economic policies for sustainable development will focus more directly on people, as active citizens and recycle a portion of public income directly to citizens (Bajrami, 2015: 7).

Goals of Sustainability of Development

WCED (1987: 6) says sustainability has been achieved through sustainable development strategies, is a concept that got real sense through the Brundtland Report. The concept of sustainable development arises from the belief that economic growth, though important to the community, has limitations. But, according to Brundtland's report, the concept of sustainable development does not imply absolute limitations, but constraints imposed by the current state of technology and social organization for environmental resources and the ability of the biosphere to absorb the effects of human

activities. According to the WTO, in this way, resources remain capable of supporting future generations as well as current generations (WTO, 1993). Sustainable tourism includes social responsibility, a strong description of nature and the integration of local people in any operation or tourism development (Bakiu, 2011: 12).

As demonstrated by UNEP and UNWTO (2011), investments in green and sustainable tourism are a means of creating jobs and reducing poverty, while simultaneously improving environmental performance (Chapter on Tourism in the Green Economy Report, jointly prepared by UNEP and UNWTO (1987) Sustainability of tourism development is based on natural goods, legal-economic infrastructure constructed by the state and implemented in the proper manner by competent institutions, it is also important to build a development strategy to absorb as much investment as possible to invest in the development of tourism. Through this development of natural goods by joining with a modern infrastructure, tourism is also of interest to foreign tourists, as well as the development of tourism is more sustainable.

Development Resource Development Centers

The resources available to a country for tourism development, or what are called different tourism potential of a country, are the determining factors for the "production" of the tourism products and services community or those that can name some places or areas as tourist destinations.

These factors are:

- ✓ Natural resources;
- ✓ Historical, artistic and cultural heritage,
- ✓ Human resources,
- ✓ Resources in Capital and Infrastructure.

Depending on the use and good management of a country's resources, the positioning of the global tourism market can be explained in line with the best models of their development and management (Bakiu, 2011: 19).

RESEARCH METHOD

The methodology of this paper is based on the study of literature and empirical study. Literature studies utilize secondary data such as books, scientific journals, official publications, websites. While the empirical study consists of treating Kosovo as a tourist destination, the model of its development should aim at sustainability. In the case study analysis, a combination of qualitative and quantitative methods of study was done. Primary data are based on qualitative research and quantitative research. So in this study the use of different techniques consists in coordinating findings from the literature review. Research methodology has been developed based on the three main actors of a tourist destination. Timur & Getz (2008) concluded that there is no universal definition for the actors. However, the stakeholder groups defined by Bramwell and Lane (2012) support "rules, inter-sectoral interactions between the parties based on at least some rules and agreed rates in order to address a common issue or achieve a political or specific purpose". According to Maxwell (2005), the use of existing literature helps to better understand what the researcher is considering and makes him more aware of particular issues and new phenomena.

KOSOVO AND THE FUNDAMENTAL RESOURCES OF THE SUSTAINABLE TOURISM STRATEGY DEVELOPMENT

Kosovo has favorable geographic positions and possesses important underground, surplus, human resources as well as appropriate climate, flora and fauna. The geographical position represents its natural pertinence. Kosovo is a Balkan,

Mediterranean and European country. It is a transitional region, through which geostrategic routes from Western and Northern Europe go to the Middle East and beyond, as well as from the Mediterranean to the eastern European countries. Compared to the relatively small area of Kosovo natural resources as "latent national capital" that are not sufficiently traced represent a delightful potential that with a multidisciplinary approach in the framework of regional and broader integrations can create new development perspectives. Kosovo's tourist values account for a relatively large number of motifs both from heterogeneity and from background. Because of the attractive motives, Kosovo faces many countries in the former Yugoslavia. The concentration of numerous tourist and natural and anthropogenic motives has stemmed from natural specifications, and the historical social conditions in the past but also in the future. The rich tourist motives and their appropriate (linear) and grouping (adequately) position show that the territory of Kosovo represents specific tourist motives in the former Yugoslavia, consisting of Kosovo's and Dukagjini's lowlands and the motives of Sharri, (Albanian Alps) and the Kopaunik Mountains. In such a large number of anthropogenic motifs, cultural and historical motives, old settlements and ethnographic-ethnological motives are concentrated with their specifics. Kosovo as well as developing countries in the first place must maintain the natural goods at the same time to develop based on the practices of the developed countries. As a political one should have the tourism not only to be sustainable but also competitive in the countries in region and european.

Kosovo's climate

Kosovo's climate is related to its geographical position (Figure 1). Its extension to the medium geographic width, the climate of Kosovo depends on the amount of heat coming from the Sun, the proximity of the Adriatic Sea, the Vardar valley, the opening towards the north, the altitude over 400 m, the extension of the high mountains to the west, south the north and the lower and middle mountains in the east and southeast.



Figure 1. Sketch of Kosovo (Source: /pristina-flights/sherrelirell.1)

Such geographic circumstances influence Kosovo's climate to have distinct features in the western and eastern parts of the area, So the climatic features vary from west to east and north to south. The sunset affects the geographical latitude (sunset angle), the relief (height, exposure), the sunset, the winds. In our geographical latitudes (42-43 degrees), the annual sunset would have to last 4450-4460 hours per year or 12.2 hours per day 9 on average (www.ammk-rks, 2018). Indeed the sunrise in Kosovo lasts 2079 hours or 5.7 hours a day, which is 47% of the solar potential. The smallest sunset is in mountainous areas and close to them and during the winter months. The sunset in December is averaged 54 hours in total or 1.7 hours a day, whereas during the summer months (over 250 hours per month or 8.3 hours per day (www.ammk-rks, 2018) Covering the cloudy sky in Kosovo ranges between 52-58% and is somewhat smaller in the plain of Kosovo than in the Dukagjini Plain. Cloud coverings vary by month. The highest is in the winter months, towards the end of autumn and the beginning of spring, when there is more rainfall and fog. More dead days lie near the high mountains (Albanian Alps and Sharr), and less on the Kosovo plain, Anamorava and Drenica. Air temperature - The temperature fluctuates during the day and the months. The temperature is lower in January (-0.9° C), higher in July and August (20.9° C). The average temperature in Kosovo in the winter season is about 1° C, in autumn spring about 10.8° C, in the summer 20.8° C. Kosovo's annual temperature ranges from 9° C to Podujevo up to 12° C in Prizren, Dukagjin 11° C, Kosovo plains 10° C, submarine areas 7° C, mountain ranges between 0° C (Luboten) and 2° C in Kopaonik. So the worst is Dukagjini that the plain of Kosovo, Drenica and Llapi.

The positive temperature values in Kosovo move between +37 and 39° C, while the extreme negative values are between -22.5° C and -32.5° C (*Ruga Luan Haradinaj, 2018*) The worst negative values in Kosovo are rarer, otherwise they bring great damage to agriculture, especially the vines and trees. Days with frost average last about 90 days and are more frequent in the plains of Kosovo than in Dukagjini. The period under zero temperature lasts from the first decade of October until the first decade of April. In Kosovo, the temperature is between 25° C and 30° C, while the number of days with tropical temperatures (over 30°C) is between 25-30 days, more in Dukagjini than in Kosovo. Tropical temperatures most often appear in July and August, but they occur in June and May (www. ammk-rks). What is more important is that in Kosovo the climate is very favorable to tourists because the seasons are adapted in climatic time according to official dates and in rare cases the climate happens to be different, such as the winter season every year it is snowy season, and summer is summer season, and not once in the summer season do not snow.

The importance of sector in the development of sustainable

The private and public sector have a special role to play in the development of tourist destinations especially in countries where tourism is at an early stage of development. The public sector should be in the service of many issues such as regulation of development policies, definition of rules and regulations on tourism, development of key infrastructures, promotion of tourism and development of marketing in order to promote tourism in tourist areas. On the other hand, the public sector function within the tourism industry is to increase tourism pleasure and to increase the tourist offer by increasing economic and business success, protecting existing assets and maintaining the integration of communities in tourist activities (Gunn, 1994). The public sector should also have broad involvement in the planning and implementation of established laws that have to do with tourist destinations and management of infrastructure construction and other prerequisites for the development of sustainable tourism. This public sector should

also provide conditions and space through instruments such as infrastructure and superstructure, security, and various social values as well as access to these elements. Also, the public sector should provide activities that have to do with culture and history and offer products that are designed and created for public use. As examples of these products that have created the public sector and are in the forefront of this sector these spaces are: national parks, various state parks with recreational areas and monuments and sports grounds (Gunn, 1994). From this, it is noted that the public sector precedes the new tourist developments, while the private sector exploits this space and offer by investing in the tourism destination of the tourist destination (Gashi, 1986). The public sector for the development of tourism sustainability has an obligation to draft modern laws to implement them well in practice to build a juncture of development strategies and to support them finally to create a spin-off coordination in the private sector in order for the development program to implement more easier and better as well as professionally based on special specializations of the private sector.

Tourism represents a socio-economic phenomenon spread among many factors and social entities as in many parts of the world a part of the social and economic development policy where the state takes an active part in promoting this as a special economic and social activity. In the spatial relationships where people live, work and travel, as well as those that result from traveling, the socioeconomic effects are to be sought, the values that come from the participants in the tourist traffic and from all the spatial processes that cause the touristic movements. From the beginning of the development of tourism so far the tourist circulations in the world are massively massive, so tourism as a social and economic phenomenon has undergone structural and essential changes. Touristic flows are an inseparable form of tourism phenomenon which is subject to scientific and operational tourism research. The world's tourist phenomenon is characterized by high degree of massiveness, so the economic effects caused by it are found in various scientific or practical research environments. Recognition of the tourist turnover is a prerequisite for the formation of the right notion of the tourist phenomenon which results in social and economic effects.

Table 1. Number of tourists and nights in Kosovo for the period 2010-2015

Source: Kosovo Agency of Statistics, 2016 (<http://ask.rks-gov.net/>)

Year	Number of tourists			Stay nights		
	Domestic	Foreign	Total	Domestic	Foreign	Total
2010	44662	34382	79044	45123	76394	121517
2011	42044	30349	72393	44757	65584	110341
2012	49973	48790	98763	52008	90968	142976
2013	45380	50074	95454	54867	83883	138750
2014	46477	61313	107790	55274	102066	157340
2015	60200	79238	139438	81372	120669	202041

The table show that the number of tourists who visited Kosovo steadily increased from 2010 to 2015 and during this period almost doubled the number of tourists. On the other hand, the number of local tourists is almost identical with 2010 in 2014, and by 2015 this number is significantly increased. The situation is different with foreign tourists due to the increase in their number is going higher rates, so from about 35 thousand foreign guests in 2010, this number reaches to nearly 80 thousand. As for staying nights, and here the situation is similar because in 2010 the interior guests realized over 45

thousand nights, and already in 2015 this number is over 81 thousand stays realized overnight. Foreign tourists generated over 76,000 nights in 2010, while 120,000 nights were spent in 2015. Thus, according to the above data, as the most successful year for tourism in Kosovo in terms of number of tourists realized during the night stays in 2015.

The most visited region of Kosovo by the number of tourists realized overnight stands is the capital Pristina, where in 2015 there were over 89 thousand tourists realized 130 thousand guesthouses, which represents about 64% of the total number of tourists and over 64% of tourists total realized at night stays at the state level. The second region according to the number of tourists in Peja with about 22 thousand tourists who created almost 34 thousand nights. Therefore, both regions account for 89% of total tourists and 81% of the population in Kosovo. The negative trend in the research period shows only Ferizaj, because the number of tourists from around 10 thousand in 2010 decreased to the thousand in 2014, and again increased to 6 thousand in 2015.

Table 2. Number of tourists and night in Kosovo
for the period 2010-2015 by statistical regions (Source: Kosovo Statistics Agency, 2016)

Statistical region	2010		2011		2012		2013		2014		2015	
	Tourists	Nights	Tourists	Nights	Tourists	Nights	Tourists	Nights	Tourists	Nights	Tourists	Nights
Gjakova	2031	2324	1640	2030	1597	2434	1517	2072	2062	3736	2269	5224
Gjilan	1976	2400	2251	3101	1937	2731	1718	2364	1552	2081	1635	2142
Mitrovica	2894	3289	2646	2890	2875	3088	2915	3147	2631	2689	2247	2434
Peja	8337	9677	6633	7170	7593	11184	6630	9597	11534	18751	21707	33857
Prizren	4663	9210	5434	6946	6212	7962	8109	10360	8615	11144	16316	21396
Prishtina	49172	83694	46636	80620	68537	102846	68687	102323	77167	114489	89050	130269
Ferizaj	9972	10923	7153	7584	10012	12731	5878	8887	4229	4450	6214	6719
Total	79045	121517	72393	110341	98763	142976	95454	138750	107790	157340	139438	202041

CONCLUSION

- The central and local level policymaking sector has done little to develop sustainable tourism, has been more focused on economic development strategies, are involved in economic development strategies, and 1 institution is by developing tourism development strategies.

- None of the public tourism development agencies have regulatory plans for tourist areas; 4 institutions have allocated budget for tourism, while 6 do not share the financial budget for tourism development.

- For marketing strategy for tourism development 5 institutions think that this strategy serves the promotion of tourist potentials, the development of cross-border tourism. 3 institutions have stated that they have projects for the development of this type of tourism, while 7 have no projects for the development of international tourism.

- The private sector due to inadequate support from the public sector and its lack of involvement in drafting strategic documents, despite the investments made, is not highly oriented to tourism development sustainability.

- Regarding accommodation capacities, based on the tourism resources of the region, it is still to be desired. The importance of marketing for the development of tourist

businesses has not yet been properly understood, many tourist businesses do not use the online booking system. Always informing the local community of important tourism projects should be timely and objective information of the competent institutions.

- The local community should be an integral part of important decision-making processes for sustainable tourism development.

- The local community through cooperation with the public and private sector should contribute to the development of sustainable tourism.

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FLEXICURITY AND OBSTACLES IN FRONT: A STUDY FOR THE TOURISM SECTOR IN TURKEY

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Abstract: The concept of flexicurity, which is a combination of flexibility and security words, involves the application of flexible working conditions providing security. There are various obstacles in the tourism sector of Turkey arising from the structural characteristics of the sector towards the applicability of the concept of flexicurity. In the study, the tourism sector was examined in terms of employment structure, working hours, wages, social protection, and representativeness, and evaluations were made on the dimensions of flexicurity. The statistics used in the study are compiled from TUIK (TURKSTAT), Eurostat and the Ministry of Labor and Social Security and evaluated as accommodation and catering sector data. This secondary analysis of existing data involves obtaining datasets from studies that have already been completed in national sources and the results in this study showed that the concept of flexicurity in the tourism sector can be maintained as unsecured due to the structure of the industry.

Keywords: Security, flexibility, tourism, working conditions

INTRODUCTION

Flexibility, which is a concept that stands out as the ability to adapt to changes and differences (Tatlıoğlu, 2012, p. 69), is now based on new phenomena in workers and employers relations with the influence of globalization. And one of these formations is the concept of flexicurity. Flexicurity is a concept created by combining the concepts of flexibility and security. It was first used in the "Flexicurity and Security Act" admitted in the Netherlands in 1999, and initially adopted in the Scandinavian countries as one of the basic concepts of the employment strategy (Kuzgun, 2012, p. 36). In the 2003 European Employment Guidelines, "providing the right balance between flexibility and security that will help support the competitiveness of firms, increase quality and productivity at work and facilitate the adaptation of firms and workers to economic change" target was emphasized (Council of the European Union, Council Decision of 22 July 2003 on guidelines for the employment policies of the Member States, Official Journal of the European Union, 2003). With the concept of flexicurity, it is primarily aimed at providing consensus between employers seeking flexibility and deregulation in the labor market and employees who want to protect their rights and work under security (Çakır, 2009, p. 80).

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Besides the effects of the tourism sector, which creates employment opportunities for more than 260 million people worldwide and employs 2.210.000 people in Turkey (Topçubaşı, 2018), in the economy on the financial dimension, one of the most important effects that it creates is the employment effect due to labor-intensive production (T.R. Prime Ministry Investment Support and Promotion Agency, 2010, p. 3). The tourism sector has structural features such as the seasonal characteristics of employment, unfamiliarity with unionization, the further abundance of the need for untrained and non-qualified workforce in job opportunities, being the average age of the employed population young, and informality. The tourism sector in Turkey can be seen in a flexible but unsecured framework by its structure. Therefore, in this sector, which has an important effect on employment, the existence of the concept of flexicurity is open to debate.

ELEMENTS and DIMENSIONS of FLEXICURITY

Elements of Flexicurity

Flexicurity has three elements in it. These are synchronisation, negotiation between the parties, and weak or disadvantaged groups within or outside the labor market. Synchronization involves performing practices on flexibility while at the same time ensuring security. According to this element, it is necessary for the employee working with one of the flexible working patterns that the arrangements for social security and job and employment security should have also been made. Negotiations between parties require compromise of the parties as the result of the evaluation of flexibility and security demands expectations from both the worker and the employer's sides. Flexicurity also serves as a protection for weak and disadvantaged groups in the labor market. The fact that flexible working is seen mostly in disadvantaged groups such as women and young people also causes income and job security to be for these groups (Çakır, 2009, p. 81-82).

Dimensions of Flexicurity

The concept of flexicurity has different dimensions in terms of security and flexibility.

Table 1. Dimensions of Flexicurity (Data source: *Çakır, 2009, 82; **Sağlanmak, 2010, 51)

Dimensions of Flexibility*	Dimensions of Security**
External Numerical Flexibility	Labor Market Security
Internal Numerical Flexibility	Employment Security
Functional Flexibility	Job Security
Wage Flexibility	Occupational Safety Security
	Income Security
	Representation Security

The dimensions of flexibility are briefly explained as follows (Çakır, 2009, p. 82);

External Numerical Flexibility: It expresses the flexibility to adjust the number of employees.

Internal Numerical Flexibility: It defines flexibility of working times.

Functional Flexibility: The flexibility to work in more than one job.

Wage Flexibility: The flexibility of determining the wage according to performance and economic conditions.

The dimensions of security are explained as follows (Atatanır, 2012, p. 7-9);

Labor Market Security: Emphasis is placed on the level of being able to internalize a system that concentrates on active labor market policies and education in order to ensure that all those seeking to be employed have access to job opportunities.

Employment Security: Whether at the same or different workplaces, the emphasis is on securing the possibility of being employed rather than the job in ensuring the employment continuity.

Job Security: It appears as normative regulations that take care of the right to work by protecting employees who provide their livelihood with their efforts against unfair terminations, and that aim to protect employees by limiting the termination process of the employer in case of termination of employment contracts for an unfair reason.

Occupational Safety Security: It is the total of systematic works that are carried out in order to ensure the security of the production/service process. While some flexible work patterns permit more free time for workers, the lengthiness of working time leads to excessive fatigue, distraction and lack of motivation in workers, so this can lead to a number of hazards in terms of the worker's health and safety.

Income Security: It can be expressed as the continuity of income suitable and consistent with the anticipated requirements, expectations and demands of the individual. Income is the most basic security for the working individual and for the survival of those he/she is obliged to look after. In this sense, it is essential that income is both sufficient and continuous.

Representation Security: Within the framework of practices such as union rights and collective bargaining, it expresses the right and need of the employee to be listened to.

METHODOLOGY

The purpose of this study was to unveil the applicability of the concept of flexicurity in the tourism industry in Turkey. This was examined in terms of employment structure, working hours, wages, social protection, representativeness and evaluations which were made on the dimensions of flexicurity. Current national and international statistical datasets were used as secondary data to show the structure of the tourism industry. Evaluations and comments were made according to the datasets.

STRUCTURAL PROPERTIES OF TOURISM IN TURKEY AND RELATIONSHIP WITH FLEXICURITY

Following the information on the concept of flexicurity, the obstacles to the concept of flexicurity due to the structural characteristics of the tourism sector in Turkey are addressed in this section. The tourism sector will be considered in five different titles: employment structure, working times, wages, social protection, and representativeness. Following the situation analysis in each title, the existing obstacles to flexicurity are interpreted.

Employment Structure of Tourism Sector in Turkey

Enterprises in the tourism sector are qualified enterprises. For this reason, tourism is a sector that is obliged to employ with the establishment of qualified workforce. The most important elements of the quality in tourism enterprises, where the service standard is required to be kept high, are the qualification and performance of the qualified employees. However, employment in tourism enterprises is seasonal. Due to this feature, employment can be unqualified especially in hospitality enterprises operated for holiday tourism. In addition to its seasonality feature, in a large part of the enterprises, cheap labor procurement and thus unqualified personnel recruitment are observed. Employment is either met with local resources or with trainees from educational institutions at all levels, except for senior and mid-level managers. This contrasts with functional flexibility which allows one to work in more than one job. As the result of the non-qualified nature of employment, one cannot work in different jobs. The characteristics of potential employment in the tourism sector can be summarized as follows (Taşçılar, 2008).

- Tourism enterprises employ a younger workforce than other sectors.
- Compared to the other sectors, the number of workers working in tourism enterprises is higher.

- It is observed that the turnover rate of the personnel is high in the enterprises with the reason of the seasonality feature.

- The majority of workers are working in accommodation enterprises. This is in turn followed by travel and restaurant enterprises.

Considering Turkey from the demographic point of view, while the number of females, child and elderly personnel employed in the tourism sector due to the family-owned enterprise type is higher than other sectors, the overall tendency in the case of education is toward being semi-qualified and uneducated although the education level differs according to the regions and enterprise types in the sector. Due to its seasonality feature, employment in the tourism sector approaches full employment during periods of intense tourism demand (Lordoğlu, 2009, p. 68). According to a study conducted in 2012, the second largest sector of women's employment in Turkey among all sectors was the tourism sector including food and beverage services. The number of women working in this field of activity has reached 280,000 with an increase of 38,000 compared to the previous year (TEPAV, 2012, p. 21). Gender discrimination in employment is one of the most important issues of the United Nations. Poverty rates have also been observed to be low in countries where gender discrimination is low (Bolwell & Weinz, 2008b, p. 6). However, education and skill levels, career opportunities, wages and working conditions of the female workforce working in the tourism sector as a whole are generally weak. Women are even paid 20%-25% less than their male colleagues who do the same job, are exposed to unequal discriminatory behavior, and experience stress, violence, and even sexual abuse (Bolwell & Weinz, 2008 a, p. 11).

Table 2. Numbers of Female and Male Employment in Accommodation and Food-Service Activities in Turkey 2004-2017 (Thousand people) (Data source: TUIK, Labor Statistics, 2017)

YEARS	PERIOD	TOTAL	MALE	FEMALE
2004	ANNUAL	812	726	86
2005	ANNUAL	877	777	100
2006	ANNUAL	931	820	111
2007	ANNUAL	988	851	138
2008	ANNUAL	998	850	148
2009	ANNUAL	1 049	889	161
2010	ANNUAL	1 084	917	167
2011	ANNUAL	1 141	936	204
2012	ANNUAL	1 206	965	242
2013	ANNUAL	1 308	1 025	284
2014	ANNUAL	1 351	1 073	278
2015	ANNUAL	1 449	1 132	317
2016	ANNUAL	1 471	1 127	344
2017	ANNUAL	1 523	1 151	372

The labor participation rate in Turkey was found as 52.8% according to the data of 2017. 33.6% of the employment is made up of women. Men make up 73.5% of employment (TUIK, Labor Statistics). According to the TUIK data, the number of people employed in the activity field of accommodation and catering services of the tourism sector has increased since 2004. The number of women employed in the tourism sector can be higher than that of other sectors as the employment opportunities based on women's knowledge and skills are higher (Bahar & Kozak, 2006, p. 139), but the unequal superiority of the number of male employees is also remarkable. As can be seen from the table above, the number of

part-time employees in the accommodation and food-beverage sector in Turkey is very low. It corresponds to about 0.5% of the total number of employees. Male workers are more involved in partial works than female workers. Since the number of male employees is also seen to be superior in the total number of employees.

Table 3. Accommodation and Food-Beverage Activity Branch Employees by Gender and Part-Time Working Status in Turkey (2013-2017) (Thousand people)
(Data source: EUROSTAT, Full-time and part-time employment by gender and economic activity, 2017)

	2013		2014		2015		2016		2017	
	F	M	F	M	F	M	F	M	F	M
All Employees	284	1.025	278	1.073	317	1.132	344	1.127	372	1.151
Total	1.308		1.351		1.449		1.471		1.523	
Part-Time Employees	23	41	28	44	31	48	33	48	32	55
Total	64		72		79		81		87	

The rate of informal employment in the tourism sector was 40% by 2012 (Sönmez, 2012). While the informal employment rate in Turkey was 37.9% in 2012, it is known that agricultural workers constitute this rate to a large extent. When we take out agricultural workers from this rate, the resultant rate becomes 24.2%, which is considerably lower than the rate of informal workers in accommodation and food-beverage activity field (TEPAV, 2013, p. 13). Therefore, informal work in the sector is quite common.

Considering the employment structure of the tourism sector in terms of flexicurity, it can be said that the sector is open to external numerical flexibility. Because of the fact that the tourism sector has seasonal feature and is made up of small enterprises, it has caused environmental employment to come to the fore alongside core employment. Thus, when the job is available, some labor is employed, and when the job is done, the ones who are not within the core employment are left unemployed until a new job comes out (Saraçoğlu & Suiçmez, 2008). On-call working, part-time working and seasonal working support the external numerical flexibility, that is the flexibility to adjust the number of employees in the tourism sector. On the other hand, while external numerical flexibility is supported, despite the existence of the Equal Treatment Principle (TBMM, Labor Law No. 4857) in Article 5 of the Labor Law No. 4857, which stipulates that workers do not suffer any discrimination on security during they chose their work and while they work, the numbers obtained from the tables show the existence of a negative situation regarding the job market and employment security both in full-time work and in part-time work. The number of people who work part-time as registered is quite low. In addition, when the security is applied only to formal employees, with an informal rate of 40%, the tourism sector constitutes a major obstacle to all dimensions of security.

Working Times in the Tourism Sector in Turkey

The tourism sector exhibits an atypical character in terms of working times (Bolwell & Weinz, 2008a, p. 2). In the tourism sector, "over 16 hours daily work" has become widely accepted and widely applied as working times. At the same time, seasonal and shift working conditions cause the emergence of a working model that is more different than other sectors (T.R. Ministry of Labor and Social Security, Labor Inspection Board, 2013). Especially in the hotels and restaurants, the working times are quite irregular. Because of the 24-hour service, shift work is common. Weekend shifts, night shifts, and shift work even at the holidays are seen. Employees can work on-call, temporarily, seasonally or part-time. This situation leads to more unsecured, less paid, unstable, more limited career opportunities and thus a faster turnover rate (ILO, 2010, p. 14).

Another negative effect of irregular working hours is on the employees' families and social lives. People can spend less time with their families and in their social lives. This can lead to an imbalance between work and social life (Beddoe, 2004, p. 16). The positive effect of irregular working times is to allow people to work flexibly. Thus, employees can themselves determine when they spare time to their families and social lives. However, this has become valid especially in developed countries and in situations where part-time working is voluntary (ILO, 2010, p. 15). In order for irregular working times to have a positive effect on the tourism sector, the flexibility of these working times should be specified by the employees themselves. In a workplace that supports flexible or part-time working hours, an employee who specifies these times himself/herself may be more productive (Deery & Jago, 2009, p. 104).

Table 4. Weekly Normal Working Time in Turkey (Data source: TUIK, Labor Statistics, 2014)

		2006	2010	2014
All sectors weekly normal working time	Female	44.7	44.5	44.6
	Male	44.9	44.7	44.8
	Mean	44.9	44.7	44.7
Accommodation and Food-Beverage, weekly normal working time	Female	45	45,1	44.9
	Male	45,1	45.2	44.9
	Mean	45,1	45,1	44.9

In Turkey, the weekly working time is 45 hours maximum (Evren, 2012, p. 107). In view of the above table, it is observed that the rule of working 45 hours per week found in the Labor Law in Turkey is agreed with the mean of all sectors. However, in works on accommodation and food-beverage field, it is also found that this time was slightly exceeded in 2006 and 2010. Although the time exceeding 45 hours is very small, it forms a negative situation. This is less than 45 hours in 2014 data and it appears to be in line with the law. The internal numerical flexibility dimension of flexicurity is defined as the flexibility in working times. As is seen, the tourism sector is a sector where various flexibilities such as shift work, part-time work, night work, seasonal work can easily be applied due to uninterrupted service. However, regarding the security, the lengthiness of working hours in terms of occupational safety security gets the worker to encounter dangers of distraction and deterioration of health. Besides, flexible working hours are determined by employer in the tourism sector rather than worker. Besides these, the lengthiness of working hours and works exceeding 45 hours in the tourism sector can be considered as negative in terms of flexicurity.

Wages in the Tourism Sector in Turkey

In the tourism sector, there is a problem about wages globally. This is because wages are lower than other sectors. The reason for this low rate is that there are additional payments under the name of service fee and tip, especially in hotels and restaurants. The fixed wages of the employees are at the minimum wage levels, and wages can be increased thanks to these additional payments.

Unpaid additional payments cause employees to experience difficulties. If the demand for tourism and the income from tourism are on the rise in the country, this situation will manifest itself with the increase in the additional payments, but in the dead seasons of tourism or when the tourism demand decreases due to external factors (economic crisis, war etc.), the economic difficulties for employees will arise due to the decrease in these payments (Beddoe, 2004). Especially the "all-inclusive" pension system, which has increased in recent years in accommodation enterprises, is seen as one of the important factors for decreasing the additional wages of workers (Tütüncü &

Demir, 2003, p. 150). In pricing at the hotel enterprises, there are internal environment and labor costs such as performance-based pricing that managers can control, various factors related to the external environment which can be summarized as laws, trade unions, social security, technological developments, competitors and market conditions, economic and social conditions (İzgi & Olcay, 2008, p. 46).

Table 5. Mean and Median Monthly Gross Wages in Turkey According to Gender and Economic Activity of Full Year Employees (TL) (Data source: TUIK, Labor Statistics, 2014)

		All sectors monthly gross wage		Accommodation & Food-Beverage monthly gross wage	
		Mean	Median	Mean	Median
2006	Female	1280	658	991	583
	Male	1277	701	843	550
	Turkey	1278	698	873	550
2010	Female	1844	1019	1266	883
	Male	1758	1025	1334	907
	Turkey	1779	1025	1322	906
2014	Female	2711	1517	1741	1243
	Male	2617	1600	1842	1398
	Turkey	2642	1582	1824	1378

Considering the above mean and median wages table, the difference between the mean and the median wage draws attention both to the whole of all sectors and to the accommodation and food-beverage field. Although the mean wages are higher both in women, in men, and in general, the median wages are quite low. This shows the wage imbalance, that is, while a large part of the employees work at low wages, a small part work at high wages. It is observed that the wages are lower in the tourism sector compared to Turkey in general.

Table 6. Labor Costs, 2016 (Data source: TUIK, Labor Statistics, 2016)

Labor Cost	Monthly mean labor cost (TL)	Gross Profit (%)	Social security payments (%)	Other labor cost payments (%)
Turkey's Average	3 991	82.9	16.7	0.4
Hotels and restaurants	3 003	82.3	17.35	0.3

Regarding the flexicurity perspective, it can be said that the income security dimension is not met in the tourism sector as a result of wage imbalance. Because wage flexibility has a nature that is influenced by other flexibility practices or supports them. By this way, as highly skilled workers can be rewarded, being able to reduce wages can provide competitive advantage to the firm in times of economic crisis and bottlenecks. By this, it is also impressed by the worker the thought that job security is provided in exchange for reducing the wage. It is expressed that wage costs constitute one of the most important elements of wage flexibility economic strategies in terms of enterprises. Wage costs are considered as directly related to the profitability and competitiveness of enterprises or business fields. The wage flexibility practice has a role in reducing costs (Eryigit, 2009, p. 11). According to the above Table 6, in the accommodation and food-beverage field, which is one of the activity fields of the tourism sector with the greatest employment and economic contribution, labor costs are located below the mean in Turkey. Total labor cost is 3991 TL in the average of all the activity fields in Turkey in 2016, while this figure is 3003 TL in the accommodation and food beverage activity field.

Therefore, employers should not be allowed to turn towards wage flexibility to reduce costs, because costs are already low. In addition, the tourism sector is a sector with low wages in global context. This situation can easily be seen in Table 5. The wages of both men and women are much lower than the Turkey wage mean for the sector as a whole. It can be argued that the income security has not been met in the tourism sector as per its structure, considering that the all-inclusive pension system, especially in seasonal enterprises, does not increase the wages, and that employment and therefore the wages are not continuous due to the seasonal employment.

Social Protection in the Tourism Sector in Turkey

Social protection, which is a very broad concept, is the protection of employees against various risks in the broadest sense. These risks are health, illness, unemployment, old age, occupational accidents and diseases, family benefits, maternity, invalidity and death risks included in the ILO Convention No. 102, which Turkey regards as many other countries in the world. "One of the most important problem fields that lead to insufficient social protection in the field of occupational health and safety is that occupational health and safety legislation encompass specific sectors or specific groups of employees, but they do not provide social protection for the rest of the employees" (Karadeniz, 2012, p. 29). In this regard, in Turkey, the new Occupational Health and Safety Law No. 6331 extends its coverage and ensures all workplaces and employees in all workplaces (including apprentices and trainees) to benefit from the occupational health and safety legislation (Akpınar, 2013, p. 256). However, only the insured ones have the right to receive the incapacity benefit for all risks. Therefore, many people who work informally cannot benefit from these rights. Especially small and medium-sized enterprises operating in the tourism sector in Turkey employ family labor or low-qualified migrant workers. Immigrants, who temporarily go to work in the regions where tourism enterprises are located, often work in such enterprises. These seasonal workers are employed informally. On the other hand, workers in large enterprises (especially those affiliated with international companies) form a more skilled workforce and are able to receive higher wages, and also work formally (Ayan, 2013). In tourism-related areas, the rate of informality has decreased in recent years. While the number of insured employees increased by 6.5% in Turkey, this ratio increased by 17% in the tourism sector in 2012. For the reason, the increase in the number of companies included in SSI scope is mentioned (AKTOB, 2013, p. 19).

Table 7. Number of Insured Persons in the Field of Accommodation and Food-Beverage Services in Turkey, 2016 (Data source: Republic Of Turkey Social Security Institution, Annual Statistics, 2016)

Tourism Sector 2016	NUMBER OF COMPULSORY INSURED PERSONS						
	Permanent (I)	Seasonal (II)	Public (I)	Private (II)	Male (I)	Female (II)	Total (I+II)
Accommodation	189,215	2,961	3,885	188,291	129,754	62,422	192,176
Food and beverage serv.	530,978	78,340	15,251	594,067	422,481	186,837	609,318
Total	720,193	81,301	19,136	782,358	552,235	249,259	801,494
All sectors together*	10,810,326	2,964,862	1,059,333	12,715,855	9,949,970	3,825,218	13,775,188

In order to have social protection, workers in Turkey must also be insured. In 2016, a total of 801,494 people work as compulsory insured in the accommodation and food-beverage services activity field of the tourism sector in Turkey. According to TUIK data, 1,127,000 men and 344,000 women work in accommodation and food-beverage services activities in Turkey in 2016 (TUIK, 2017). Looking at the insured numbers in the Table 7

above, it is seen that the insurance ratio is 49% for males and 72% for females. It can be said that the social protection does not show a positive scene in the tourism sector in Turkey in terms of the concept of flexicurity. Particularly in terms of job security, the condition for employees to be secured in unfair job terminations is to work formally, as insured. Pursuant to Article 19 of the Labor Law No. 4857, the notice of termination shall be made in writing and the employment contract of an indefinite duration of an employee shall not be able to be terminated for reasons related to the behavior or the yield of that worker without taking his/her statement against the allegations about him (Evren, 2012, p. 73).

According to the Article 32 of the Labor Law, the termination of the employment contract requires payment of the employee's wages and all the benefits that may arise from the law and the contracts and that can be measured by money (Evren, 2012, p. 93). Apart from this, no discriminatory practice with regard to people working part-time can be performed. As clearly stated in the Article 13 of the Labor Law No. 4857, a worker who works with a part-time employment contract is not subject to a different process according to the worker who works under a full-time employment contract only because of the partial duration of the employment contract unless there is a justifiable reason to discriminate. As a matter of fact, the Labor Law has called for "having worked for at least one year", and has not made any evaluations in this regard relating to weekly or daily working time (Topçu, 2011, p. 230). In the light of the above data, it is observed that employees have been working in unsecured conditions on job security although legal practices exhibit a positive nature in terms of job security in the tourism sector where informality is so high, and the insured rate is 49% in males and 72% in females.

Representation Security in the Tourism Sector in Turkey

Employees in the tourism sector tend to be less organized compared to other sectors. Since the enterprises in the sector are mostly of small scale, the unionization rate in the industry is as low as 10% in the global framework. Although employees in certain hotels in major cities are frequently organized, the organization of employees in small hotels or in hotels serving out-of-town centers is weaker (Boz, 2006, p. 78). At the same time, the fact that workers in the sector are young and inexperienced can also cause them to abstain from union activities. In addition, employers in the sector do not think positively about unionisation, for seasonal and atypical working in the tourism sector is also quite common (ILO, 2013). The Ministry of Labor and Social Security in Turkey has collected trade unions under a total of 20 business lines in accordance with the Trade Unions and Collective Bargaining Agreements (Act No. 6356. The business line related to tourism from these business lines is the business line numbered 18 which is the Accommodation and Entertainment Businesses. According to the table below, there are 11 trade unions under this business line related to the tourism sector. Despite the high number of employment, the rate of unionization in the sector is very low. As of January 2018, the unionized rate is shown as 4.04%. The general unionization rate for all employees in Turkey is 12.38% (MoLSS, Number of Workers and Trade Union Members, 2018).

In Turkey, unionization in the tourism sector is about 4%. Seymen and Kılıç have pointed out various factors in the declaration in a symposium for the reasons of the unionisation being not very effective. These factors can be summarized altogether as follows (Kılıç & Seymen, 2011, p. 167-171).

- Structure of labor (young people, immigrants ...)
- Globalization and technology (predisposition to mechanization)
- Company and group mergers (companies employing within themselves)
- Subcontracting
- Economic and political instability
- Privatization

- Excessive informal and seasonal employment rates
- Human resources policies are individual oriented rather than collective bargaining agreements
- Personnel turnover rate is high.

Table 8. Accommodation and Entertainment Businesses Unionisation Rates (as of January 2018) (Data source: The Ministry of Labor and Social Security, Statistics, 2018)

	Total Number of Employees	Trade union	Number of Members	Member rate (%)
Accommodation and Entertainment Place	861,471	TOLEYİS (Turkey's Hotel Restaurant and Entertainment Workers Trade Union)	14,256	1.66
		OLEYİS (Hotel Restaurant and Entertainment Workers Trade Union)	14,322	1.67
		TURKON-İŞ (Tourism Accommodation and Entertainment Industry Workers Trade Union)	3,400	0.40
		TÜM EMEK-SEN (Tourism Hotel Sports Employees Trade Union)	29	0.01
		TÜM EMEK-SEN (Progressive Sports Employees Trade Union)	9	0.001
		DEV.TURİZM-İŞ (Progressive Tourism Workers Trade Union)	1,853	0.22
		FUTBOL-SEN (Soccer Workers Trade Union)	92	0.02
		TURİZM İŞ (Tourism Workers Trade Union)	79	0.01
		TURÇASEN (Tourism Workers Trade Union)	11	0.01
		F.Ç.K. (Accommodation and Fast Food Workers and Couriers Trade Union)	111	0.02
TOTAL		TÜM TURİZM İŞ SEND (Tourism Business Union)	52	0.01
			34214	4.04

From the perspective of flexicurity, it is observed that the representation security is highly unfavorable in the tourism sector in Turkey when it is directly related to the unionization rate in the sector. The unionisation rate in the sector is about 4%. And this is seen as the biggest obstacle in front of representation security.

CONCLUSION

The concept of flexicurity, first introduced in 1999, encourages the flexible working conditions of employees and employers to be secured and underlines the need for a compromise between the employee and the employer. Flexicurity incorporates various elements and dimensions. It includes the simultaneous application of flexibility and security by workers and employers, compromise between the parties, and to protect disadvantaged groups in their employment.

The tourism sector, which is one of the most important branches of the services sector and totally dependent on human labor, has been examined within the five characteristics of the sector on flexicurity. The tourism sector, which is observed to not give women more right in terms of female employment in the statistics, shows a negative scene as the job market and the employment security with a high rate of informal workings. However, it is possible to say that the dimension of external numerical flexibility can be realized in the tourism sector thanks to the seasonality feature that allows the number of employees to be adjusted and kept flexible. In addition to this, the uneducated and low quality structure of employment creates an environment opposite the functional flexibility that allows the worker to do more than one job. While it can be said that the tourism sector in Turkey constitutes an obstacle to the concept of flexicurity in terms of income and occupational safety security with the working times over 45 hours determined by the labor law, the internal numerical flexibility is implemented to the sector in terms of flexibility of working times such as part-time working, on-call working and seasonal working. However, this flexibility is not determined by the worker, but he/she works within flexible hours determined by the employer. The fact that the wages are low in the sector as a whole and the labor cost is below the mean in Turkey are obstacles to the implementation of the wage flexibility.

In addition, the low ratio of insured workers and the very low unionisation rate compared throughout Turkey underlines the obstacles to sector's flexicurity practices on job security and representation security. As a result, the concept of flexicurity in the tourism sector can be maintained as unsecured due to the structure of the industry. None of the dimensions of security is met, and only extrinsic numerical elasticity and intrinsic numerical elasticity dimensions of the flexibility are met.

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ASSESSING THE ACCESSIBILITY OF RELIEF FOR TOURISM ACTIVITIES. CASE STUDY - COZIA MASSIF (SOUTHERN CARPATHIANS, ROMANIA)

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Abstract: Relief, through altitude, specific landforms and processes, through the morphology of valleys and interfluvies, influences the practice of different types of tourism in a given area. It can be considered a factor of favorability or restrictiveness for the development of tourist activities. Restriction is mainly given by the degree of accessibility of the landforms through its morphometric and morphographic parameters. In this context, this study aims to assess the accessibility of landforms by analyzing a series of factors (declivity, land cover, road network), determining the accessibility by sectors of the tourist routes, highlighting the parameters with the greatest importance in calculating accessibility, determining the degree of difficulty of tourist trails, as well as the identification of areas where low accessibility generates specific forms of tourism (alpinism and climbing). The study area is represented by Cozia Massif, located in the South of the Southern Carpathians and enrolled almost entirely in the area of Cozia National Park. The accessibility of the massif was determined by the analysis of three factors (declivity, land cover and transport infrastructure) which constituted the main input data of the applied model. Intersection of parameters has led to the establishment of accessibility ranges for both the entire mountainous area and, in particular, for the tourist routes. The results showed that in a proportion of 43.41%, the massif has average accessibility, which offers the possibility of developing various types of mountain tourism. The transport routes

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inside the massif amount to about 162 km, of which 56 km are marked tourist trails. They mostly have high and medium accessibility (31.38% and 41.77% respectively).

Key words: relief, tourism, accessibility, tourist route, Cozia Massif, Southern Carpathians, Romania

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INTRODUCTION

The relief is the main component of the geographic environment that contributes to the tourist potential of the mountainous area, through the multitude of landforms with high attractiveness, which can be constituted in tourist attractions or tourism-generating resources (Cocean, 2011). The types of tourism practiced in a certain mountainous area, as well as the location of the tourist infrastructure, depend on the morphometric and morphographic parameters of the landforms, which gives it the role of physical support (Muntele & Iațu 2006). The relief is important for touring activities and the overall viewing possibilities of the landscape due to the belvedere points it offers, or by the landscape background function when it is not the main attraction (Cocean, 2011; Gozner, 2014). Landforms can be considered a limiting factor for tourism activity due to morphometric and morphographic characteristics that may restrict access to some tourist attractions, as well as the presence of present-day geomorphological processes (Comănescu et al., 2010; Gavrilă, 2012). Accessibility has been the subject of study in many scientific fields, being defined differently according to the purpose of the evaluation. Together with the physical accessibility that is the subject of this paper, there are other types of accessibility used in different disciplines (mental, social, organizational, financial, virtual). They include in the analysis both the proximity of sites and the possibility to benefit from certain services (sanitary, educational, transport, financial, commercial, tourist, recreational) and individual characteristics (personal experiences and needs, ability to understand and use the facilities of a space) (Kıvanç, 2011; Kwan, 1998; Makri, 2002).

Physical accessibility refers to the degree of difficulty in achieving spatial objectives that may be institutions in the urban areas or landforms with tourist importance in mountainous areas (Clius, 2012). In general, physical accessibility is given by the distance to the point of interest, the length of time spent traveling, the variety of transport, the ability to benefit from certain services (attributes of the place), but also the constraints, abilities and personal experiences (characteristics of the individual) (Neutens et al., 2007; Dong et al., 2006; Kwan, 1998; Miller, 2003; Kwan, 2004). Therefore, two accessibility approaches are seen - "accessibility of place and of the individual" (Kwan, 1998) – selected according to the objectives of the scientific approach. This approach focuses on spatial accessibility analysis, independent of the attributes of individuals, highlighting the difficulty with which certain points or objectives can be achieved by different people.

In the literature have been numerous attempts to define the concept of physical accessibility. Clark (1979) defines accessibility in natural areas as a recreational opportunity. Accessibility can be considered, according to the US Department of the Environment (1996), the possibility of reaching a spatial objective without significant efforts. In the sense of Joly (1999), accessibility is a geographic concept with a significant role in transport planning to facilitate access to different points. Chen (2000) treats accessibility as an important index of the ease of movement of persons in a given territory. Kwan (2003) considers accessibility as being the possibility to reach a certain place in optimal conditions of safety, comfort, complexity and speed of travel, to achieve a

goal. Accessibility therefore depends on the degree of difficulty to reach a point, imposed by the distance and time taken to the objective, the risks associated with the movement and the characteristics of the transport infrastructure. Accessibility analysis is a necessity as it is a very important factor in the development of territorial strategies and planning (Makri, 2002; Juliao, 1999; Halden et al., 2000; Radke & Mu, 2000). These planning policies aim at "better distribution of population and activities in the territory", which is why accessibility "expressed in time, distance or cost" should be assessed in the early stages of this approach (Juliao, 1999). Accessibility is therefore an essential factor in planning different socio-economic but also recreational activities, also in view of its important role in managing protected areas (Boers & Sottrell, 2007; Miccadei et al., 2014).

Accessibility assessment does not only result from the need to inform tourists about the possibility of achieving the proposed objectives but also of protected area managers. Travel route informations are useful for managing recreational resources, monitoring, assessing and arranging routes in order to reduce the impact of tourism activities on them (Tomczyk, 2011; Pickering, 2007; Brown, 2011; Önal et al., 2007; Mullick, 1993; Tóth et al., 2010). Concerns about contextualizing and modeling the accessibility of relief are also present in Romanian literature (Gheorghe, 2009; Comănescu et al., 2010, Cocean, 2011; Clius et al., 2012; Bulai, 2013; Alixandroae, 2014). These works address the issues of tourism in general and mountain tourism in particular, and the role of natural or anthropogenic factors in the qualitative or quantitative assessment of accessibility. In the mountainous area accessibility is influenced by a number of factors imposed by the local characteristics of the landforms (morphometry, morphography, morphodynamics), the quality of the infrastructure and the type of means of transport, but also by the land cover. This study has as a general objective the assessing of the accessibility of Cozia Massif and the determination of the degree of difficulty of the tourist trails as a whole and by sectors.

STUDY AREA

The study area is represented by Cozia Massif, located in the Eastern part of the Southern Carpathians, in the south of Făgăraș Mountains (Popescu & Călin, 1987) and included almost entirely in the area of Cozia National Park (Figure1). It was declared a protected area II IUCN category - National Park in 1990 by Government Decision no. 7/1990 and confirmed in 2000 (Law no. 5 / 2000). Since 2007, it has been declared a site of community importance (ROSCI0046 Cozia) and special protection area (ROSPA 0025 Cozia-Buila Vânturarița), being integrated into Natura 2000 network. The aim of Cozia National Park is to protect and conserve landforms and representative habitats at national level and to maintain biological diversity at regional level.

From a geological point of view, Cozia Massif is a crystalline horst composed of gneisses and par-gneisses. Peripheral sedimentary formations are sandstone, limestone, marl, breccia, conglomerate, sands that make up Faciesul de Gosău, Brezoi Formation, Turnu Sandstone, Căciulata layers, Călimănești Conglomerate (Geological map, 1:50.000, sheet Călimănești L-35-97-B). Fault systems have caused the massif uplift by 800-1000 m in relation to the surrounding area, thus obtaining the appearance of a "rocky monolith" that impresses through massiveness and steepness. The lithological, tectonic and climatic conditions in which the massif was modeled gave rise to a stepped relief, converging to the highest point of the massif (Ciuha Mare Peak - 1668m), with sharpened interfluvies, needles, rocky towers and steep slopes with heights of hundreds of meters (Popescu & Călin, 1987). The touristic potential of the massif is given by ruiniform landforms (towers, chimneys, natural arches, bench, sewer, sharp edges), steep walls, waterfalls, stone gates, caves and the presence of Cozia Gorge. The elements of the geographic environment of

Cozia Massif offer the possibility of practicing a wide range of tourist activities: mountain hikes and climbing, weekend tourism, curative tourism (in Calimanesti spa resort located at the base of the massif) and religious tourism. The most important tourist spots related to the relief inside the massif are Cozia Peak or Ciuha Mare (1668m), Durdac Peak or Crucea Ciobanului (1568m), Bulzu Peak (1665m), Șoimului Peak (1281m), Pietrele Vulturilor, Colții Foarfecii, Turnul lui Teofil, Poarta de Piatră, Gardului Waterfall, Urșilor Cave etc., many of which are considered geomorphosites.

The access infrastructure is predominantly represented by tourist routes and forest roads that have a concentric development, starting from the access points located at the base of the massif to the central part, where is located Cozia Chalet (1573m).

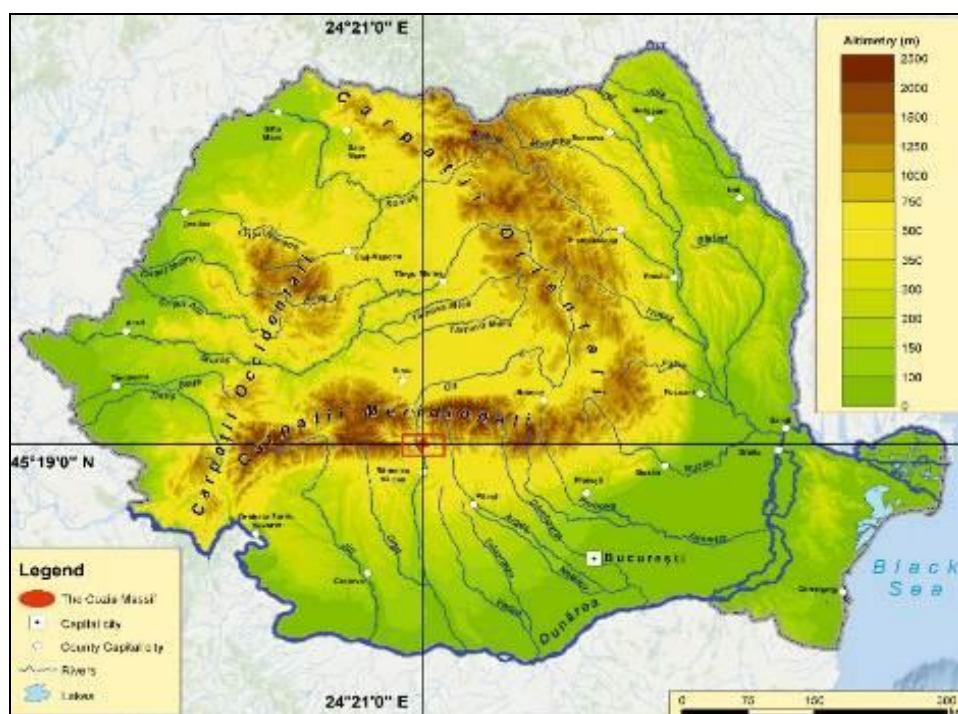


Figure 1. The geographical position of study area (Source: www.geo-spatial.org)

METHODOLOGY

Assessing the accessibility of landform for tourism activities required the creation of a database of topographic information, land cover and transport infrastructure. For this analysis, slope is the most important element of the relief and resulted from the Digital Elevation Model (DEM), which was obtained on the topographic map at 1: 25,000 scale. Data on land cover and transport was extracted from orthophotoplans from 2012. This database was supplemented with field-based information from the Garmin 64st GPS, which mainly focused on tourism routes (high-risk sectors, belvedere points) (Figure2).

The first step was to determine accessibility based on slope values and land cover. These parameters were classified into 5 classes and received scores proportional to accessibility levels. The most accessible slopes (1) record values of 0-100, and the most difficult to access, values above 400 (5). The land cover has been reclassified according to the type of vegetation that requires a certain degree of visibility and accessibility for

tourists. Grassy vegetation (meadows, grasslands, etc.) was considered the most accessible (1), while rocks represent the areas with the lowest accessibility (5) (Table 1). Subsequently, the two resulting rasters were processed (multiplied) by the Weighted Overlay method. Because the parameters did not have equal influence on accessibility, a differential weighting was taken into account (slopes - 60%, land cover - 40%).

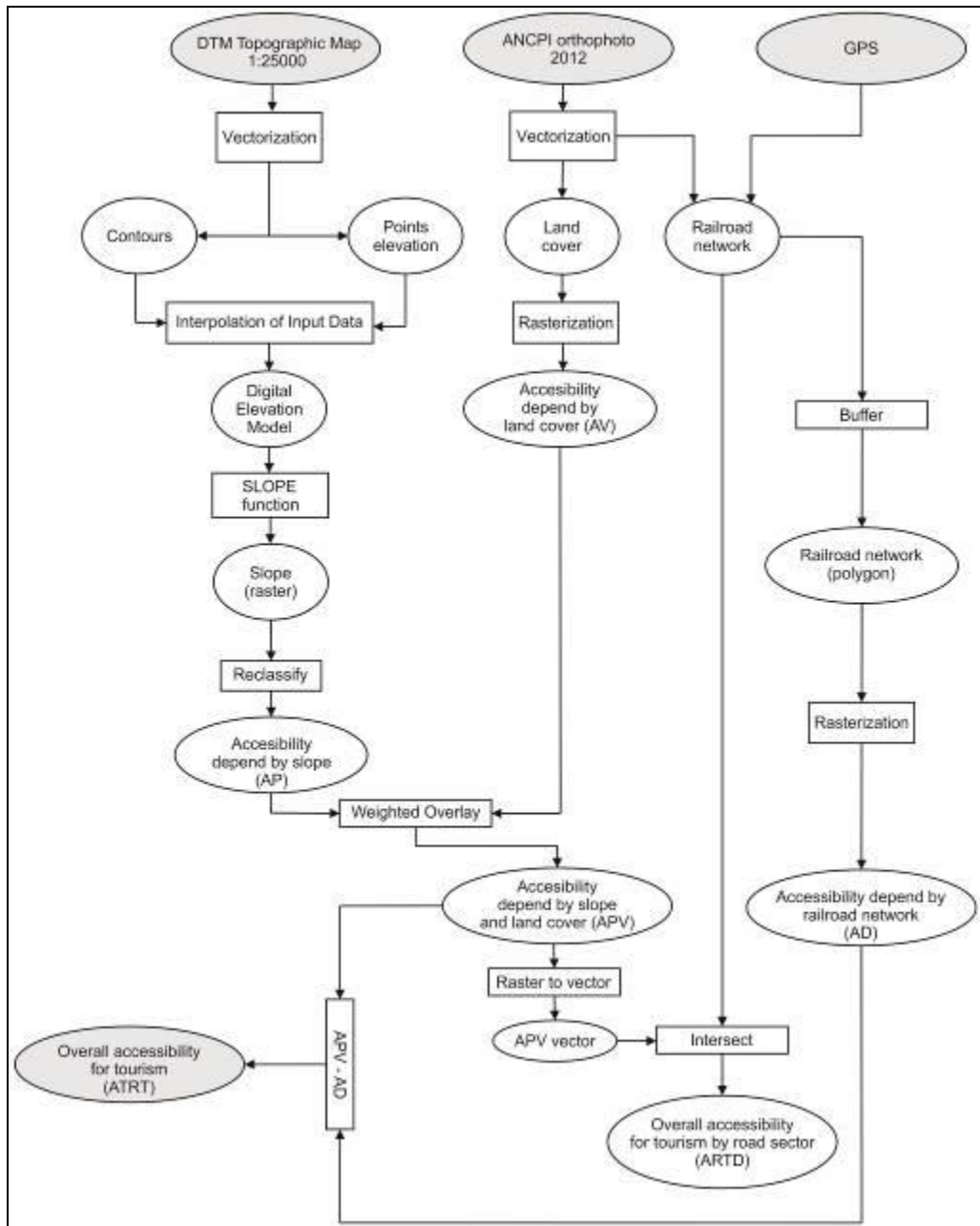


Figure 2. The methodological approach

In the next step, accessibility of relief was calculated, including in the analysis data about the type of infrastructure and means of transport. The method involves converting paths from vector format to raster using the Buffer function. The size of the area of influence of the transport network was determined by the accessibility and importance of the roads (Table 2). In order to be included in the analysis, these data were rasterized, resulting in a grid with two values: 0 for areas without infrastructure and 1 for spaces crossed by communication paths. Subsequently, the difference between the accessibility achieved in the first stage and the raster resulting from the road data processing: $ATRT = APV - AD$, where $ATRT$ is total accessibility for tourism, APV - accessibility depending by slopes and land cover and AD - accessibility depending on transport infrastructure. Thus, the sectors crossed by the means of transport have increased accessibility by one unit.

Table 1. Parameters used to determine landform degree of accessibility

Parameter / Score	1	2	3	4	5
Slopes (P-grade)	0 – 10	10 – 20	20 - 30	30 - 40	>40
Use (U)	Grassy Vegetation	Deciduous forests Mixtures of forests	Coniferous forests	Swamp areas	Rocks
ACCESSIBILITY	Very high	High	Average	Reduced	Very reduced

Table 2. Parameters used to determine accessibility by road network

Parameter / Buffer (m)	50	40	10	5	0
Roads (D)	European National County	Local Forestry	Tourist paths	Other paths	No roads
ACCESSIBILITY	1				0

Accessibility on road sectors required transformation of relief accessibility depending by slopes and use of raster format in vector format, then its intersection (Intersect) with the road network. The results consisted of obtaining roads by sectors, each sector having a value in accordance with the degree of accessibility (1 - very high, 2 - high, 3 - medium, 4 - low, 5 - very low). Finally, the lengths of the road segments corresponding to each accessibility class were calculated. In order to highlight the influence of the parameters mentioned in the equation of landform accessibility for tourism activities, scatter plot graphics were made in order to determine the correlation of these variables. Another method of analyzing the accessibility of mountain roads is represented by the profile on representative trails providing information on the morphometric parameters (segment slope, average slope of the route, level difference, total length of ascending and descending sectors), land cover, sectors with high risk of injury, total route length, total walking time and intermediate times. This was done using the Global Mapper software that used the terrain numerical model obtained by vectorizing the contour lines on the topographic map 1: 25,000, as well as the data recorded by a GPS device (Garmin 64st) while driving. The profile was processed in Corel Draw graphics program. This approach has the advantage of assessing the difficulty of tourist routes based on a larger number of items considered, but also the possibility of establishing relationship between the elements included in the analysis.

RESULTS

The accessibility obtained on the basis of slope and land cover (Figure 3) reveals the differences between the central part of the massif and the periphery, also evidenced by the geomorphological regionalization of the massif. The crystalline horst of Cozia (Hann 1990), with altitudes over 1000 m, constitutes the central and northern part of the massif and has

lower accessibility values compared to the sedimentary unit located on its southern periphery, characterized by prolonged interfluvial areas with low slopes and altitudes not exceeding 1000 m. In proportion of 45.15%, the area considered in the study shows average accessibility (code 3) corresponding to 20-30° slope areas covered with deciduous forests and mixture.

Areas with **high and very high accessibility (code 2 and 1 respectively)** represent 24.14% of the total area of the massif and characterize rounded interfluvial areas with a slope less than 10° and slopes below 20°, under hardwoods and mix or meadows. This type of accessibility predominates in the Southern and South-Eastern part of Cozia Massif, in the upper part of the hills Păușa, Căliman, Sulița, Groșilor, Dealul cu Coacăză, at the ridge of Haidor and Pleșa and in the Cocinelor and Mocirlele interfluvial areas. Large and very large accessibility values can be found in the upper part of Muchia Trăznită, Culmea Vârful Omul and in Muchia Turneanu on smaller surfaces. The high accessibility of these areas is demonstrated by the fact that most of the tourist routes were arranged along them.

Low accessibility (code 4, 28%) occupies areas situated especially on the Northern slope of the massif, very steep, elevated along Brezoi Fault. They characterize the slopes with 30-40°, covered by coniferous and mixture forests, from Culmea Șirul de Pietre, Claia de Piatră, Muchia Vlădești, Căprăriile, Boldanului, Urzicii, Armăsarului, Cărligul Mare and the slopes of Cozia Peak (1668m), Ciuha Mică (1629m) and Rotunda (1592m).

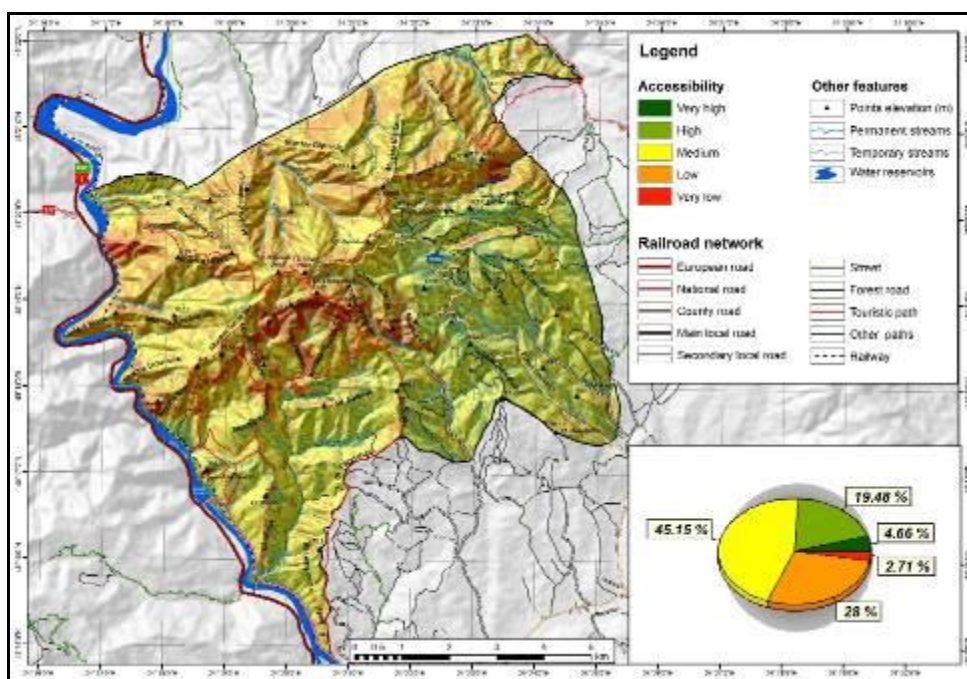


Figure 3. The accessibility depending by slope and land cover

The areas very low accessible or even inaccessible (code 5, 2.71%) for tourists who practice mountain hiking overlap with rocky cliffs with slopes above 40° from the edges of Turneanu, Scortăru, Roșiei, Fruntea Oii, Colții Foarfecii, Pereții Gardului, Pietrele Roșiei and Vulturilor, the abrupts of Bulz, Durdac, Soim, Salbatic and Tower of Theophilus. These are made up of gneisses that behave differently at temperature oscillations, which form a ruiniform relief, very attractive from a touristic point of view. The imposing slopes of Cozia have attracted interest and extreme sports

lovers (climbing). Therefore, very low accessibility of the cliffs can be regarded in this case as a tourism generator. Climbing opportunities are offered especially by the walls of Bulzului, Gardului, Foarfecii, Pietrele Vulturilor and Scocul Ursului (Popescu & Călin, 1987). Inclusion in the analysis of the transport network (Figure 4) has led to the increase of areas with high and very high accessibility from 24.14% to 26.53%, namely by 2.4%. This indicates that areas with large slopes, covered by forest vegetation or cliffs with low accessibility, have become more accessible due to the arrangement of tourist routes. These situations are present along all mountain trails. For example, Bulz and Durduc slopes in the sector crossed by tourist routes 1 and 4 have gained high accessibility values due to the installation of cables designed to limit the risk of injury.

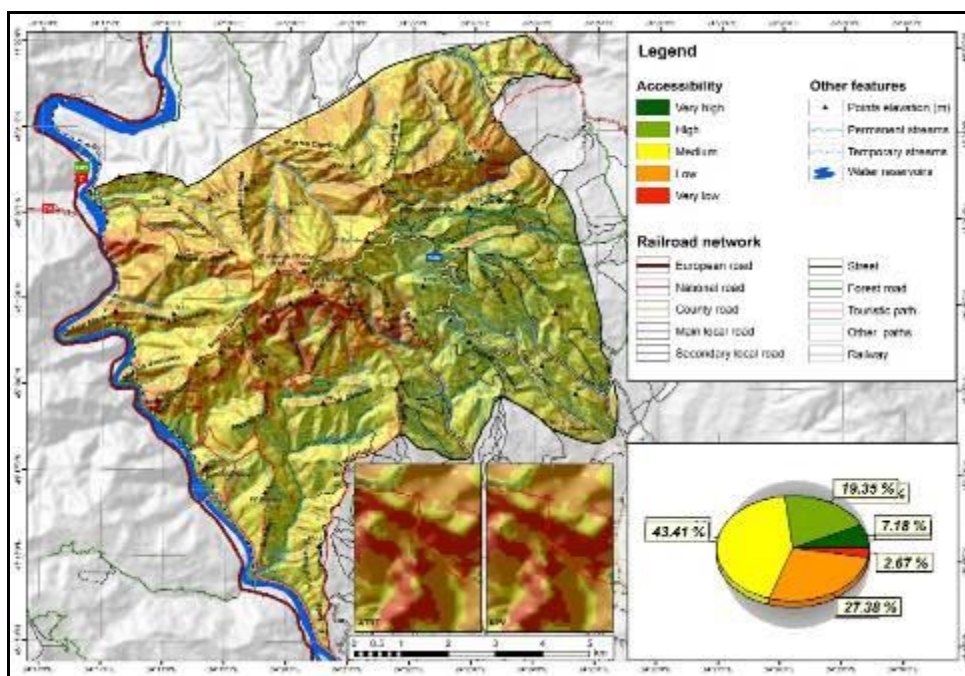


Figure 4. The total accessibility of relief for tourism activities

The transport network allows access to the most important tourist attractions, thus being necessary to inform the tourists about the difficulty of the routes. The transport infrastructure inside Cozia Massif is represented by marked and unmarked tourist routes, by forest, communal and county roads. They have a total length of about 162 km, follow the valleys and interfluvies and converge to the central part of the massif where Cozia Chalet is located. In this respect, road accessibility was assessed for each route (Figure 5). Of the total length of the transport routes, about 100 km (62.25%) have high and very high accessibility, about 50 km (30.27%) average accessibility, and the remaining about 12 km (7.49%) low and very low accessibility. The marked tourist trails amount to 56 km and show predominantly average accessibility (42.2%) and high (32.6%). The degree of trails difficulty determined by the landforms accessibility analysis varies according to the weight of accessibility classes in the total length of the tourist trails. Hence, routes with high and very high accessibility on about 50% of the length and very low accessibility below 1% of the total length are characterized by a low degree of difficulty and are represented by routes 1, 3 and 4. The most difficult routes from the point of view of

landforms accessibility are those that present on about half of the total length, very low and low accessibility (routes 9 and 10) (Table 3). Low access areas cross rocky and very steep areas, such as Bulz and Durduc steeps, the slopes of Singuraticul Peak and Muchia Scorțaru.

Table 3. The relief accessibility on the road sector calculated for marked tourist trails

Route no. 1 - Păușa - Stânișoara - Cozia						
Accessibility	1	2	3	4	5	Total
Length (km)	1,23	3,2	3,12	1,68	0,09	9,33
%	13,24	34,35	33,47	17,96	0,98	100
Route no. 2 - Turnu - Cozia						
Accessibility	1	2	3	4	5	Total
Length (km)	0,63	1,18	4,31	1,32	0,11	7,54
%	8,33	15,6	57,08	17,52	1,47	100
Route no. 3 - Baraj - Stânișoara						
Accessibility	1	2	3	4	5	Total
Length (km)	0,17	1,72	1,27	0,68	0,02	3,86
%	4,46	44,64	32,82	17,63	0,44	100
Route no. 4 - Călimănești - Cozia						
Accessibility	1	2	3	4	5	Total
Length (km)	1,38	3,93	4,03	0,93	0,07	10,36
%	13,36	37,97	38,95	9	0,72	100
Route no. 5 - Văratica - Cozia						
Accessibility	1	2	3	4	5	Total
Length (km)	0,8	2,46	3,38	1,33	0,04	8,01
%	10,01	30,76	42,18	16,58	0,47	100
Route no. 6 - Surdoiu - Cozia						
Accessibility	1	2	3	4	5	Total
Length (km)	0,15	2,83	2,69	1,53	0	7,2
%	2,11	39,24	37,34	21,31	0	100
Route no. 7 - Turneanu - Cozia						
Accessibility	1	2	3	4	5	Total
Length (km)	0,54	1,39	2,97	1,05	0,06	6,01
%	9,02	23,05	49,36	17,53	1,04	100
Route no. 8 - Poarta de piatră						
Accessibility	1	2	3	4	5	Total
Length (km)	0	0,11	0,33	0,23	0	0,67
%	0	16,51	48,47	35,02	0	100
Route no. 9 - Vârful Singuraticul						
Accessibility	1	2	3	4	5	Total
Length (km)	0,09	0,1	0,24	0,34	0,08	0,85
%	10,06	11,61	28,51	40,15	9,67	100
Route no. 10 - Cascada Gardului						
Accessibility	1	2	3	4	5	Total
Length (km)	0	0	0,27	0,25	0	0,53
%	0	0	52,03	47,97	0	100
Route no. 11 - Turnu lui Teofil						
Accessibility	1	2	3	4	5	Total
Length (km)	0,22	0,68	0,82	0	0	1,72
%	12,88	39,38	47,74	0	0	100

Based on the percentages of the accessibility classes, pyramid-type graphical representations were presented, showing their distribution within the tourist trails. Different types of standard graphs that describe the degree of difficulty of the trails, based on topographic accessibility, have been individualized. Thus, the pyramid with extended base (bell type) is a characteristic of accessible routes, with little difficulty. As the accessibility decreases, the base continues to decrease (amphora pyramid type),

developing the pyramid's median midline for medium-difficulty routes or the higher one for difficult-to-reach routes. These models can be very useful in planning new routes, the accessibility of which can be determined by reference to the proposed model.

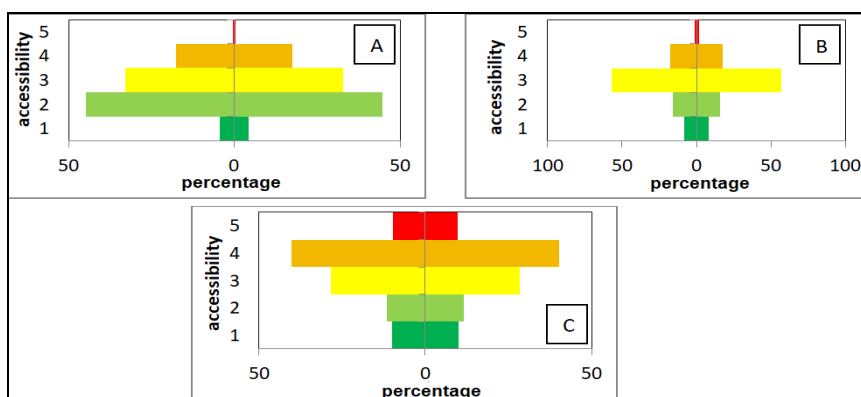


Figure 5. The degree of difficulty of touristic A - low (T3), B - medium (T2), C - high (T9)

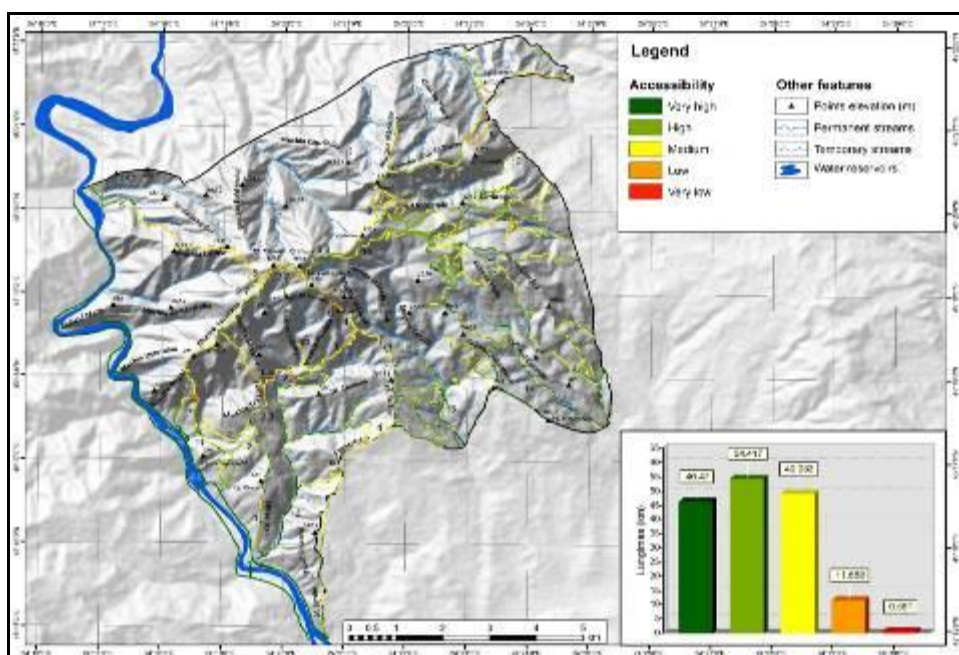


Figure 6. The accessibility of relief for tourism activities on the road sector

DISCUSSION

Cozia Massif has mostly medium accessibility. Inaccessible areas or those with very low accessibility have a fairly low share (2.67%), due to topographical conditions, land cover, but also due to the planning of tourist routes. Next, we propose to determine how the analyzed parameters influence the accessibility level of the massif. The evaluation highlights the very dependence of the accessibility on the slope values, as proved by the correlation coefficient $R = 0.63$ (Figure 7). This aspect is highlighted by

the arrangement of hiking trails along the rounded interfluvies or valleys (routes 1, 4, 6, 7 and 13, 14, 15) avoiding areas with very rough or abrupt landform. Accessibility is also influenced to a large extent by the characteristics of the vegetal cover ($R = 0.45$) (Figure 8). The vegetation-free areas are especially rocky slopes and very steep slopes from the central part of the massif, with a high degree of attractiveness but difficult to cross (1 and 4 routes in Bulzu and Durduc abrupts). The inclusion in the analysis of the parameters regarding the transport infrastructure inside the massif aims at highlighting the influence of the road network on the accessibility degree.

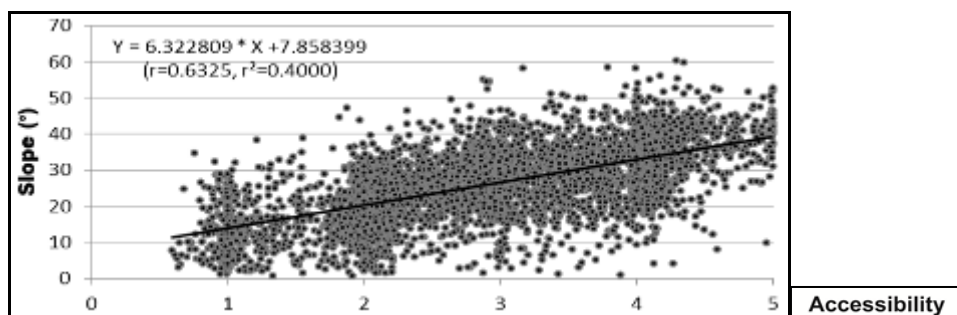


Figure 7. Relationship between accessibility and slope

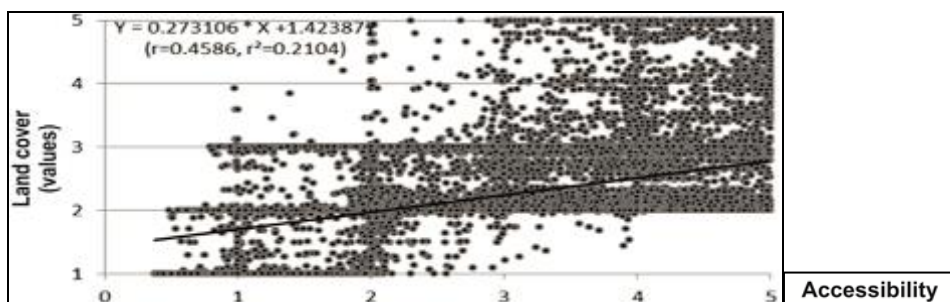


Figure 8. Relationship between accessibility and land cover assigned values

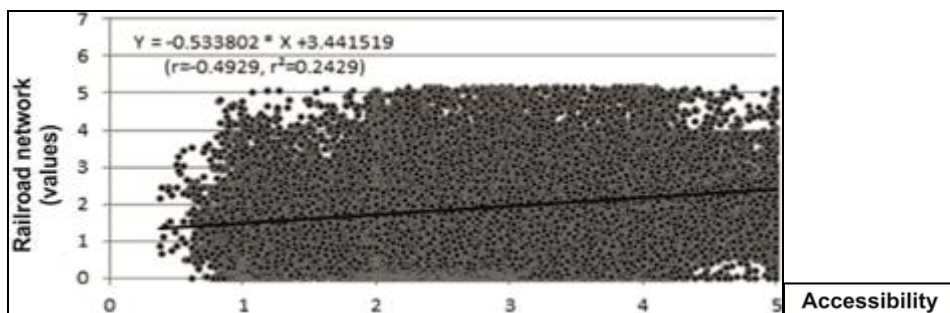


Figure 9. Relationship between accessibility and road network assigned values

The high correlation coefficient of 0.49 (Figure 9) demonstrates the interdependence of the two variables. For example, arranging routes 1 and 4 in the section that crosses the steeps of Durduc Peak has increased the accessibility of this area. Following the analysis of the three parameters that formed the basis for assessing the

accessibility of the massif for tourism activities, we can see that the most important factor in the determination of accessibility is the relief through the morphometric and morphographic characteristics, followed by the road network and the land cover.

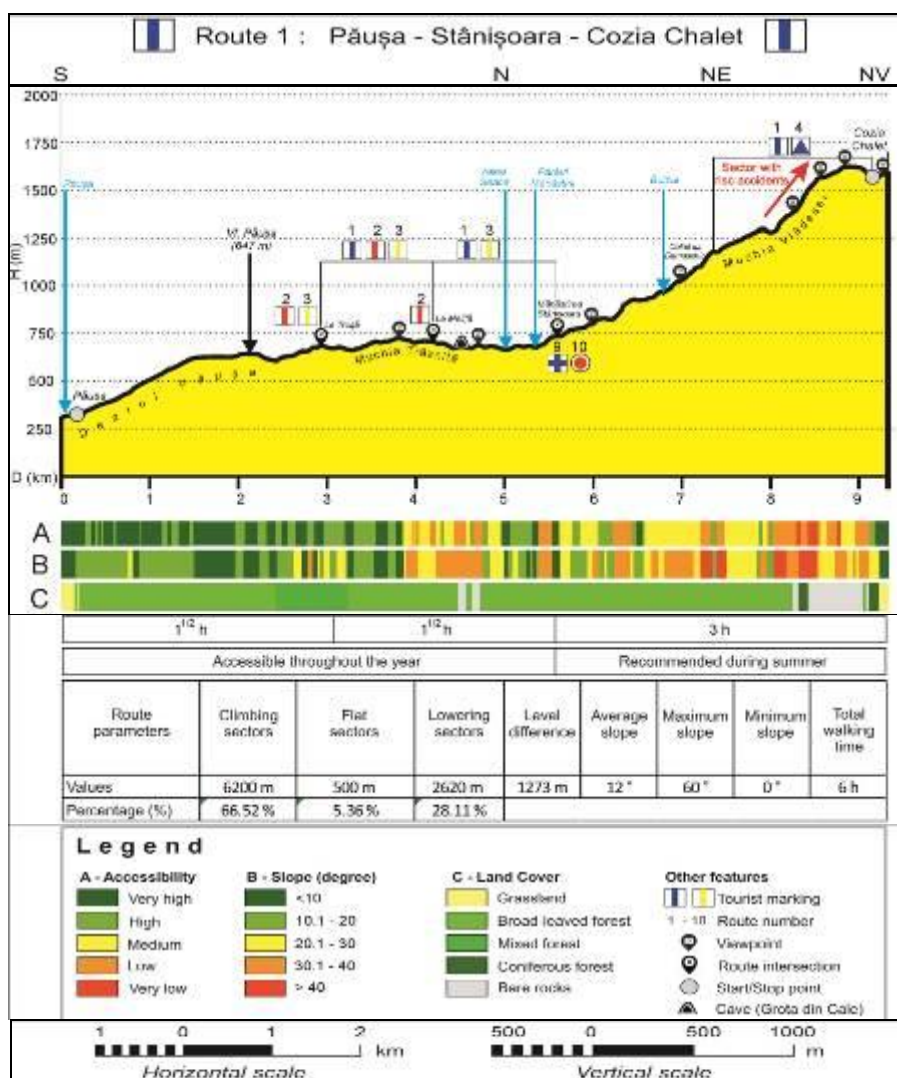


Figure 10. The longitudinal profile and its features for the touristic route 1 (Păușa – Mănăstirea Stânișoara – Cabana Cozia)

Another way to correlate the elements considered in the analysis, in the calculation of accessibility, is represented by the profiles made along the tourist trails. They offer the possibility to determine the difficulty of the routes based on a much larger amount of information, such as: the total length of the route and the ascending and descending sectors, the average and sectoral slopes, level difference, land cover, high risk areas, accessibility by road, accessibility during the year, total walking time and intermediate times, points of connection with other trails and belvedere points (Figure 10).



Figure 11. The touristic route 1 Păușa – Stânișoara – Cozia Chalet: a) Intersection la Troiță; b) The sector with very high accessibility; c) Cave Grota din Cale; d) Intersection „La Meliță”; e) Marking belvedere point; f, g) Point of view towards Cozia Ridge and Pausa Valley; h) Bridge- Gardului Valley; i) Poiana Stânișoara; j) Bulzului Valley; k) Belvedere point „Colțul lui Damaschin”; l) Vlădesei Edge; m, n) cables; o) Cozia Chalet; p) Belvedere point Ciuha Mică

For example, the number 1 tourist route, marked with a blue stripe, was chosen from Paușa to Cozia Chalet. This is the main route that can be reached from Calimănești resort and presents numerous points of tourist importance: caves (Grotă din Cale), abrupts, needles (Colțul lui Damaschin), "stone faces" (Bulzu - Durdac area), belvedere points and connection with other tourist routes. The configuration of the route demonstrates the geomorphological diversity of the massif: the first part is along Păușa Hill, with soft slopes, which determines a high degree of topographic accessibility; then the trail crosses sectors with a lower accessibility such as Muchia Trăznită and the abrupts of Muchia Scorțaru; the last part of the route has a more pronounced climb because it is in the crystalline area of the horst, characterized by steep slopes and rocking. In this section, the sector with the highest degree of accessibility difficulty crossing Bulz's "Stone Fortress" („Cetea de Piatră” a Bulzului) is also met. Here are installed cables that ensure safe crossing of the rocky thresholds, especially during the winter (Figure 11).

This tourist route records 47.59% of the total length of high and very high accessibility, and 33.47% average accessibility. Segments with low accessibility are 17.96% and the very hardly accessible places have a value below 1% of the route length. Therefore, from the point of view of topographic accessibility, route 1 presents a small degree of difficulty, but according to Government Decision no. 77/2003, routes that require a 4 to 8 hour walking time and sustained physical effort on certain sectors are included in the medium difficulty category and those with a difference in the range of 500 to 1500 m, in the one with high difficulty. Thus, for a correct approach of the difficulty level of tourist trails, a strictly topographic analysis of accessibility is not sufficient, but a complex, integrated assessment is needed taking into account all route parameters. Analyzing the elevation profile of the route 1, we can conclude that it has an average degree of difficulty.

CONCLUSIONS

Data validation in the field demonstrates the accuracy and effectiveness of the methodology being approached. Thus, the proposed model is an important source for informing tourists about the difficulty of the trails, as well as a support for the competent authorities for the monitoring and arrangement of the mountainous area, including for the managers of Cozia Natural Park. Proper management of tourism activities in protected areas is necessary to limit anthropic pressure on the environment, to reduce land degradation through erosion processes and to adequately capitalize the tourism potential. On the other hand, the relief accessibility map is also a basic tool in the design of new tourist routes, but also in the delimitation of areas suitable for the development of special types of tourism (geotourism, mountaineering, climbing). Complex profiles of accessibility analysis for tourist trails are a complete method of assessing the difficulty level as it includes in the analysis a much larger number of variables with an important role in mountain hiking planning. In a future approach, we propose the development of a mathematical model of accessibility assessment that integrates into the equation the topographic factor, land cover and transport infrastructure, as well as other parameters of interest for tourists (difference in level, length of the route, walking time).

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DEMOGRAPHIC MONITORING AND FORECASTING TOURISTS' ARRIVALS AS A MEANS OF OVERCOMING SEASONALITY

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Abstract: Understanding the movement of tourists within a destination and predicting future movements have their practical applications for destination management, product development, marketing and attraction. We analyzed the seasonality of tourist presence in Belgrade, using the ARIMA models, with the aim of predicting future movement. We came to the result that about three-fourths of tourists in this area consist of domestic tourists or residents of Belgrade and people from other parts of Serbia, while the rest are foreign tourists. By increasing the

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number of foreign tourists there would be a significant economic development both for Ada Ciganlija Island and for Belgrade. This also points to the need for improving marketing and significantly engaging and making this area closer to foreign tourists.

Key words: Monitoring, Tourism, Ada Ciganlija Island, Belgrade, Serbia

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INTRODUCTION

According to Papić-Blagojević et al. (2016), and Vujko et al. (2018), seasonality is one of the main aspects affecting tourism, and forecasts of tourist arrivals are essential for planning (Brougham & Butler, 1981), policy making (Dogan, 1989; Canizares et al., 2016) and budgeting purposes by tourism operators (Choi & Murray, 2010; Deng et al., 2011; Gounopoulos et al., 2012). Ada Ciganlija is a river island on Sava River and popular swimming area for residents of Belgrade during the summer, but it attracts a significant number of visitors off summer season, so, as such, it represents one of the favorite zones of picnic-recreational tourism within the city of Belgrade. Often do the residents of Belgrade call it "Belgrade Sea". Apart from providing certain facilities to Belgrade residents and domestic tourists, it is visited by the tourists from the region, as well as by quite a large number of foreign tourists.

Understanding the way tourists move through time and space (Turanligil & Altintas, 2018), as well as the factors that influence their movements (Chen, 2000; Andereck et al, 2007; Andereck & Nyaupane, 2011; Ursache, 2015; Marković et. al, 2017), has important implications for infrastructure and transport development, product development, destination planning, and the planning of new attractions (Dwyer & Kim, 2003; Dwyer et al., 2004), as well as management of the social, environmental, and cultural impacts of tourism (Lew & McKercher, 2006; Petrović et al, 2016). However, the number of tourists, foreign tourist especially, and achieved economic and social effects of tourism, suggest that all these benefits are underused (Van Den Bergh, 1993; Lee & Chang, 2008; Nunkoo & Smith, 2013). Tourism may indicate the achievement of the objectives of development policy (Blake et al., 2006; Lee & Chang, 2008; Sekaran & Bougie, 2013), but it requires a continuous work and cooperation with state institutions (Vujko & Gajić, 2014; Mhlanga et al., 2015; Sinclair-Maragh, 2017). There are assumptions that the intensive tourism development (all tourism products) in Ada Ciganlija may induce positive impact through a series of direct and indirect economic changes within certain categories not only in the area observed but also within the whole gravitating area, in this case, city of Belgrade. Our aim is to provide the empirical evidence that is the use of exponential smoothing model is useful for generating accurate prediction intervals, in practice. The autoregressive integrated moving average (ARIMA) model has excellent natural statistical characteristics and is the most popular (Sudheer & Suseelatha, 2015). It has been found that there are preconditions to turn this area into a large-scale tourism development, and thus achieve visible economic effects.

METHODOLOGY

The research was conducted on monthly data relating to the number of tourists in Belgrade during the period from January 2000 to December 2015. The frequency of Belgrade series is platykurtic, which is confirmed both by the results of Jarque-Bera tests (Jarque & Bera, 1987) and kurtosis. The time series show strong presence of seasonal

effect. Scaling factors of seasonal effects are calculated by applying multiplicative seasonal adjustment method, which means that factors represent ratios to moving average.

Tables 1. Basic statistics and scaling factors of seasonal effects for observed series
Data source: The report of the Tourist Organization of Belgrade

Mean	56111.06	1	0.731681
Median	56658	2	0.732539
Maximum	86205	3	0.840048
Minimum	27389	4	0.94708
Std. Dev.	12102.68	5	1.121233
Skewness	-0.051611	6	1.097412
Kurtosis	2.62769	7	1.270311
Jarque-Bera	1.04489	8	1.29885
Probability	0.593069	9	1.244596
Sum	9426658	10	1.098282
Sum Sq. Dev.	2.45E+10	11	0.92941
Observations	168	12	0.909228

Unit root tests conducted on deseasonalized series, obtained by applying multiplicative seasonal adjustment method, show the evidence of non-stationarity in observed series. Therefore, all data were differenced, in order to obtain stationary series. To forecast the number of tourists in Belgrade, autoregressive moving average models (Whittle, 1951) were applied on transformed data:

$$r_t = \phi_0 + \sum_{i=1}^p \phi_i r_{t-i} - \sum_{j=1}^q \theta_j a_{t-j} + a_t,$$

Where r_t is observed series, ϕ_0 is constant, ϕ_1, \dots, ϕ_p and $\theta_1, \dots, \theta_p$ are model parameters and a_t is white noise. All series were tested with ARIMA (1,1) to ARIMA (5,5) models, and optimal models were selected based on Schwarz Bayesian information criterion (Schwarz, 1978):

$$BIC = -2\zeta + \frac{\log(T)}{T} k,$$

Where ξ is log likelihood function, T is sample size, and k is number of parameters. Also, the statistical significance of parameters and autocorrelation of residuals were taken into the account. The specifications of selected models are given by Table 2. Analyses of observed series show strong evidence of seasonal effect, which was expected. Belgrade time series has the largest scaling factors during periods July – August. This was the reason why we did some additional research.

The Tourist Organization of Belgrade had two clerks at the tourist information desk on the New Belgrade's side of Ada Ciganlija, about a hundred and fifty feet away from the restaurant called "Lake", who were giving information to tourists interested in the city of Belgrade, informing them about the tourist destinations and tourist events, both in Belgrade and at Ada Ciganlija, as well. The tourist clerks have been noting down the number of tourists at the information desk and their interests. It was recorded that the visitors at the desk of the tourist information center, (hereafter called TIC), were the residents of Belgrade, domestic tourists and tourists from the region (from the former Yugoslav republics) and foreign tourists, likewise. However, because of the same-speaking

region, a part of the tourists from the region or from the former republics merged into domestic tourists. The study was based on the main hypothesis H: that Ada Ciganlija, as recreational area, is attractive enough to attract tourists throughout the year, and that it is possible to determine the corrective measures and implement strategic actions for improving supply. This would further imply positive effects in the field of tourism and the general economy and the economy of the region. Under this hypothesis certain lower-level hypotheses were set: all the big cities having large picnic and recreational areas, and in this case it's Ada Ciganlija, enhance the landscape and it is their inhabitants that use these resources (hypothesis 1), the benefit of this landscaped area is multiple and particularly in the health domain (hypothesis 2), the native population uses picnic and recreational zone of their city more often than the foreign tourists (hypothesis 3).

RESULTS AND DISCUSSION

The examination of series forecast by ARIMA models showed that obtained forecasted values fitted historical data very well, which gives possibilities for prediction of future series values, as well as the examination of their mutual relationship and influence on economic indicators in observed regions.

Table 2. Selected ARIMA models for observed series
Data source: The report of the Tourist Organization of Belgrade

Variable	Coef.	Std. Err.	Prob.
C	-41.417	133.873	0.758
AR (1)	1.629	0.028	0.000
AR (2)	-0.900	0.026	0.000
MA (1)	-2.188	0.080	0.000
MA (2)	1.728	0.144	0.000
MA (3)	-0.429	0.080	0.000
R-sq	0.304		
Adj. R-sq	0.281		
S.E. of reg.	4097.24		
Sum sq. resid.	2.60E+09		
Log likelihood	-1564.60		
F-stat	13.54		
Prob. (F-stat.)	0		
BIC	19.63		
Durbin-Watson	1.96		
Inv. AR Roots	.81-.49i	.81+.49i	
Inv. MA Roots	0.7 .86-43i	.86-43i	0.46

The current tourist offer makes it possible for the local population (Chen & Hsu, 2002; Zengeni & Zengeni, 2012; Chibaya, 2013; Chingarande, 2014; Aliaskarov et al, 2017), to have access to landscaped zone that has a positive effect on their health (Allen et al., 1993), which enables Ada Ciganlija to be classified into another domain of tourism - health tourism, and, hereby, hypothesis 1 and 2 are confirmed. Hypotheses No 2 is also confirmed by the following claim: Sports and recreation tourism, as the most important part of the tourist offer (Standeven & Knop, 1999; Hayward, 2001; Weed & Bull, 2004; Weed, 2008; Vujko & Plavša, 2013; Vujko & Plavša, 2014), present a primary characteristic and one of the main functions of this area. The principal property of Ada Ciganlija is the presence of creative and diverse content designed for a great number of various users. As the water of the Sava Lake is warmer and cleaner than in the river, the

lake and the island (Ada Ciganlija peninsula) have created the conditions for mass recreation and exercise for almost all water and land sports. Sports facilities and courts at Ada are numerous and this can be shown by mentioning the most important ones: two large football pitches, six concrete pitches for football and volleyball, ten basketball courts, seven outdoor tennis courts, a hall with two indoor tennis courts, six concrete volleyball courts, two sand volleyball courts, a mini-golf and golf course, football pitch, baseball field, water polo pool, which is open to the pontoons and the referee control tower and hangar space for water sports, ski lift for skiing, a hockey ground, small courts for beach volleyball, a water soccer field, bungee jumping, artificial rocks and terrain for paintball, the ground for people with disabilities, while for the fishermen near the Sava Lake there is the Ada Safari Lake. As various sports are actively trained at Ada Ciganlija, there are two sports federations and 14 clubs here.

For over four fifths of visitors (81%) the reasons for coming to Ada are sports and recreation (Plavša & Dražić, 2012). The total number of tourists who visited the checkpoint TIC Ada Ciganlija during observed period (July – August 2015), was 4622 (Table 3), out of which 3266 are the residents of Belgrade (about three-fourths), 156 tourists are from the region and 1200 are foreign tourists (about a quarter). These data confirmed the hypothesis 3. The average number of informed tourists' weekly is 385, which makes 55 tourists a day. From the first to the eighth week, the number of tourists was constantly growing, and from the eighth to twelfth week it declined.

Table 3. Total number of tourists per week
Data source: The report of the Tourist Organization of Belgrade

Week	Number of tourists
1 st week	252
2 nd week	338
3 rd week	346
4 th week	348
5 th week	453
6 th week	424
7 th week	465
8 th week	520
9 th week	429
10 th week	412
11 th week	333
12 th week	302
The total number of tourists	4622

In the seventh week which lasted from August 8th to August 14th of the year 2015, the last day of the week, August 14th, which was Sunday, was said to have a record number of 203 tourists in just one day. In the week, lasting from August 15th to August 21st of the year 2015, it was informed that there was the largest number of 520 tourists for the whole week. The total number of informed tourists who turned against TIC is 4622; out of which 3266 are the residents of Belgrade (about three-fourths), 156 tourists are from the region and 1200 are foreign tourists (about a quarter). These data confirmed the hypothesis 3. The largest number of visitors at the checkpoint TIC is from Belgrade, but the presence of the tourists from other cities in Serbia was recorded, too. However, in the first, fifth, sixth, ninth, eleventh and twelfth week, domestic tourists were recorded, but not their individual arrival from a place of birth outside Belgrade. The reason is that one of tourist clerks recorded only the total number of domestic tourists, but not their number and the origin outside of Belgrade.

Table 4. The total number of domestic visitors per week (Belgrade and the rest of Serbia)
Data source: The report of the Tourist Organization of Belgrade

Week	Number of domestic visitors
1 st week	184
2 nd week	260
3 rd week	253
4 th week	242
5 th week	285
6 th week	291
7 th week	300
8 th week	330
9 th week	302
10 th week	311
11 th week	268
12 th week	240
The total number of visitors	3266

The total number of residents of Belgrade and domestic visitors who were informed at the desk of TIC, make 70.66% of the total mass of tourists or 3266 tourists (Table 4). The identified number of tourists in the first week was actually 1184. The reason for such a large number of tourists was that one of the tourist clerks distributed leaflets for the event "Ships Carnival" which was held in Belgrade, and thus a significant number of tourists was informed about this event. If we take into account that this was the first week of existence of checkpoint TIC it's not a big mistake to take into consideration that at the checkpoint there were about 184 tourists who were looking for some information. Although the registered number and origin of tourists outside Belgrade is relatively small it is important to know that they were looking for information at the desk of TIC. Of course, it was impossible to record all the tourists if they themselves did not report where they had come from so that a significant number of domestic tourists merged with the visitors from Belgrade. Some of these tourists were in Belgrade as guests, and the others in a one-day visit. The largest number of tourists at the desk of TIC at Ada Ciganlija, who were noted down and weren't from Belgrade, were from Vojvodina: 11 of them from Subotica; 7 of them from both Novi Sad and Smederevo; 4 from each of the following towns: Pančevo, Niš, Bor, Zaječar, Kruševac and Valjevo, while the tourists from other cities were there in a lesser extent (Table 5 and 6).

Table 5. The number of tourists from the rest of Serbia per week
Data source: The report of the Tourist Organization of Belgrade

Week	Number of domestic tourists	The total number of tourists
1 st week	Not counted	/
2 nd week	Bor 2, Banja Koviljača 1, Loznica 1, Kragujevac 1	5
3 rd week	Subotica 4, Zaječar 4, Novi Sad 3, Kragujevac 1	12
4 th week	Kruševac 4, Pančevo 2, Niš 2, Pirot 1	9
5 th week	Not counted	/
6 th week	Sombor, Novi Sad, Pančevo, Kruševac, Niš	/
7 th week	Subotica 7, Sombor 2, Pančevo 2, Ivanjica 1, Šabac 1	13
8 th week	Valjevo 4, Novi Sad 4, Smederevo 4, Trstenik 2, Bor 2, Niš 1	17
9 th week	Not counted	/
10 th week	Smederevo 3, Niš 1	4
11 th week	Not counted	/
12 th week	Not counted	/
The total number of tourists		60

Table 6. The registered cumulative information about tourists from the rest of Serbia
Data source: The report of the Tourist Organization of Belgrade

Town	Number of tourists	Town	Number of tourists	Town	Number of tourists
Bor	4	Novi Sad	7	Ivanjica	1
Banja Koviljača	1	Kruševac	4	Šabac	1
Loznica	1	Pančevo	4	Valjevo	4
Kragujevac	2	Niš	4	Trstenik	2
Subotica	11	Pirot	1	Smederevo	7
Zaječar	4	Sombor	2		
The total number of tourists			60		

Of all the tourists registered at the checkpoint of TIC, the tourists from the region, from the former Yugoslav republics, represent only 3.37% or 156 tourists. However, some of the tourists merged with domestic tourists, since they themselves did not report where they had come from. A number of registered tourists from the region came to visit someone in Belgrade or Serbia, and the other ones were on a tourist trip. Of the total number of the tourists from the region and the former Yugoslav republics at the checkpoint TIC, the most numerous were the tourists from Slovenia (32), then from Croatia (23), from Bosnia and Herzegovina (13), Macedonia (9), and the fewest tourists were from Montenegro (2). The total number of the tourists from the region and the former Yugoslav republics at the point TIC, who were being informed, was 79. The real number of tourists from the region and the former Yugoslav republics, who were being informed at the point TIC, was 156 tourists in twelve weeks. This difference occurred because one of the tourist clerks had not separately classified tourists by country of origin but had merged them all in the total number of tourists from the region. In the total mass of tourists at the checkpoint TIC of Tourist Organization of Belgrade, foreign tourists occupy a significant number or a quarter of all the tourists being informed. This information indicates that during observed period, at Ada Ciganlija, there were many more foreign tourists than tourists from the region (tourists from the former Yugoslav republics).

Table 7. Number of foreign tourists per week
Data source: The report of the Tourist Organization of Belgrade

Week	Number of tourists	Week	Number of tourists
1 st week	63	7 th week	141
2 nd week	64	8 th week	183
3 rd week	87	9 th week	100
4 th week	93	10 th week	93
5 th week	147	11 th week	56
6 th week	122	12 th week	51
Total number of tourists		1200	

According to the report of the Tourist Organization of Belgrade, the total number of foreign tourists being informed at the checkpoint TIC was 25.96% or 1200 tourists (Table 7). From the table 4 it can be seen that the number of foreign tourists is constantly growing from the first to the fifth week, that it varies from the fifth to the eighth week, but still remains high, and from the ninth to the twelfth week it significantly decreases. The highest number of foreign tourists was registered during the eighth week, 183 of them. The first two and last two weeks registered the lowest number of foreign tourists. The most numerous (Table 5), were the tourists from Great Britain (216), then there were quite a lot of them from Germany (71) and France (57), while the tourists from Russia,

Italy, Spain and Sweden were of almost equal number - slightly more than 30 tourists. At the checkpoint TIC, there was a significant number of tourists from overseas countries, as well, USA (23) and Australia (19). There were 10 tourists from China (Table 8).

Table 8. The registered number of tourists and their origin
Data source: The report of the Tourist Organization of Belgrade

	Country where tourists come from	Number of foreign tourists
1.	Great Britain	216
2.	Germany	71
3.	France	57
4.	Russia	36
5.	Italy	33
6.	Spain	32
7.	Sweden	31
8.	USA	23
9.	Austria	20
10.	Australia	19
11.	Greece	18
12.	Ireland	16
13.	Czech	15
14.	Netherlands	14
15.	Turkey	13
16.	Switzerland	12
17.	Belgium	11
18.	China	10
19.	Canada	8
20.	Norway	7
21.	Slovakia	7
22.	Finland	6
23.	Syria	5
24.	Israel	5
25.	New Zealand	4
26.	Romania	4
27.	Argentina	3
28.	India	2
29.	Portugal	2
30.	Hungary	2
31.	Bulgaria	2
32.	Poland	2
33.	Iraq	1
34.	Island	1
35.	Pakistan	1
36.	Denmark	1
37.	Ukraine	1
38.	Ecuador	1
Total number of tourists		712

CONCLUSION

The most important urban tourist destinations in Serbia are the main administrative centers, Belgrade, Novi Sad and Niš. Thanks to the favorable tourist and geographical position, natural values in the area, a rich cultural and historical heritage

and a solid material basis, these urban centers develop various forms of tourist movements. Therefore, it is necessary to make the analysis of tourist turnover, in order to highlight the main directions of tourism development (Cavus & Tanrisevdi, 2002; Andriotis & Vaughan, 2003; Harrill, 2004; Byrd, 2007; Deng et al., 2014).

The residents of Belgrade and domestic tourists represented about 70 per cent of all the tourists in Ada Ciganlija recreational center, the tourists from the region (from the former Yugoslav republics) represented more than 3 percent, while there were about 25 percent of foreign tourists. As for the domestic tourists at Ada Ciganlija, most of them were the residents of Belgrade, although residents from other cities in Serbia were registered, as well. Tourists from Slovenia and Croatia were the most numerous tourists from the region, while the most numerous foreign tourists were the ones from the United Kingdom. Since the foreign tourists represented a quarter of all the tourists, it indicates that there is a significant presence of foreign tourists at Ada Ciganlija (the Sava Lake), but it also points to the need of long-term planning (Latkova & Vogt, 2012; Tuzunkan, 2018) of marketing activities for this area so that it would become one of the first planned landscapes to be visited by foreign tourists (Harvey et al., 1995; Jurowski et al., 1997; Lindberg & Johnson, 1997; Mason & Cheyne, 2000; Teye et al., 2002; Nunkoo & Garsoy, 2012; Sharma & Gursoy, 2015; Sinclair-Maragh et al., 2015), not only in summer, but during other seasons, as well, which would have a positive effect on the economic growth plan (Dieke, 1989; Ap, 1992; Lankford & Howard, 1994; Gursoy et al., 2002; Deery et al., 2012).

Besides economic effect, Ada Ciganlija, as any other picnic and recreational area (Fisher & Arnold, 1994; Haralambopoulos & Pizam, 1996), has a significant value regarding the health (Plavša et al., 2014), of the population that visits it. Further expansion of tourism facilities and better availability of information, as is the creating of the map of Ada, with all the existing facilities, as well as the existence of a checkpoint information would raise the quality of service and even greater attendance would be achieved (Long & Kayat, 2011; Wang, 2013). The main finding of the paper is that, in general, the prediction intervals from the ARIMA model generate prediction intervals with desirable statistical properties, at least in the context of tourism forecasting.

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GEOSITES AS A POTENTIAL FOR THE DEVELOPMENT OF TOURISM – OVERVIEW OF RELEVANT SITES IN ESWATINI (FORMERLY SWAZILAND)

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Abstract: Despite being one of the smallest countries in Africa, the Kingdom of Eswatini (formerly Swaziland) is characterized by many locations, which are due to their geoscientific significance to be termed as geosites, and which are here in an overview presented and briefly explained. Each of them can be assigned to a specific scientific approach, e.g. as a landscape, a geological, a geomorphologic, an archaeological (prehistoric) or a mining heritage site. Eswatini yields remarkable landscapes like the Mahamba Gorge and the Sibebe Monolith, it exhibits worldwide one of the largest in granite formed caves (Gobholo), and possibly the oldest dated rocks in Africa (Piggs Peak gneisses), as well as beautiful and scientifically relevant rock painting sites (Nsangwini, Sandlane and Hholoshini) and three abandoned mines in the Barberton Greenstone Belt (Forbes, Ngwenya and Bulembu). The latter have contributed largely to the infrastructural development of the country. The geotouristic value of the respective sites is evaluated and commented, and it is assumed that in future these and other, here not yet mentioned geosites, may contribute to income generating processes for the country and the local communities.

Keywords: Eswatini (Swaziland), geoheritage, geosites, geology, geomorphology, archaeology, mining, geo-tourism.

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INTRODUCTION

Landlocked Eswatini (renamed from Swaziland in April 2018) is located in Southeast Africa between South Africa bordering to the North, West and Southeast, and Mozambique to the Northeast (W: 30° 47', N: 25° 34', E: 32° 08', S: 27° 18'). It covers an

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area of 17,364 km² and has a population of about 1.3 Millions, with an annual growing rate of about 1.2 %. Its GDP per capita is with 9.715 US \$ in the lower middle range. Average life expectancy is with about 50 years (2015) due to the HIV/AIDS epidemic one of the lowest worldwide (Schlüter, 2013; Schlüter & Tevera, 2016). The country can be separated into four geographical regions, which are from west to east determined by altitude: Highveld (average altitude 1200 m), Middleveld (700 m), Lowveld (250 m) and Lubombo Ridge (600 m). Geographic data are summarized by Schlüter (2008). The primary premise of conservation is the protection of heritage. Geoscientific conservation involves recognising, protecting and managing sites, which may be identified as important for their rocks, minerals, fossils, landscapes, various archaeological (prehistoric) features or as former mining sites. Geoconservation or Earth heritage conservation is the broad term that refers to all aspects of conservation, the protection and management of geological, geomorphological, archaeological /prehistoric and mining related landscapes and soil sites. It is the endeavour of trying to conserve geodiversity and geoheritage (Schutte, 2009). Geosites represent places or locations where the dynamics of the Earth and the resulting geological, geomorphological and human-made features are exceptionally well indicated and preserved, sometimes yielding aesthetic landscapes or geo-historically relevant places. Often such sites have the potential of economic income in the form of “Geotourism”, and they may therefore also serve for the purpose of education about environmental protection and nature conservation (Viljoen & Reimold, 1999).

GEOHERITAGE IN ESWATINI

“Geoheritage” is generally a descriptive term applied to sites or areas of geoscientific features with significant scientific, educational, cultural and/or aesthetic value (www.geo.mtn.edu). The following four sub-categories of geoheritage are here considered being relevant and available in Eswatini: sites with 1) geological, 2) geomorphologic, 3) archaeological (prehistoric) and 4) mining heritage background.

Geology

The country`s surface geology is dominated in its western part by rocks of Precambrian – mostly Archaean – age, i.e. of rocks that are more than 2.5 Ga old, whereas outcropping rocks in the east are of sedimentary and volcanic origin of younger Palaeozoic (= Karoo) age. There are two gaps in the stratigraphic record ranging 1) from Proterozoic to the Carboniferous, and 2) from at least Jurassic to Cenozoic times. The predominant rock types in the west are of metamorphic origin (mostly gneisses), but sometimes igneous and sedimentary rocks appear also on the surface (Brandl et al., 2006; Schlüter, 2008). Geosites with pure and entirely geological background are comparatively few and rare in Swaziland (Figure 1).

Geomorphology

Eswatini is embedded in south-eastern Africa`s landscape, which comprises a narrow coastal plain, separated from the inner southern African plateau by a horseshoe-shaped escarpment. The drainage network of southern Africa is characterized by three divides, broadly parallel to the coastline. The drainage divides have been interpreted as axes of epeirogenic uplifts. The ages of these uplifts, which young from the margin to the interior, correlate with spreading regimes in the oceanic ridges surrounding southern Africa, suggesting an origin from stresses related to plate motion. Successive uplifts were focused along these axes, which initiated cyclic episodes of denudation, to be coeval with erosion surfaces recognized elsewhere in Africa. There are numerous specific landscapes in Swaziland that can be designated to episodes of these processes and may therefore represent geosites as overviewed and reflected in the following paragraph (Schlüter,

2008; 2010). The mountainous Highveld of Eswatini is characterized by steep slopes with an average gradient of 17 %. Due to heavy – often human-caused – erosion in the past, the hilly areas are now dominated by rock outcrops and stony ground. Most streams are perennial and the riverbeds are generally stony as a consequence of the floods of the rainy seasons. The natural vegetation of the Highveld consists of short grassland covered by bushes and small trees interspersed with rock-outcrops.

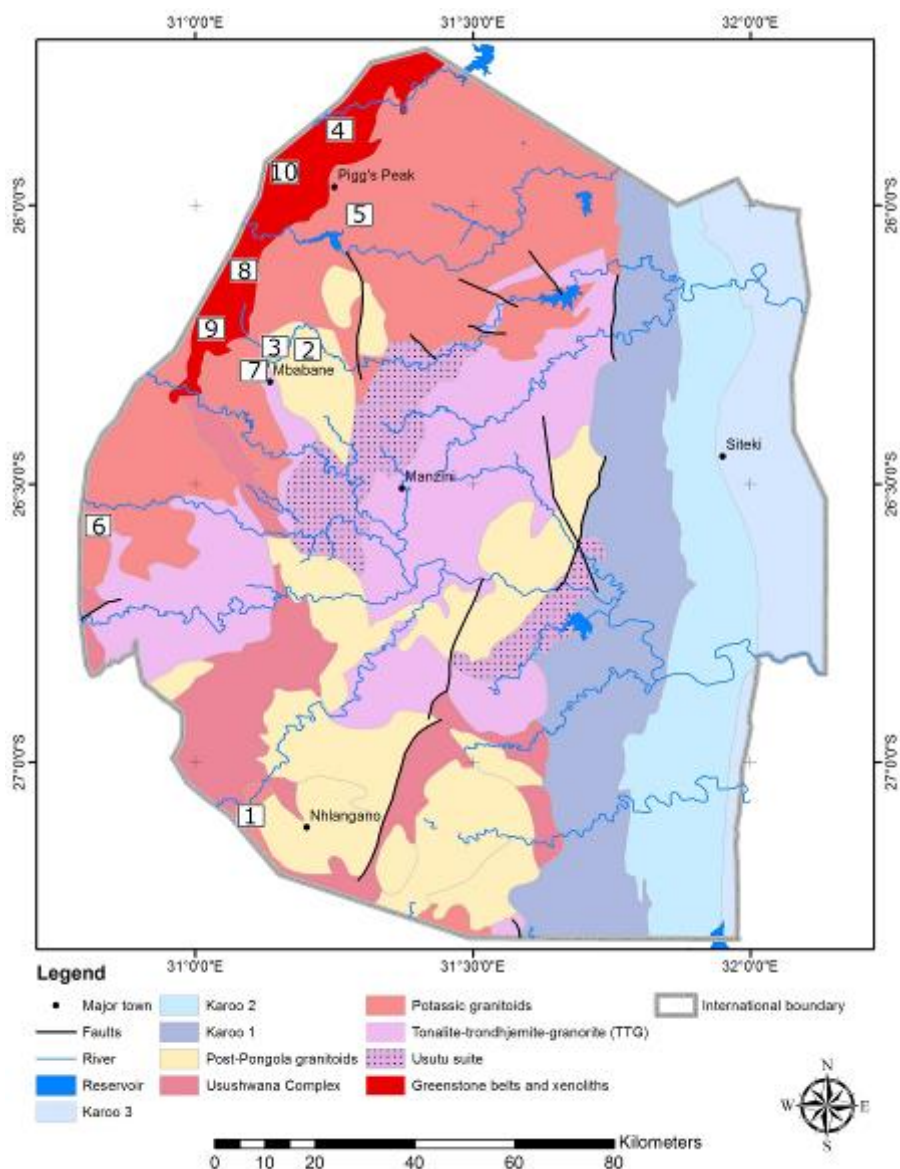


Figure 1. Geological overview map of Eswatini (formerly Swaziland) (modified after Schlüter, 2008). The numbers indicate the following geosites: 1: Mahamba Gorge; 2: Sibebe Monolith; 3: Gobholo Cave; 4: Piggs Peak gneisses; 5: Nsangwini rock paintings; 6: Sandlane rock shelter and paintings; 7: Hholoshini rock shelter and paintings; 8: Forbes former gold mining deposit; 9: Ngwenya iron ore deposit; 10: Bulembu former asbestos mine

Wet grassland systems and spots of temperate forests can also be found, mostly in the valleys. The land has been inhabited for a long time, implying that the present vegetation is a consequence of earlier land use (with long-term grazing and fire periods). The Middleveld comprises rocks hills with granite outcrops, rounded ridges and hills with frequent valley slopes. The riverbeds generally consist of pebbles, gravel and sand. The vegetation is a mixture of temperate and tropical elements. In the Lowveld, topographic features are made of rounded ridges with gentle slopes. Around the rivers, narrow terraces composed of river alluvium occur frequently. The riverbeds mainly contain sand, but patches of gravel, pebbles and hard rock also exist. Originally the natural Lowveld vegetation consisted of woodland, dominated by large trees, but has now largely been deforested.

Archaeology and Prehistory

Archaeology is methodologically often practised and almost understood as a synonym of the term prehistory, which literally means to analyze the history of people whose cultures are lacking written documents. But sometimes archaeology includes also cultures that have invented some kind of hieroglyphs or other letter types that could be deciphered later and are thus telling us more about the history of these cultures. In Eswatini, however, human records before colonial arrival are only found without any written documentation, and their evidence is therefore largely based on the geo-environmental context in which human sites were preserved. Based on the information now available, the archaeological or prehistoric record of Swaziland may possibly go deep into the early Pleistocene, i.e. about 2 to 1.5 Ma ago. Isolated artefacts of a probable Oldowan stone tool industry were found among high-level Pleistocene river gravels (Price Williams, 1980; Watson & Price Williams, 1985), which almost exclusively consist of quartzite and contain numerous crudely manufactured unifacial and bifacial chopping tools. No exact dating of this surface material is possible, but in analogy with the southern and east African dating of the Developed Oldowan artefacts an age of at least 1.5 Ma can be postulated. The more advanced Acheulean handaxe culture lasted from about 1.5 to 0.5 Ma and is characterized by better manufactured cleavers and choppers, which are found throughout northern Europe, western Asia, India, Indonesia, and also in large quantities in southern and East Africa. In Eswatini, Acheulean stone age sites occur for instance along the river terraces of the Komati valley, where sometimes large handaxes and cleavers were found (Masson, 2011). Apart from these remains also rock painting sites represent valuable geosites, which were used by human ancestors as shelter and for ritual purposes. The latter sites are often under threat of human-caused pollution and vandalism.

Mining Heritage

Another example of geosites is represented in former mining sites, which for instance in South Africa have already lost their original industrial function, but are currently turning to tourism for heritage preservation, regional revitalization and wider education. This in turn may serve for economic development of the surrounding communities. Eswatini was in its near past a substantial producer of asbestos, iron ore, gold and tin, but currently (2018) the mining industry accounts altogether for less than 2 % of the Gross Domestic Product (GDP). As a conclusion most of the old mining sites were abandoned, but are now often used as waste dump sites, thus being an eye sore in the larger landscape and contributing to environmental pollution. Therefore an alternative use in the context of geoheritage conservation seems often possible or even necessary.

EXAMPLES OF REMARKABLE GEOSITES

Landscapes and Exceptional Rock Sites

This magnificent gorge lies west of the small town of Nhlangano off the tarmac

road to the Mahamba border point with South Africa. A few kilometres before the border gate one has to turn right and pass the Gothic style Methodist church, which was built in 1912 and is the country's oldest intact place of Christian worship (Figure 2). It has been thoughtfully restored and preserved over recent years, with a display board outlining the establishment and development of Christianity in Eswatini/Swaziland. The stony material used for building of the church comes largely from sandstone of Karoo age outcropping not far away in the west and south of the Mahamba gorge.



Figure 2. Mahamba Methodist Church, the oldest in Eswatini built church (1912), in 2016 by his Majesty, Mswati III, declared a National Monument



Figure 3. Mahamba Gorge near Nhlanguano in SW-Eswatini. Exposed are on its sides quartzites of Mesoarchaeon age of the Pongola Group

The gorge itself is cutting through Mesoarchaeon quartzites of the Mozaan Group, which is part of the Pongola Supergroup leaving behind an impressive landscape where hiking is possible along a marked footpath with breathtaking views of the scenery.



Figure 4. Sibebe Monolith in central western Eswatini, seen from its eastern flank. The rather homogenous porphyritic granite has a Neoarchaeon age



Figure 5. Rounded boulders inside of the Gobholo Cave along the flank of the Sibebe Monolith. Were these formed in situ or by movement? (M. Filippi, 2017)

Just 10 km east of Mbabane, the capital city of Eswatini, this large, rather homogeneous porphyritic granite monolith of probably monzogranitic to granodioritic composition is exposed. On the geological overview map of Eswatini/Swaziland this monolith is forming part of the Mbabane Pluton. The pluton or batholith formed deep in the Earth's crust during Neoarchean times, some 2.6-2.7 Ga ago, as evidenced by radiometric age determination, and was later exposed to the surface due to tectonic

forces. Now it reaches an altitude of 1488 m a.s.l. In Eswatini it is assumed that the Sibebe dome after Ayers in Australia is the second largest in the world, which is debatable, but surely it is one of the biggest granitic monoliths at least in Africa. From top of the Sibebe rock a nice stunning, panoramic view is guaranteed. Hiking tours are periodically organized by the Natural History Society of Swaziland. Rather small but beautiful rapid falls appear at the foothill of Eagles Rock cutting through the Sibebe porphyritic granite. And not to forget: The most famous beer brand of Eswatini is named after the Sibebe rock. Though the adventure agency Swazi Trails, which is run by its CEO Darron Raw in Ezulwini, central Eswatini, has offered cave visits at Ghobolo for almost 20 years, not much is yet known about this site, located near Mbabane along the margin of the Sibebe Monolith (Figure 4) in largely granitic rock formations. The only scientific publications were presented by Sjöberg (2011) and Scheurer et al. (2013), who had organized expeditions into the cave and reported about their results. Research is currently undertaken by the University of Swaziland (since 2017) and a group of Czech speleologists, who visited the cave in October 2017. The Gobholo River sinks underground in the upper part of the Gobholo Valley. From there it flows nearly 1.8 km underground until it exits in resurgence in the lower part of the valley (Scheurer et al., 2013). Another source of moderately warm water in the Gobholo Cave has been recorded somewhere in a small middle passage of the cave, thus indicating possible influences for its formation from local thermal waters. There are two different theories for the origin of the cave (Scheurer et al., 2013). The cave is simply a huge talus cave, formed by boulders that have gravitationally been transported from the side of the valley, or (2) it is formed by deep weathering of the granite, and the boulders are therefore in situ. Most significant in the cave are numerous speleothems, forming different morphologies. Common are coralloids and flowstones, but also draperies do occur. No real stalactites and stalagmites have been found. Apparently the cave was sometimes inhabited by humans as indicated by isolated pottery findings. But scientific analysis has not yet been carried out.



Figure 6. Road cut exposure of Pigg's Peak Gneisses of Eoarchean age, probably the oldest dated rocks in Africa (about 3.5 Ga), north of Pigg's



Figure 7. Rock paintings at Nsangwini showing an elongated human figure between two wildebeest

Probably the oldest dated rocks in Africa are found north of Pigg's Peak (Figure 6) along a road cut, and comprise of dated Eoarchean (ca 3.65-3.64 Ga) gneisses and migmatites of the Ancient Gneiss Complex, which is called Ngwane Gneiss on the older geological overview map of Eswatini (Brandl et al., 2006). Around 3.5 Ga ago was the time when continents started to form from the isolated cratons. It must have been a very un-pleasant time, since simple life on Earth only begun to develop around the

same time or slightly later on this planet, as evidenced by Protozoan microfossils found in almost un-metamorphosed rocks of the Fig Tree Group of the Barberton Belt in South Africa. Rocks of this unit are also exposed in NW-Eswatini, but fossils were not yet recorded from those (Ferrar & Heubeck, 2013).

Archaeological Sites, with emphasis on Rock Painting Sites

The three archaeological sites of Eswatini here in this review designated and incorporated as remarkable geosites are exclusively places of shelter for humans who used these locations for ritual purposes, especially in documenting their abilities in painting. Altogether at least 31 places are in Eswatini recorded where rock art has been found (Masson, 2011), but many sites are now in rather poor condition, often due to defacing by graffiti or other human caused vandalism. Better conservation measures are urgently needed. Masson (2011) has stated that more than 90 % of the paintings (28 of 31) are situated on granitic country rock, whereas only two are shown on quartzite and one on gneiss. The majority of these sites are located in the western part of the country. The Nsangwini (Figure 7) site is the most famous rock painting site in Eswatini. It is sign-posted from both the Piggs Peak and Maguga Dam roads. A kiosk with an office at the end of the dirt road provides parking places and guided tours to the location in a walking distance of about half an hour. The site is a concave shelter. There are paintings of elephants in red outline, two blue wildebeest with an elongated human figure between them and a sole wildebeest at the bottom of the panel. There are also fat-tailed sheep in black, together with human figures also in black. This site contains the only depiction of felines in Swazi rock art, probably two lions. Below them on the same rock panel are a group of antelopes, including at least one eland. Human figures are either of the “match-stick” type (Masson, 2011), but most unusual at this site are two winged figures, which were after their first publication (Masson, 1961) even featured in Eswatini’s postage stamps. Nsangwini apparently contains the most diverse subject matter of all rock art paintings in the country.



Figure 8. Rounded granitic rock shelter at Sandlane with painted animals, just being in the process of vandalism as a local guide throws water on them for better visibility, but thus contributes to increased erosion



Figure 9. Two probable land animals painted on the Sibebe porphyritic granite at Hholoshini, also influenced by natural as well as human-caused erosion

The Sandlane (Figure 8) site in the south-west of Eswatini, close to the South African border, represents partially a rounded outcrop of granite, but smaller than a doomed structure, which has been split both vertically and horizontally to become a pile of boulders containing cave-like hollows and passages (Masson, 2011). Among various others, there is one animal painted, which the people of the Swazi homesteads nearby have identified as a

donkey. Just below it is another “donkey” with an exfoliated head. But these animals represent probably zebras or perhaps the extinct quaggas. For better visibility the local guides are pouring water on the paintings, which definitely contributes to increased erosion of these rock art paintings. The Hholoshini (Figure 9) site has not been referred to by Masson (2011) and can only be traced with a local guide, near the Pine Valley road close to Mbabane. The paintings are hidden in an overhang shelter of large isolated boulders and drawn on the Sibebe porphyritic granite. The red paintings show animals, probably cattle and humans. However, the drawing of humans can only be guessed, since the site faces the threat of vandalism. Additionally, part of the paintings are already covered with a film derived from weathering solutions. Furthermore our generation added its own graffiti writings, hence the site can already be regarded as a partially vandalized location.



Figure 10. Former gold mining deposit Forbes inside the Malolotja Nature Reserve in NW-Eswatini, which may be rehabilitated for both geotouristic and commercial purposes

Mining Heritage Sites - Forbes Former Gold Deposit (Figure 10)

Gold production was always sporadic in Eswatini and prior the Boer War in South Africa (1899-1902) only mines in the Forbes Reef area attained consistent production. Gold was first discovered in the Piggs Peak area in 1883 or 1884, by members of the

Forbes family. Forbes Main Reef produced in 1886 about 100 ounces of gold per week, but a few years later it totalled to more than 2,000 ounces per month. After some booming years all commercial work ceased in 1913, largely due to missing infrastructure as the ore had still to be brought to neighbouring South Africa. The Forbes Reef Mine finally closed down in the 1950s. On the other hand it has to be considered that Eswatini owes its initial infrastructural development from the mid-1880s till the 1950s largely to gold mining in the Hloho District, especially the mines located at Piggs Peak and Matsamo. It was proposed by MinEx Associates, a South African based mining company, to investigate, clear and develop the Piggs Peak Mine as a National Heritage monument and educational site for tourists and the Swazi nation (Schlüter, 2013). There is still some hope that the Piggs Peak Mine may also be reopened as a production mine. It operated intermittently from 1913 to the 1950s, but was after the initial few years never profitable – despite huge investments. MinEx has promised that there will be no conflict of interest if commercial gold mining will start again there. A tourist attraction can work alongside a production facility (what may still be debated). Certain outcomes in preparing new mining facilities must initially be postulated, for example stringent control of environmental issues are necessary. Additionally, the history and relics from the past have to be recovered and restored before a new mine could destroy their evidence forever. It has also to be considered that the Forbes former gold deposit is located inside the Malolotja Nature Reserve. Currently investigations on the potentially most viable exploration and exploitation site for gold point to the Lutfu area, also close to Piggs Peak.

Former Ngwenya Iron Ore Mine (Figure 11 and 12) is located on the Bomvu Ridge, about 20 km NW of Eswatini's capital Mbabane. It is a sedimentary iron ore deposit and was formed during Precambrian times, around the boundary between the Archean and the Proterozoic, i.e. 2.5 Ga ago. Its sedimentary stratification is conversantly defined as Banded Iron Ore Formation (BIF), or according to similar deposits in Brazil also as itabirites. This means a fine-grained ferruginous layer is succeeded by a much lighter jaspilitic layer, followed again by a darker ferruginous layer, and so on. However, the Ngwenya iron ore layers are generally not more in their originally horizontal position, but have been tilted (sometimes into an almost vertical position) and folded, indicating various tectonic overprints since their deposition. The area of the Bomvu Ridge was first explored in 1946, when the Geological Mines and Survey Department started prospecting in the Ngwenya Massif (Hunter, 1961). However, it had already been identified as an economically viable deposit in 1889, but had apparently been forgotten for more than 50 years. By 1957 prospecting operations had started and reserves of ore were identified in the range of 30,000,000 tons, with a mean value of about 60% metallic iron content.

After various infrastructural efforts commercial production of iron ore started in 1964. By 1977 the richer ores in the centre of the deposit had all been extracted, and there remained laterally on the flanks only those ores ranging from 25 to 50% iron content. By 1980 about 20,000,000 tons of the high-grade hematite had been removed, including all the stockpiles previously assembled. The mine closed in 1980.

As still can be seen in the field and was in detail interpreted from aerial photographs of the site, large tailing deposits of iron ore are located especially along the eastern part of the industrial mining site, but are also concentrated at various other places in the area. From 2011 to 2014 these were again commercially exploited, but especially acid mine drainage polluted heavily the streams originating from the Ngwenya Massif, which essentially contribute to the water supply of Eswatini's capital Mbabane (Fadiran et al., 2014; Thwala et al., 2014). Also floral and faunal impacts due to the new mining activities in the Malolotja Natural Reserve, of which Ngwenya is part, were unavoidable.

Another argument for declaration of Ngwenya as a geosite (or even a World Heritage Site: Schlüter & Schumann, 2016) is related to archaeology: Several Stone Age artifacts made of dolerite – a material which does not occur in this area – have been found in the mine during its industrial exploration in the 1960s and 1970s. These tools are more specialized than others normally found on a Stone Age site, e.g. choppers, picks and hammer stones, and were therefore identified as mining tools (Dart & Beaumont, 1967). Radiometric dating of charcoal nodules associated with these presumable mining tools indicated between 41,000 and 43,000 years as age for their deposition (Dart & Beaumont, 1971), thus Ngwenya may currently represent the oldest iron ore mine in the world. Red ochre from Ngwenya was extracted by ancestors of the San people and used either for ritual purposes or in rock paintings. By about 400 to 600 AD, pastoralist Bantu tribes had arrived, who were familiar with the smelting of iron ore (Figure 11), and who probably traded their metallic iron widely through the southern part of the continent. These together with the previous San people produced therefore evidence of early iron ore mining, which has led to a gradual change of tools in the region from stone tools to iron tools. Despite this legacy it is due to the recent exploitations of its tailings doubtful if Ngwenya will achieve the official status of a World Heritage Site (Schlüter & Schumann, 2016).



Figure 11. Former iron ore deposit Ngwenya here exhibiting what was exploited till the 1970s, mixed with large deposits of tailings that were from 2011 to 2014 resourced



Figure 12. Reconstruction of ancient iron ore smelting by indigenous Bantu people shown in the Ngwenya visitors centre

The former Havelock asbestos mine is located at Bulembu close to the border of South Africa in north-eastern Eswatini, at the foot of the country's highest mountain, Emlembe (1833 m). The rugged topography in this area is due to the underlying geology, which is part of the ancient Barberton Greenstone Belt and juxtaposes in its folded and faulted rocks soft volcanics and extremely hard, weathering-resistant cherts and sandstones. These and other rock units form some of the world's oldest, relatively unmetamorphosed strata, which have yielded abundant information on the early history of our planet worldwide and were the main reason to designate the Barberton-Makhonjwa Geotrail, an assemblage of geosites explained in detail in the brochure of Ferrar, Heubeck (2013). Chrysotile asbestos, associated with serpentinite in a shear zone about 1 km wide, was mined at the Havelock mine next to Bulembu from 1939 to 2000. Chrysotile, also known as "white asbestos", is the least dangerous of the six fibrous or asbestiform minerals commonly known under the name asbestos. The crushed and milled ore was transported via a cableway (at its construction the world's longest aerial ropeway) across the mountain to the Barberton railhead in South Africa for export. Haveloch was once the world's fourth-largest deposit of its kind. The versatile use of asbestos allowed for profitable mining until the end of the last century when it was gradually replaced by other materials. The mine was

sold in 1999, the new owner promptly went into bankruptcy, and Bulembu became a ghost town. The previous activities left three large, un-remediated serpentinite tailing dumps in topographically unfavourable, elevated position (Figure 12) – open to weathering and erosion, which contain about 4 % of fine-grained Chrysotile fibres (Heubeck, 2017).



Figure 13. Large tailing deposits in the centre of Bulembu town



Figure 14. End-station of the cableway in Bulembu for the transport of raw asbestos to Barberton in South Africa. The building in the right is now housing the Bulembu Museum

A Christian non-profit ministry (Bulembu Ministries Swaziland – BMS) purchased the village and surrounding infrastructure in 2006 and is now running a large orphanage on behalf of the Eswatini government, moved into the abandoned Bulembu village, gradually restored many buildings and developed a number of side businesses mostly for training purposes. But the slopes of the steep tailings are still extending literally into the backyards of several buildings. Unfortunately during the past two decades it was not yet possible to re-grade the slopes or even to apply a soil cover over these. The following potential hazards remain vibrant: (1) Air contamination by short asbestos fibres on windy and dry days can never be completely excluded. (2) Mass failure of the steep dump slopes into the adjacent drainage may threaten the watershed emanating from the former mine, which flows into the Lomati River and from there into the Maguga dam reservoir (Heubeck, 2017). A museum was constructed and opened in Bulembu in 2012, largely due to the private initiative of Bob Forrester, which is housed in the old cableway station (Figure 13) and focuses in its exhibition on various environmental issues in this area. All the old machinery used during the exploitation of the mine is here shown including a comprehensive display of the former mining activities, life in a remote small town during colonial times and the natural history of the former mine's surroundings (Forrester, 2009). According to a recent press statement (Times of Swaziland, 17 July, 2017) the tailings were sold to a Mauritius-based and South Africa-owned company, which is planning to mine the dump tailings by dissolving the serpentinite in sulphuric acid and thus producing magnesium sulphate (epsomite or Epsom salt) for sale plus the clay mineral brucite and silica as a residue. Questions remain if the recovered ore, which may additionally include exploitation of numerous minor and dormant gold deposits in the region, will contribute to enough valuable profit of this endeavour. Also the design of the remaining clay tailings is not yet clear. Currently the all-weather road from Piggs Peak to Bulembu (18 km) is still in bad condition, but its transformation into a tarmac road was recently announced in a press statement. These questions gain now particular weight because Bulembu is located next to a planned World Heritage Site on the South African side of Eswatini's border, where a major geo-touristically paved road beginning in Barberton is exhibiting unique geological examples from the early history of planet Earth. Bulembu may in this context serve as the end of this geo-trail, but represents one of the

touristic highlights of it (Ferrar & Heubeck, 2013). The geo-trail is equipped with well-designated geosites and viewpoints till Bulembu on its South African part.

DISCUSSION

Most of the geosites here presented are located in the western part of the country – none of them is yet indicated in eastern Eswatini (see Figure 1). What may be the reason for this curious fact? Answers arise from geological, geomorphologic and even archaeological background information: The rugged and mountainous land scenery in western Eswatini exposes per se a beautiful landscape. The Barberton Belt with its extremely diversified and ancient geological formations is embedded in the north-western Eswatini landscape. Additionally, more than 90 % of the 31 archaeological sites (rock painting sites) mentioned by Masson (2011) are located in granitic rock outcrops, which are primarily found in western Eswatini. Finally, the mining heritage sites here presented are also all part of the Barberton Belt. Despite this current concentration of enumerated geosites in western Eswatini, in future additional sites may also be described from other parts of the country.

CONCLUSION AND RECOMMENDATIONS

From the examples of geosites in Eswatini here presented, it can be concluded that a sustainable geotourism approach implies that the natural, cultural and other recourses of tourism in Swaziland should be conserved for continuous use in the future, sometimes already currently bringing benefits to people in their surrounding communities. Most of the here presented examples of geosites are not only significant for a single natural scientific approach, but include also aspects of cultural identification. This joint approach is very important because development in geotourism depends largely on attractions and activities not only related to the natural environment, but often to the historic heritage and cultural patterns of the respective area (Schutte, 2009). When the original georesources are destroyed or degraded, then the geotouristic destinations will not more attract tourists. But Tourism remains an underlying force in sustainable development of the African continent (Sifolo & Henama, 2017).

As here exemplarily indicated, some of the Swazi destinations (especially rock paintings, see Figure 8) are already under threat of vandalism, pollution or congestion. The majority of geotourists seek destinations that have a high level of environmental quality simply because they like visiting places that are attractive, clean and neither polluted nor congested. Additionally, one of the most important benefits of geotourism is that, if the respective areas are properly developed and based on the concept of sustainability, geotourism can greatly help to justify and pay for conservation of this area's natural and cultural resources. But as already outlined by Reimold et. al (2006), Swaziland needs to market its natural and cultural assets more broadly by addressing the educational tourism market more effectively. The country hosts some very spectacular geo-heritage sites not only representative for Africa, but for the whole planet Earth. Even the few examples here presented are sufficient to illustrate that Swaziland has a great potential as a destination for tourists to help understanding many aspects in the history of planet Earth, and how its human population has developed and managed to survive on it.

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GEODIVERSITY AND GEOCONSERVATION OF THE CHAIYAPHUM REGION IN THAILAND FOR SUSTAINABLE GEOTOURISM PLANNING

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Abstract: Chaiyaphum region in the westernmost edge of Khorat Plateau is the most famous natural land of northeastern Thailand. There are many spectacular landforms such as cliffs, pillar or pedestal rocks, and cascades. The selected geosites are located in Pa Hin Ngam, Sai Thong, Tat Ton and Phu Laen Kha National Parks and are covered by the Jurassic-Cretaceous (50-100 Ma) clastic sedimentary rocks of the Phra Wihan Formation, Khorat group. Based on geodiversity, scope and their values (scientific, tourism, natural, and aesthetic values) which are analyzed from field investigation data suggest this area is a highly valuable part for geotourism development. Promoting geotourism will help tourists understand the geological processes and realize the importance of the geomorphological heritage conservation. This research is the first step of geotourism announcement of the studied area, which is a powerful tool for sustainable economic and scientific development at both local and national scale.

Key words: Geodiversity, Geoconservation, Geotourism, Chaiyaphum, Thailand, Sustainable Development

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INTRODUCTION

The spectacular landforms, valuable Earth materials and rare geological phenomena can be tourism attractions all around the world. The values include scientific, aesthetic, economic, historical, cultural and functional values of the geoheritage. Geological concepts are developed from the potential geological attractions that focus on characteristic geological features (Gray, 2005; GSA, 2012; Nazaruddin, 2016). The

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geotourism is referred to as a form of tourism, which focused primarily on the geology and landscape in the natural area (Gray, 2011; Newsome & Dowling, 2010; Hose, 1995, 2000). It is the new trend within the last two decades and promotes geological heritages and geoscientific knowledge to people (Demarest, 1997; Liebowitz, 1999; Hose, 2008, 2012; Reynard, 2008; Ruban et al., 2010; Henriques et al., 2011; Wimbledon & Smith-Meyer, 2012; Gray, 2013; Prosser, 2013; Reynard & Coratza, 2013; Ruban, 2015; Brilha, 2016; Neches, 2016; Mikhailenko et al., 2017; Sallam et al., 2017). In addition, it is the new form of tourism and research in Northeastern Africa, Western Asia, and Southeast Asia especially Thailand, which will help the economic and scientific development both at local and national scale (AbdelMaksoud et al., 2018; Habibi & Ruban, 2017, 2018; Habibi et al., 2017; Sallam et al., 2017, 2018a, 2018b;). These relevant issues in Thailand were discussed, for instance, by Singtuen and Won-In (2017, 2018). Geotourism can be a threat to the geoheritage resources, due to its ability to increase visits to this area without sufficient protective regulations, could eventually mean a ruination of the geosite. However, an efficiently managed geotourism is a beginning process to sustainable development.

Geosite is any site with the feature or landform that contains significant geodiversity and indicates these high geodiversity values (Wimbledon, 1996; Komoo, 2004). In 2011, ProGEO defined geosite as an area shows geological features with scientific values and make people understand the geologic processes and the evolution of the Earth. In addition, geomorphosites is defined as any site, which particularly applies to highlights the distinctiveness of scientific and additional values especially geomorphological interest (Panizza 2001; Reynard et al., 2007). According to many kinds of research (Ruban, 2005, 2010; Ruban & Kuo, 2010; Neches, 2016), geosite were identified into 21 types as cosmogenic, economic, engineering, geochemical, geocryological, geohistorical, geomorphological, geothermal, hydrological and hydrogeological, igneous, metamorphic, mineralogical, neotectonical, paleogeographical, paleontological, pedological, radiogeological, sedimentary, seismical, stratigraphical and structural types. The Chaiyaphum Province means “The Land of Victory” and is the gateway to northeastern Thailand. The Chaiyaphim region was a small town of the Khmer Empire in the 12th century and was settled between Angkor and Prasat Singh by Laotians in 1817. This region is located in the Phetchabun Mountain Range, which was originally paleo-Tethys between Shan-Thai and Indochina Terranes and closed in Permo-Triassic Period (Kamvong et al., 2006; Boonsoong et al., 2011). Because this area is a part of the suture zone, many structures are presented such as faults and folds. It is mostly covered by Triassic-Tertiary sedimentary rocks of the Khorat Group and Permian Limestone, with a small amount of Permo-Triassic Volcanic Rocks (Figure1). However, all of the geosites are located in the Phra Wihan Formation, which is a sedimentary rock formation of the Khorat Group. These geosites show the uniqueness and rarity of geological features in this region and have high scientific values. The geosites in the Chaiyaphum region are divided into three groups such as cliffs, pillars, and cascades that are distributed in 4 National Parks; (1) Pa Hin Ngam, (2) Sai Thong, (3) Tat Ton, and (4) Phu Laen Kha.

The Phra Wihan Formation comprises fine-coarse grained pale yellow sandstone, siltstone, mudstone, and conglomerate. They show well-sorted and rounded grain. Most of the detrital grains in sandstone are quartz. Thick sandstone beds occurred as high cliffs were deposited in braided stream environment, whereas thinner sandstone beds were deposited in meandering rivers (Meesook, 2000). Intercalations of siltstone and mudstone are found mainly in the latter sandstone beds which show little resistance to weathering and reduced them to small hills. Palynomorphs include *Cyathidites* sp., *Classopollis* sp., *Ballosporites* hians, *Lycopodiacidites* sp., *Calamospora* sp.,

Monosuleites sp.,? *Ballosporites* sp., *Cyclotriletes subgranulatus* MADL, *Minutosaccus* sp., *Chasmatosporites* sp., and cf. *Anulatizonites* indicating a Late Triassic to Early Jurassic age (Hahn, 1982). There are many fault segments of the Phetchabun Fault Line and the rocks have different weathering rate, so the sedimentary rocks in the Chaiyaphum region show many outstanding geologic features for tourist attraction especially "Mo Hin Khao". This research groups the potential geosites to each national park and describes them so that the national park can be promoted for ecotourism. There is a strategy to interpolate the scientific and geological data to each site and to assess the national park in the value of geoheritage resources. This research for broader publication will help tourists understand the geological features and realize the importance of conservation.

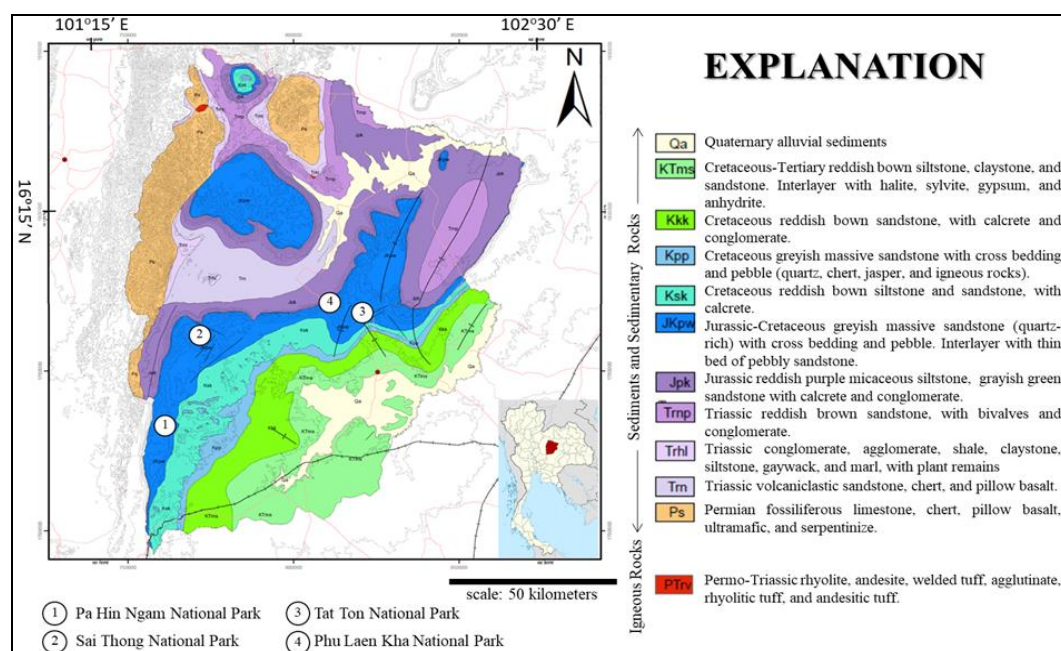


Figure 1. Location and Geologic map of study area in Chaiyaphum Province, Thailand (modified from DMR, 2007)

MATERIALS AND METHODOLOGY

The topographic map of the study area scale 1:50000, geologic map of Chaiyaphum Province, Thailand scale 1:1000,000 and many kinds of literature are studied by the methodology, which comprises the inventory, characterization, classification and assessment respectively. First, geosites were identified, inventoried and mapped in the field. The characterization of geosites was carried out by observations and description of the landform groups occurrence. The assessment comprises qualitative and quantitative methods. The qualitative method is the basic assessment, which determines geosite in term of the values and levels of significance. On the other hand, the quantitative method uses valuing assessment of the studied geosites. Geosites where than described in terms of attractiveness and spatial distribution within each national park. Classification details are comprising the geodiversity, scope and scale of the sites were presented. In addition, SWOT analysis was performed in order to identify strengths, weaknesses, opportunities, and threats of potential geosites for geoconservation and geotourism development in the Chaiyaphum Region.

INVENTORY

Based on the previous famous attraction in Chaiyaphum Province, researchers were identified and mapped the geological sites in the study area. Although this area is popular and easy to reach, the geoscientific knowledges have never been demonstrated in any scientific description to educate people. Accordingly, with the theory of Đurović and Đurović (2010) and Pralong (2005), criteria such as their occurrence, rarity, integrity, and representativeness of geological features must be taking into consideration for the geosites identification process. In this study case, the criteria used for geosites identification was the occurrence, identity, rarity and outstanding. These criteria can be divided geosites in Chaiyaphum Province into cliffs, pillar or pedestal rock, and cascade. Thailand consists of many kinds of rock and structural geology and Chaiyaphum is the typically geosite of the clastic sedimentary rocks. The studied geosites are located in Pa Hin Ngam, Sai Thong, Tat Ton and Phu Laen Kha National Parks. The study area has the unique sandstone cliff, which formed by tectonic setting at the western edge of the Khorat Plateau and linked with the central plain of Thailand. The sedimentary rocks also formed the spectacular cascade, which is flat, wide and parallel with their sedimentary layer. Moreover, there is the Mo Hin Khao, which is the only one geosite of pillar rocks of Thailand.

CHARACTERIZATION

The geosite of the Chaiyaphum Region, which is located in the westernmost edge of Khorat Plateau, consists of the cliff, pillars and cascade. These geosites in Chaiyaphum Province were classified as geomorphological, sedimentary, stratigraphical and structural types based on their origin and characteristics of sites (Ruban, 2005, 2010; Ruban & Kuo, 2010; Neches, 2016). Meanwhile, the national park has many other attractions such as Siam Tulip Fields and Viewpoints (Table 1).

Table1. Information delivery and interpretive strategies
used in geotourism (modified from D. Newsome et al., 2012)

Strategy	Pa Hin Ngam	Sai Thong	Tat Ton	Phu Laen Kha
Geosite	Lan Hin Ngam, Sut Phaen Din Cliff, Thep Phana Cascade	Sai Thong Cascade, Hum Hod Cliff	Tat Ton Cascade, Tat Fah Cascade, Pha Lang Cascade	Mo Hin Khao, Pa Hin Ngam Chan-Daeng, Pratu Khlong, Pha Hua Nak Cliff, Pha Phae Cliff
Geotails	Thung Dok Krachiao- Nature Trail	Sai Thong Cascade- Trail	Nature Trails	Nature Trails
Geological garden	Dok Kra Jiao Field	Thung Bua Sawan- Field		Pa Hin Ngam, Thung Khlong- Chang flower Field
Visitor centers	National Park			

The Pa Hin Ngam National Park consists of the great unusual rocks such as nail, large snake and castle, which are identity and rarity geosite in Thailand. These sites are developed by the geological phenomena, which is a weathering process with different erosion ratio of sedimentary rock layers (Figure 2a). The Dok Krachiao or Siam Tulips (a type of wildflower related to ginger) sprout cheery pink and white blooms all over the area (Figure 2b) during the early rainy season in July. Also, orchids emerge from the fracture of the rocks, alongside numerous wildflowers in the winter. The Sut Phaendin is a steep sandstone cliff and connects Mountain range of northeast Regions with the

central plain of Thailand (Figure 2c). Curved faces or slickrock slopes on Sut Phaen Din Cliff are mainly the results of grain-by-grain weathering and erosion, and of the peeling of thin weathered rinds like the curved faces on cliffs in Monolith Valley, southern Sydney Basin, Australia (Young et al., 2009). The tourists can enjoy the surrounding area with the rocks and the panoramic views from the highest viewpoint. In addition, there is Namtok Thep Pratha, which is a medium-sized cascade and it is the most beautiful in the rainy season (Figure 2d). Ahnert (1998) divided waterfall into 3 types; 1) the Niagara type of waterfall 2) Cascade waterfall and 3) Hanging valley waterfall. Namtok Thep Pratha has the character like the cascade type that he also described it is the waterfall over several, usually small, step rather than other waterfalls.



Figure 2. The geodiversity of the Pa Hin Ngam National Park; a) Lan Hin Ngam, b) Thung Dok Krachiao Nature Trail, c) Sut Phaen Din Cliff, and d) Thep Phana Cascade

The Sai Thong Cascade is the highlight of the Sai Thong National Park, which is located approximately 1 kilometer from the park office (Figure 3a). This is the spectacular cascade in this region, which is very wide and parallel to their bedding. In this case, the rocks are divided by layer of sedimentary rocks and almost vertical tectonic joints that provide the weathering and erosion on surfaces and create the step-like form of the cascade (Ahnert, 1998). The stream of cascades flows down that has the height of about 100 meters. There is a large field of Dok Krachiao the same as the Pa Hin Ngam National Park. The tourists can access this field by hiking only and can camp overnight. In addition, the tourist can see a panoramic view from the Pha Ham Hod cliff, which is a projecting plate like the Eagle rock in the Royal National Park of Sydney (Young et al., 2009) (Figure 3b). This is one of cliff fascinating of Thailand.

In the case of the Pha Ham Hod Cliff, where the undercut section of sandstone takes the form of a block or plate projecting from the cliff, rather than a column, its stability can be more appropriately analyzed by considering it to be analogous to a simple cantilever. Tensional stress at the junction of the projecting plate and the cliff will again be determined by the density of the sandstone and the dimensions of the plate (Figure 4). The

stress arises from the load $P = 2clp$. The density is p , which acts along a moment arm of length $l/2$ of a cantilever of thickness $2c$ (Robinson, 1970). Following the method of Timoshenko and Goodyer, Robinson (1970) derived the tensile stress acting along the junction of the plate and the cliff and then rearranged the equation to give a ratio of the plate dimensions at the critical level at which failure occurs: where σ is the tensile strength. Assuming a density of 2.3 g/cm^3 , a tensile strength of 2MPa and letting $2c = 40 \text{ m}$, Robinson computed a critical length of 34 m for projecting plate in the Navajo Sandstone.

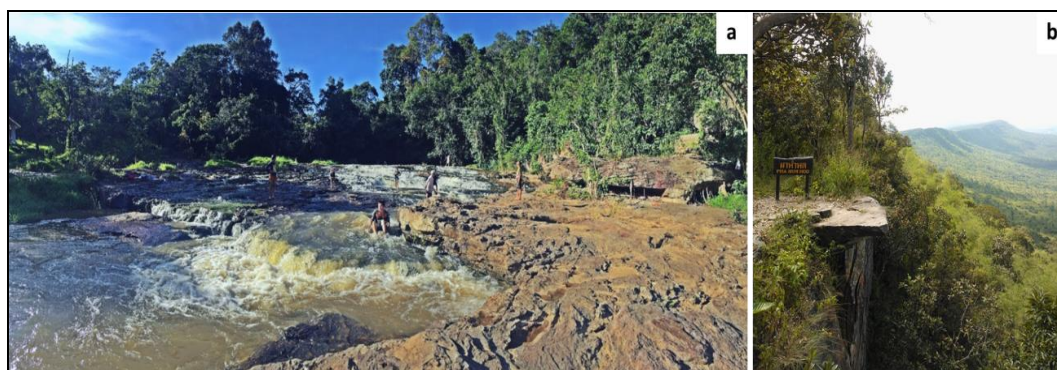


Figure 3. The geodiversity of the Sai Thong National Park; a) Sai Thong Cascade and b) Hum Hod Cliff

$$l / c = (2\sigma / 3pc)^{1/2} \quad (1)$$

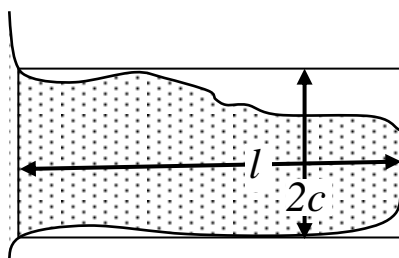


Figure 4. The parameters used in Equation (1), representing a projecting plate as a cantilever (modified from Young et al., 2009)

The Tat Ton National Park is a part of the Phu Laen Kha Mountain and located close to the Phu Laen Kha National Park. There are many beautiful cascades such as Tat Ton, Pha Lang, and Tat Fa, but the Tat Ton cascade is the most famous one in this area (Figure 5a). The Tat Ton cascade was grouped into the Niagara type of waterfall (Ahnert, 1998), the steep scarp is formed of the very resistant sandstone. The less resistant rocks are siltstone and mudstone. This type of waterfall is rare in Thailand; however, the Tat Ton cascade is the representative in this area. On the other hands, the Tat Fa cascade was grouped into the cascade type like the other previous listing (Figure 5b).

Cascades are geologically formed and represent major interruptions in river flow. The difference in rock types is the common conditions that gave rise to the cascades. The streams quickly erode the soft rock layers and steepen their gradient at the rock boundaries. The river cuts and exhumes a junction that is created between different rock beds. However, the character of rock formations and the geologic structures can cause the cascades. The geomorphology of the Northeastern part of Thailand is a high plateau

surrounded by a steep escarpment slope. This characteristic landform creates many cascades and rapids on the rivers. Whereas, the fault movement may encourage the establishment of a cascade because it can bring hard and soft rocks together. There are many factors that can make cascade worn away, especially the rapidity of erosion, which depends on the type of cascade, the height of cascade, the volume of flow, and structure of rocks involved. The cascade presents downward flow in wide rock plateau, which is a wonderful view, especially in the rainy season from May to August. The Pha Lang cascade is far away from the city on the Chaiyaphum-Nong Bua Daeng road approximately 32 kilometers While the Tat Fa cascade is located on the eastern flank of the headquarters and far away from the central city 25 kilometers on the Chaiyaphum-Kaeng Khro road.



Figure 5. The geodiversity of the Tat Ton National Park - a) Tat Ton Cascade and b) Tat Fah Cascade

The Phu Laen Kha National Park is a mountain in Khao Phang Hoei mountain range. There are massive jungles and watershed of many streams, which run to join the Chi River. Cliffs, mountain ridges, stone terraces, and strange rock formations are fascinating sights. There are many natural trails, which have outstanding rocks such as Pa Hin Ngam Chan Daeng, Phu Khi, Pa Hin Ngam Thung Khlong Chang flower field, and Pa Hin Prasat Viewpoint. The most famous attraction of this park is "Mo Hin Khao" that is the isolated pillars (Figure 6a), which are accessible from the Tat Ton National Park. Meanwhile, tourists can visit the Pha Hua Nak, which is the highest cliff in this area (Figure 6b). The road will reach all of the sites as long as you can drive.

The Cliff is a steep sloping rock which is very high, tilting and near vertical. It may be overhanging from the mountain and stand out in the high land. However, the cliff is formed as the result of fault movement and the differential resistance of rock. Cliffs are associated with several rock types such as limestones, sandstones, and gritstones. This research focuses on the sandstone cliff, which is valleys and around the edges of the plateau like this area. Isolated pillars of rock are also common at such sites. Throughout the world, sandstone cliffs and pillars are distinctive features of a sandstone terrain. Many sandstone cliffs and pillars are undercut towards their bases (Robinson & Williams, 1994). The layer of soft rock is more readily eroded, leading to the formation of a lowland. The resistant rock on the top of the layer will become the isolated pillars, which upright above

the new lower plain. The curve slopes on sandstones may be decorated by polygonal cracking, commonly called ‘elephant skin weathering.’ This form of tessellation should not be confused with patterns found on benches or platforms due to weathering and widening of intersecting joints (Young et al., 2009). However, most forms of tessellation are not related to jointing, being a surface phenomenon, which dies out within a few centimeters depth, and which follows the curvature of outcrops, even appearing on overhanging faces such as the surface of Mo Hin Khao and outcrops in the Phu Lan Kha National Park.



Figure 6. The geodiversity of the Phu Lan Kha National Park
a) Mo Hin Khao and b) Pha Hua Nak Viewpoint

CLASSIFICATION

The classification of the potential geosites in Chaiyaphum Region is shown in Table 2. It focuses on the hypothesis of many researchers such as Gray (2005), Brocx and Semeniuk (2007) and Đurović and Đurović (2010), and comprises geodiversity, scope and scale.

Table2. Classification of potential geoheritage resources in Chaiyaphum Region

National Park	Geological Site	Geodiversity ^a	Scope ^b	Scale ^c
Pa Hin Ngam	Lan Hin Ngam	Rock	P, G, STG	Small
	Sut Phaen Din Cliff	Rock, landform/ landscape	P, G, STR	Medium
	Thep Phana Cascade	Rock, landform/ landscape	P, G, STR	Small
Sai Thong	Sai Thong Cascade	Rock, landform/ landscape	P, G, STR	Medium
	Hum Hod Cliff	Rock, landform/ landscape	P, G, STR	Medium
Tat Ton	Tat Ton Cascade	Rock, landform/ landscape	P, G, STR	Medium
	Tat Fah Cascade	Rock, landform/ landscape	P, G, STR	Small
	Pha Lang cascade	Rock, landform/ landscape	P, G, STR	Small
Phu Lan Kha	Mo Hin Khao	Rock, landform/ landscape	P, G, STG	Small
	Pa Hin Ngam Chan Daeng	Rock	P, G, STG	Small
	Pratu Khlong	Rock	P, G, STG	Small
	Pha Hua Nak Cliff	Rock, landform/ landscape	P, G, STR	Medium
	Pha Phae Cliff	Rock, landform/ landscape	P, G, STR	Small

P: petrological site, G: geomorphological site, STG: stratigraphic site, STR: structural site

^a Gray 2005), ^b Brocx and Semeniuk 2007; Predrag and Mirela 2010, ^c Brocx and Semeniuk 2007

The geodiversity was divided by Gray (2005), in rocks, minerals, fossils, landforms, landscape, processes, soil and other resources. In addition, Brocx and Semeniuk (2007) and Đurović and Đurović (2010) classified the geological sites, including mineralogical, petrological, structural, stratigraphic, geomorphological, speleological and hydrological/hydrogeological sites. The scales of geological features comprise regional scale ($>10000 \text{ km}^2$), large-scale ($>100 \text{ km}^2$), medium scale ($>1 \text{ km}^2$), small-scale ($>10000 \text{ m}^2$), fine-scale ($>1 \text{ m}^2$) and very fine scale ($<1 \text{ mm}^2$) (Brocx & Semeniuk, 2007). The potential geosites in Chaiyaphum Region are made up of rocks, landform and landscape features including sandstone hills, cliffs, cascades and pillars. These geosites have the area between small to medium scales (Brocx & Semeniuk, 2007).

ASSESSMENT

The effective conservation and management depend on the geosite assessment as a potential resources for geotourism. The SWOT analysis in terms of the strengths, weaknesses, opportunities, and threats of potential geosite resources was used for assessment in this research (Table 3). The type of geoheritage conservation is part of the geoheritage evaluation, which comprises geosite, geomorphosite, geotope, geological monument, Geopark, National Park and World Heritage Site (Brocx & Semeniuk, 2011; Nazaruddin, 2015). The National Park is the natural area, which is established in both land and sea for ecological protection. Furthermore, it is the useful tool to conserve the integrity of natural systems for the next generations. In addition, the National Park manages many activities according to the environment and culture of the community, which have the advantage to the scientific, educational, recreational, and tourism opportunities. Meanwhile, the UNESCO World Heritage Sites are any cultural and/or natural sites, which are deemed to be unique and important in the future to the whole world for conservation. The World Heritage Site made up of cultural heritage sites and natural heritage sites, which are part of our shared global heritage (Nazaruddin, 2015). All of these geosites in the research are geoheritage resources, which are located in the national park of Thailand. These national parks have many rules to protect and conserve natural sites and geosites. The relatively high geodiversity of the study area makes the geosites in the Chaiyaphum Region outstanding and valuable.

Table 3. SWOT analysis to evaluate the potential geosite resources of the study area for conservation and development

SWOT	Remark
Strength	Good potential for research and education High aesthetic value of some sites Good potential for recreational activities Relatively high geodiversity of the study area Good accessibility Good management and protection from National Park
Weakness	Bad accessibility of some sites Lack of promotion of the area
Opportunity	Study area is suitable for research and educational activities Need geological knowledge panels to serve visitors Suitable for some recreational activities, such as hiking, swimming etc. Increase the attractiveness of the area and possible development of local community Cooperation between local authority, university, community, and government
Threat	Vandalism Encroachment on the public land

DISCUSSION FOR GEOTOURISM PLANNING

The examples selected for this research present the method to introduce the sedimentary geosites to travel industry. There are many interesting landforms in Thailand, which are managed as geosites. The tourists can focus on rocks and landforms in typical geosites such as a cliff, pillar and cascade. The travel route map of the potential geosite resources in Chaiyaphum Province was created in this research (Figure 7).

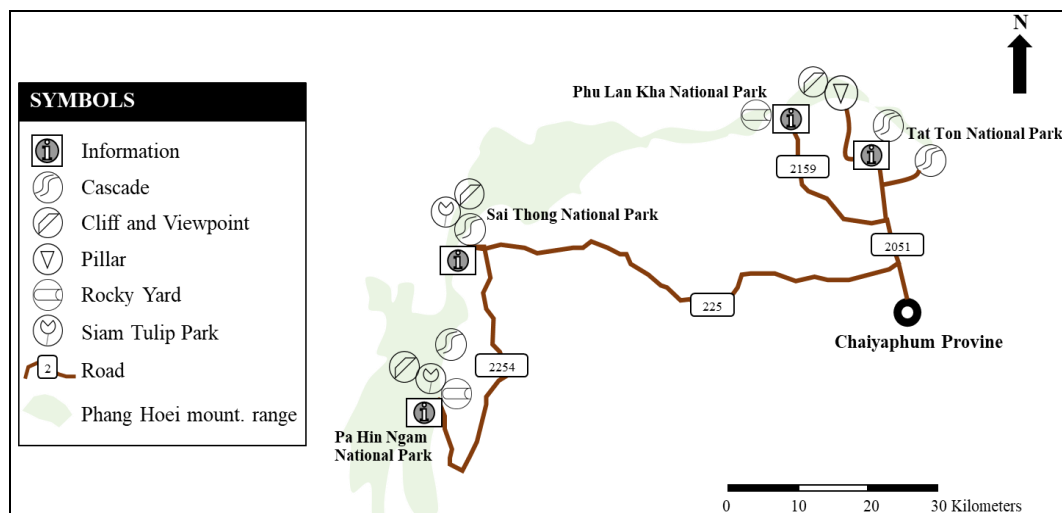


Figure 7. Travel route of the potential geosite resources in Chaiyaphum Province

However, in the four case study sites, the tourists cannot receive any explanation on the spot about the geological background. The sedimentary rocks have both soft and hard layers which are caused by the differential ratio of their erosion. The soft sedimentary layers are easily eroded, while the hard layers are more resistant to erosion. In this assumption, the differential erosion ratio of the rock layers creates the outstanding landform and geomorphology including previously listed geosites. These study sites are regarded as the local peculiarities, which should have more value to the geoscientific sites. The accessibility of the four locations is comfortable and the tourists can walk from the parking areas for nearest distances. Thus, all of the studied areas have significant aesthetic values, which comprise the exhibitions of rocks and harmonious cultural-landscapes announcement. However, an important geomorphological component is still missing. The most visible part of sedimentary rocks geosites are apparently considered as more landscape curiosities rather than features of significance. All of the geosites, which are distributed in four national parks are close to one another. This research provides the geotourism data for planning the travel route in Chaiyaphum province. The tourists can travel to the Pa Hin Ngam National Park, Sai Thong National Park, Tat Ton National Park, and Phu Lan Kha National Park respectively. These four national parks are part of the famous National Parks in Thailand, which are the natural attraction and advertised as both interesting and easily accessibility sites. National parks are the geosites and natural sites, with legal forms to protect these areas for purposes of sustainable aesthetic value. The information center at the park headquarters advises and helps the tourists. National Parks are effectively designed with road leading to the developed parking areas and

information panels. However, there is no interpretation of the geodiversity and rock occurrence in the park. Due to their large site and having various geosites, they are mainly developed as recreation areas. Thus, the tourists frequently visit them for amusement. Facilities in the national parks include a small hall, viewing points, rock exhibition, and accommodation. All of the previous listings are the important components of the travel industry, which can be managed for sustainable development in the economy, society, earth sciences, and culture of the community.

CONCLUSION

The diverse geological features of the Chaiyaphum Region are essential parts of the geological heritage. This research studies 4 National Parks and three groups of dominant geosites, which are the geomorphological features such as cliff, pillar and cascade. It assumes the erosion and weathering trend of sedimentary rocks which will destroy geosites and create a way for tourists to understand the geological processes and be aware of the needed conservation. In the case of pillars, they are exposed to a higher risk of being destroyed by man- or nature than other landforms. However, the destruction of these landforms cannot be estimated as the violence of water volume which can destroy the pattern of cliff and cascade. The edge of Khorat Plateau and the area nearby are well suitable for geotourism development. Both geoconservation and geotourism can be encouraged by the established natural protectorate in promoting the new type of tourism in Thailand, resulting to economic, scientific, and social developments.

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THE TOURIST DEMAND FROM THE PERSPECTIVE OF THE MOTIVATION, ASSESSMENT AND SATISFACTION IN A SUN AND BEACH DESTINATION: THE MANTA CASE, ECUADOR

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Abstract: Conducting studies of motivation, evaluation and satisfaction of the demand of sun and beach tourism provides important information to adapt the products according to demand. The present study was conducted in situ in the city of Manta, Ecuador. Using a questionnaire, variant and bivariate statistical techniques were used to achieve the study objectives. The findings show that the main motivations of tourists are to rest, enjoy the beach and the sun, and enjoy the typical local gastronomy, which ratifies the main motivations in destinations with these characteristics. The most valuable aspects of the visit were the hospitality of the residents, the sun and the beach, and the restaurant service. The satisfaction of the destination is high, which shows the potential of this site for this type of tourism.

Key words: Tourism, demand, motivation, satisfaction, assessment, Manta

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INTRODUCTION

Sun and beach tourism has had a growth of 39% between 2007 to 2014, this type of tourism is the most attractive for visitors because of the natural characteristics of the destinations, occupying the best segment of the tourism market with 29% (ITB World Travel Trends Report 2015/2016), the US and Asian market has driven 6% growth between January and August 2016 (ITB World Travel Trends Report 2016/2017), so it is essential to raise an inquiry about of the sun and beach destinations that contribute to improve the provision according to demand. In this sense, vacationing on the beach is becoming a phenomenon of mass tourism (Bramwell, 2004). Consequently, Poon (1993) sought to change the stereotype 3-S (sun, sand and sex) to a more exclusive and strict tourist, who seeks more than a break. For the above reasons, Orams & Lück (2013) ratify that the distraction on the beach is destined to prosper in the future.

Manta is the first fishing port and maritime of Ecuador; the tourist offer is varied, has food and beverage establishments, accommodation, entertainment and sports centers. You can perform different types of tourism like gastronomic, cultural, religious, sun and beach, adventure, meetings and ecotourism. It has the Pacoche Marine Coastal Wildlife Refuge; it has cozy beaches such as the Murciélago, Barbasquillo, San Mateo, San Lorenzo where you can practice water and recreational sports, you can also enjoy artistic and cultural events. The restaurants offer gastronomy based on seafood; while crafts made with local products are sold in pier. In this context, it is important to carry out studies that analyze tourism demand from the perspective of motivation, assessment and satisfaction in sun and beach destinations such as the case of Manta in Ecuador, due to its natural and cultural characteristics typical of this type of tourism; that is why this tourist destination is very visited by national and foreign tourists. At present, there has not been a study that addresses this issue; that is why the objective of this study is to present the results of a field work that addresses a study of the motivations, valuation and satisfaction of tourism demand. The present research aims to achieve this objective and consists of the following parts: the introduction, followed by the review of the literature, then describing the characteristics of the destination, the methodology of the research and the results. The article ends with the conclusions and the bibliography used.

THEORETICAL FRAMEWORK

The field of motivations is increasingly studied in relation to tourism demand, so mmotivations is a set of biological and spiritual needs and wants that motives one to do specific tasks (Crompton & McKay, 1997). Therefore, it is the central factor in the decision-making process (Yolal et al., 2015). If we refer to the motivations of tourists, these can be divided into two main categories: content models and process models (Hsu et al., 2010; Suni & Komppula, 2012). Content models, in the context of various conceptualizations of needs, are proposed in the form of different models such as Maslow's theory of the hierarchy of needs (1943) two-factor theory of motivation-hygiene, and Plog's (1974) theory of Allocentric- Psychocentric spectrum. Regarding the process models, these include those that address behavior predictions after one has been motivated. Dann's (1977) theory of pull-push factors and Crompton's (1979) theory of motivation which was further developed by Iso-Ahola (1982) are placed in this category. Process models are more central than content models and have a better ability in predicting behavior (Hsu et al., 2010). These models are mostly used. Thus, it can be said that tourists' motivations are usually complex and multi-dimensional (Crompton, 1979; Uysal et al., 1993). In the tourism sector, the main motivations of the sun and beach tourist are rest and recreation, since it is included in leisure tourism (Martínez, 2001;

Rivas, 2004; Bigné et al., 2007). In this sense, for González et al. (2006) the main motivations of sun and beach tourists are rest and relaxation, followed by fun and entertainment. In the same line, for Carvache-Franco et al. (2017), Enjoy the sun and the beach, and rest were the main motivations. In another study, Prebensen et al. (2010) uses two motivational dimensions in sun and beach destinations: Body-related (Sun and warmth-related motivations, and Fitness and health-related motivations) in the Mind-related (Culture and nature-related motivations, and Escapism-related motivations).

About the motivations in coastal marine destinations: Kozak (2002) on the tourists' trip to Mallorca (Spain) revealed reasons such as culture, pleasure / fantasy, relaxation and physics. Molera and Abaladejo (2007) identified five marine reasons for traveling to Murcia-Spain, nature and tranquility, physical and cultural activities, family, travel characteristics and rural life. In another study, Saayman et al. (2009) found five travel motivation factors for marine destinations in South Africa: escape and relaxation, destination attractiveness, socialization, personal attachment, site attributes and trip features. In another study, Kruger and Saayman (2010) found six reasons to travel for tourists visiting Tsitsikamma National Park, located in the Indian Ocean in South Africa, which were as knowledge seeking, nature experience, photography, escape and relaxation, park attributes and nostalgia. In another research (Van Der Merwe et al., 2011) on coastal marine destinations found four motivational factors: Destination attractiveness (Factor 1), Escape and relaxation (Factor 2), Time utilization (Factor 3) and Personal attachment (Factor 4). For De Nisco et al. (2015) different destinations have different reasons for traveling, finding in a study carried out in Africa the same motivations as escape and relaxation, destination attractiveness, and site attractiveness as well as personal attachment and different motivations, for Jeffreys Bay, however, leisure activities and novelty were identified and for Hartenbos, socialization and trip features as additional motives for traveling. In this framework of ideas, marketing focuses on the customer, and relies on administrative processes to make promises or value propositions that reflect individual expectations created by such proposals and their fulfillment is done through the creation of value (Grönroos, 2009). In this sense, factors such as the satisfaction of tourists as a result of the co-creation of services, contribute to the attractiveness of a tourist region, with which the key areas are effectively traced to make, enable and keep promises to tourists (Dolnicar & Ring, 2014). Thus, the study of tourists in a comprehensive manner is necessary to understand their level of satisfaction, as it is evident that this depends on the profile of the visitor, as well as social, financial elements and the environment in which it is related (Torres-Sovero et al., 2012).

On the other hand, the scientific literature recognizes the importance of satisfaction to recommend a destination (Hosany & Witham, 2010), the positive effect it causes when relating it with the intention to return (Zabkar et al., 2009; Chen & Chen, 2010), and for being considered as a moderating part of the image of destination (Chi & Qu, 2008). From another perspective, Das Chagas and Marques Júnior (2011) consider that there are eight perceived dimensions of quality in sun and beach destinations: beaches and facilities, public facilities, food and beverages, transportation services, hotel facilities, services of the hotel, entertainment and attractions, and hospitality and access.

For them it is necessary to provide a quality of service, the relationship between the quality of the image of a destination and tourist satisfaction is well documented in the tourism field (Chen & Chen, 2010; Yüksel et al., 2010; Zabkar et al., 2010; Moliner Velázquez et al., 2011; Cong, 2016). Therefore, it is necessary to analyze variables directly related to the natural environment, the services offered within the destination and its amenities (Safee Sapari et al., 2013). Therefore, it is very important to analyze these

aspects in sun and beach destinations in order to improve the quality of tourist services. Regarding the assessment of sun and beach destinations, in a study (Carvache-Franco et al., 2018) the variables best valued in General Villamil Playas from Ecuador were the "sun and the beach", "Restaurant services", "hospitality of residents", and "accommodation".

CHARACTERIZATION OF MANTA DESTINATION

This aboriginal capital of the Manteña Culture was baptized on March 2, 1534 as "San Pablo de Manta", it happened to occupy the place of seaport, then it was a cabotage port. During the Presidency of the Republic of Ecuador, Vicente Rocafuerte designated it as the First Maritime Port of Ecuador in 1837. Finally, in the administration of General Juan José Flores, it was qualified as an export and import port (Sánchez, 2010). Manta is located in the most western salient of South America, limits to the west with the Pacific Ocean, to the south with Montecristi and to the east with Montecristi and Jaramijó; the temperature fluctuates between 18 ° C and 36 ° C (Figure 1).



Figure 1. Geographic Location of Manta (Ecuador) in South America

According to Decentralized Autonomous Government of Manta (2016), it has an area of 29,265.96 ha, distributed as follows: 70.60% Natural Vegetable Coverage, 15.44% anthropic use, 3.96% livestock use, 5.27% agricultural and mixed agricultural use and 4.73% are unproductive land. Manta energizes the economy of Manabí province - Ecuador, both for the amount of productive units and active services, as for the volume of the total production and its contribution in the formation of Gross domestic product (GDP). (Decentralized Autonomous Government of Manta, 2016) In Malecón sector, the commercial area and hotel chains are concentrated, Tarqui parish sells fishing products and in the urban area there are tourist, commercial, banking and industrial companies. The city also has museums where archaeological fragments of cultures of the region are exhibited.

The Decentralized Autonomous Government of Manta (2016) declared Furniture Cultural Heritage to 38 monuments and 29 real estate as Cultural Patrimony of the Nation.

METHODOLOGY

In order to reach the proposed objectives, an on-site fieldwork was carried out based on a survey that contained 17 questions grouped into two blocks: (socio-demographic information and the satisfaction and motivation of the visitors) whose target population were older visitors of 18 years. Closed and multiple-choice questions on a five-point Likert scale were used to obtain reliable results. The data collected were organized, tabulated and analyzed through the SPSS Version 22 program, univariate and bivariate statistical instruments were also used. Visitors were surveyed near the Murciélago beach in Manta city during weekends between March and April 2018. The surveys were conducted by students of the bachelor's degree in gastronomy at the University of Guayaquil, who were previously trained by the authors of this article. The sample size was 390 and the infinite population was used considering that the study population is over 10,000 according to the number of tourists who visited Manta in 2015 received 625,000 tourists; in 2016 from January to October received a total of 266,000 tourists (Gobierno Autónomo Descentralizado de Manta, 2016). A margin of error of +/- 5%, a confidence level of 95% and a variance of 50% is proposed (Table 1).

Table 1. Research file

Population	National and foreign visitors
Geographic área	Manta city
Period of realization	March and April 2017
Process	Simple random sampling
Confidence level	95%
Error range	+/- 5%
Valid questionnaires	390

Several previous research papers were reviewed in order to elaborate the questionnaire of questions (Prebensen et al., 2010, Van Der Merwe et al., 2011, De Nisco et al., 2015, Carvache-Franco et al, 2018), where you can see relevant research on motivation, assessment and satisfaction of demand in sun and beach destinations. The cronbach alpha index reached the value of 0.83, which indicates a meritorious internal consistency between the elements of the scale.

RESULTS AND DISCUSSION

The results of socioeconomic variables as gender, age, civil status, level of education and professional activity are found in Table 2.

Table 2. Socioeconomic variables

Variable		Percentage
Gender	Man	48.7
	Woman	51.3
Age	Younger than 20	6.4
	Among 20 - 29	35.6
	Among 30-39	32.1
	Among 40-49	14.4
	Among 50-59	10.0
	Older than 60	1.5

Civil Status	Single	42.6
	Free Union	26.9
	Widowed	1.3
	Married	27.4
	Divorced	1.8
Level of Education	Primary education	3.6
	Secondary education	39.0
	University education	56.4
	Postgraduate/master's degree / Ph.D.	1.0
Professional Activity	Student	25.1
	Businessman, business owner	11.3
	Public employee	13.1
	Private employee	10.0
	Independent employee	6.4
	Housework	11.0
	Unemployed	7.4
	Retired	3.6
	Informal worker	7.4
	Others	0.0

According to the results from Table 2, 48.7% of the visitors are men and 51.3% are women, what shows that visitors from both genders arrive the destination, from which, 35.6% have an average age of 20 to 29 years old and 32.1% have an average age of 30 to 39 years old. About the civil status, 42.6% are single and 27.4% are married. Concerning the level of education, a 56.4% have a university education and 39.0% have a secondary education, being 25.1% students as the majority group, followed by public employees with a 13.1% of the total amount of respondents.

To know what company tourists prefer when visiting a place, Table 3 is shown.

Tabl 3. Who the tourist travels with

Variable	Percentage	Ranking
With family	52.3	1
With friends and coworkers	35.4	2
With the couple	10.3	3
Alone	1.3	4
Others	0.8	5

According to the results from Table 3, tourists use to travel to this destination with their families (52.3%), with friends and coworkers (35.4%), which indicates that Manta is generally a destination to go with the family principally, followed by groups of friends. The frequency the visitors arrive to the destination is presented in Table 4, where the frequency in this destination is from 1 to 3 times a year (43.6%) and from 4 to 6 times a year (41.8%).

Table 4. Frequency of visit

Frequency of visit	Frequency	Percentage
From 1 to 3 times a year	170	43.6
From 4 to 6 times a year	163	41.8
From 7 to 9 times a year	57	14.6
Total	390	100

Motivations

Tourists' motivations are shown in Table 5. It is based on a 5 points Likert scale, being 1 – the less and 5 – the most.

Table 5. Motivations

Motivational variables	Mean	Ranking
Resting	4.63	1
Enjoying beach and sun	4.58	2
Delight with local typical gastronomy	4.24	3
Visiting touristic attractions	4.18	4
Night life	3.84	5
Visiting friends or family	3.79	6
Because of touristic services prices	3.78	7
To know flora and fauna	3.77	8
For its commercial activity	3.59	9
For visiting communities	3.40	10
Closeness to your residence place	3.13	11

As shown in Table 5, the principal motivations of tourists in visiting the destination are resting (4.63), enjoying beach and sun (4.58), delight with local typical gastronomy (4.24) and for its night life (3.62). Similar results (Martínez, 2001; Rivas, 2004; González et al., 2006; Bigné et al., 2007; Carvache-Franco et al., 2017) where the resting is one of the main motivations in this type of tourism. These results show that Manta is a destination of sun and beach where its main motivation is rest, with a delicious typical gastronomy. Based on the two motivational dimensions in the sun and beach destinations found by Prebensen et al. (2010) have been found in the present study the motivations related to the Body: rest, and enjoy the sun and the beach. The motivations found related to the mind were: nightlife and to visit friends or family.

The valuation of the sun and beach in different aspects in Manta are shown in Table 6. It is based on a 5 points Likert scale, being 1 – the worst and 5 – the best.

Table 6. Valuation of the destination

Aspects	Mean	Ranking
Residents' hospitality	4.56	1
Sun and beach	4.53	2
Restaurant service	4.51	3
Accommodation	4.39	4
Security	4.32	5
Touristic services prices	4.17	6
Parking lots	4.15	7
Information and signaling	4.12	8
Commercial zones	4.11	9
Ambient conservation	4.09	10
Recreation places	4.05	11
Cultural activities	3.91	12
Flora and fauna	3.87	13

According to Table 6, the variables with the major valuation were residents' hospitality (4.56), sun and beach (4.53), restaurant service (4.51), accommodation (4.39) and security (4.32). Similar results to the dimensions found by Das Chagas and Marques Júnior (2011) who consider that there are eight perceived quality dimensions in sun and

beach destinations. In the study of Carvache-Franco et al. (2018) similar results were obtained what would seem to indicate the most valued aspirations in a sun and beach destination. Because the destination also has potential for gastronomy, we must also highlight the need for destination marketing organizations to pay more attention to the link between the destination image and food events (Privitera et al., 2018).

By contrast, the variables with the minor valuation were the flora and fauna (3.87), recreation places (4.05) and the ambient conservation (4.09). These findings indicate this destination has a lot of potential in its beach, which is its principal touristic attraction, also its gastronomy based on seafood, and the hospitality of its residents.

General satisfaction

Tourist' general satisfaction in the destination is shown in Table 7.

Table 7. General satisfaction in the destination

Very unsatisfied	Unsatisfied	Not satisfied not unsatisfied	Satisfied	Very satisfied	Mean of satisfaction
0.5%	0.0%	3.3%	20.8%	75.4%	4.71

According to Table 7, 75.4% of the tourists are very satisfied, with the destination, while a 20.8% are satisfied; this indicates a great percentage of the visitors have a good appreciation of the destination. On the other hand, the general satisfaction mean of the tourists is 4.71 which indicates a high satisfaction. These findings are very important to promote the destination based on the general satisfaction of its visitors. The visitors with the major satisfaction and with their expectations surpassed will have a more positive perspective of the place and in consequence major possibilities to return to the destination and also recommend it to other people (Cruz et al., 2012) which demonstrate the high potential of this destination for tourism.

Tourists' information media

The following Table 8 shows the means of communication that tourists used to obtain information about the destination. The question was of multiple choices, reason why the result is higher than 100.

Table 8. Information Media

Media	Percentage	Ranking
Friends recommendations	60.0	1
Social media recommendations	37.4	2
Internet based information	33.6	3
Press	27.9	4
Journals	21.5	5
Radio	16.4	6
Others	10.5	7

Table 8, shows that 60% of the respondents came to know the destination through recommendations from friends, 37.4% by social media and 33.6% used the information found on the internet, which indicates the destinations use principally the internet for their publicity, even more than the radio (16.4%), Journals (21.5%) and press in general (27.9%).

Valuation of the experience in Manta

The following Table 9, shows the valuation of the experience after visiting Manta and its response in recommending the destination or not. For the report in the table it has been taken the media of the valuation from 1 to 5, where 1 is strongly

disagree and 5 is strongly agree. According to the exposed on the Table 9, the general valuation of the different questions by the tourists shows a media major to 4.5, which indicates tourists agree on choosing Manta as a touristic destination (4.58), in their satisfaction they also agree (4.57); they would also recommend visiting Manta (4.71) and encourage their related to travel to the destination (4.65), and most importantly, the visitors would like to return Manta eventually (4.65).

Table 9. Experience valuation

Valuation	Mean	Ranking
My decision of visiting Manta was right	4.58	1
My satisfaction level with Manta has been important	4.57	2
I would recommend visit Manta if someone asks me for advice	4.71	3
I will encourage my family and/or friend to visit Manta.	4.65	4
After my experience, I think I will return to Manta on a next occasion.	4.65	5

Relationship of satisfaction with the variables of destination

The relationship of general satisfaction with the different destination variables are presented in Table 10. They have been analyzed through a Spearman correlation.

Table 10. Satisfaction with diferent variables of destination

Aspects	Coefficient	Sig.
Security	0.440**	0.000
Information and signaling	0.369**	0.000
Restaurant service	0.337**	0.000
Recreation places	0.318**	0.000
Sun and beach	0.313**	0.000
Accommodation	0.303**	0.000
Commercial zones	0.267**	0.000
Parking lots	0.261**	0.000
Residents' hospitality	0.258**	0.000
Touristic services prices	0.246**	0.000
Cultural activities	0.239**	0.000
Flora and fauna	0.237**	0.000
Ambient conservation	0.208**	0.000

** Correlación significativa al 1%

According to Table 10, all the variables analyzed show a significant and positive correlation with general satisfaction. So, the variables that have a greater influence on overall satisfaction are the security, information and signage, restaurants services and recreation sites, so these variables should be improved and in this way the level of General satisfaction of tourists visiting Manta.

Relationship of satisfaction with the intention of returning to the destination

The relationship between the level of satisfaction and the intentions of returning to the destination are presented in Table 11. They have been analyzed through a Spearman correlation. As shown in Table 11, a significance level of less than 0.01 has been obtained, so the intentions of returning to the destination are influenced by satisfaction, in other words, the higher level of satisfaction, the greater intentions of return to the destination. In addition, 64.1% of tourists in relation to the total of respondents, are very satisfied and with a high intention to return to Manta, so the quality must be improved in the different

variables of the destination to increase the level of overall satisfaction of tourists and in this way increase the intentions of returning to the destination.

Table 11. Relationship between the degree of satisfaction and the intentions of returning to the destination

After my experience, I think I will come back next time	Defree of general satisfaction					Total	Coefficient	Sig.
	1	2	3	4	5			
1	0.50%					0.50%	0.566	0.000
2			0.50%			0.50%		
3			2.10%	2.10%	0.30%	4.40%		
4			0.80%	11.30%	11.00%	23.10%		
5				7.40%	64.10%	71.50%		
Total	0.50%	0%	3.30%	20.80%	75.40%	100.00%		

Relationship of the satisfaction with main motivations

The relationship with general satisfaction with main motivations are shown in Table 12. They have been analyzed through a Spearman Correlation.

Tabla 12. Relationship of the satisfaction with main motivations of tourists

Motivations		Degree of general satisfaccion					Total	Coefficient	Sig.
		1	2	3	4	5			
For resting	1							0.273	0.000
	2				0.3%		0.3%		
	3			1.3%	4.4%	3.3%	9.0%		
	4				5.9%	12.8%	18.7%		
	5	0.5%		2.1%	10.3%	59.2%	72.1%		
Total		0.5%	0.0%	3.3%	20.8%	75.4%	100.0%		
To enjoy sun and beach	1							0.199	0.000
	2								
	3			1.3%	1.3%	6.2%	8.7%		
	4			0.8%	9.2%	14.9%	24.9%		
	5	0.5%		1.3%	10.3%	54.4%	66.4%		
Total		0.5%	0.0%	3.3%	20.8%	75.4%	100.0%		

As shown in Table 12, a significance level of less than 0.01 has been obtained in the relationship between rest motivations and general destination satisfaction. So the motivations of tourists to rest are influenced by the level of general satisfaction. In other words, the greater the satisfaction of tourists in the destination, the greater motivation for resting. In addition, 59.2% of tourists are very satisfied and highly motivated to rest, which indicates that it is necessary to improve the rest services to increase the motivations of tourists to visit the destination. On the other hand, a significance level of less than 0.01 has been obtained in the relationship between the motivations for enjoying the sun and the beach and the general satisfaction of the destination. So the motivations of tourists to enjoy the sun and the beach are influenced by the level of overall satisfaction. In other words, the greater the satisfaction of tourists in the destination, the greater the motivation for enjoying the sun and the beach. In addition, 54.4% of tourists are very satisfied and have high motivations for the enjoyment of the sun and the beach, which indicates that we must improve the services involved in the enjoyment of the sun and the beach to increase the motivations of tourists for visiting the destination. What ratifies studies as Carvache-Franco et al. (2018) that the main motivations in this typology of tourism revolve around enjoying the sun and the beach, and rest.

CONCLUSION

The study of demand in sun and beach destinations brings important information to develop products according to their motivations, valuation and satisfaction of its travelers. These destinations have their own natural and cultural characteristics that make every time more research is done for having the largest share of the world market. The findings show that the main motivations of tourists are Resting, Enjoying beach and sun, and Delight with local typical gastronomy. The most valued aspects of the visit were Residents' hospitality, Sun and beach, and Restaurant service. The satisfaction of the destination is high, which shows the potential of this destination for this type of tourism. The variables that have a greater influence on overall satisfaction are security, information and signage, restaurant services and places of recreation. In addition, the intentions of returning to the destination are influenced by satisfaction. The motivations of tourists to relax are influenced by the level of general satisfaction. Also, the motivations of tourists to enjoy the sun and the beach are influenced by the level of general satisfaction. From a theoretical perspective it has been found that motivations such as resting, enjoying the sun and the beach are still the main ones in sun and beach destinations (Martínez, 2001, Rivas, 2004, González et al., 2006, Bigné et al., 2007; Carvache-Franco et al., 2017). In addition, the intentions of returning to the destination are influenced by satisfaction (Zabkar et al., 2009, Chen & Chen, 2010). As practical implications it is recommended that the destination focuses on improving security, information and signaling, restaurant services and recreation places because they are variables with the greatest influence on overall satisfaction. It is also necessary to pay attention to the motivations to rest, enjoy the sun and beach, and the typical cuisine to improve the stay of the tourist. It is suggested to take into account the less valued aspects of the destination such as flora and fauna, and cultural aspects to create improvement plans that relate these variables to the visit of tourists. As a final conclusion it can be established that the main limitation of the study is the timeliness of the field study and a new line of research is opened about the relationship between the motivations of body and mind with the variables of assessment of the destinations with these natural characteristics.

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TOURISM SEASONALITY IN THE SPAS OF ROMANIA

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Abstract: The paper aims at presenting the seasonality as one of the most important elements that influences significantly the tourist activities. The research methodology deals with the statistical analyze of the basic indicators that define the seasonal flows – the arrivals of tourists, the overnight stays and the ratio between them and the average stay, having as main result the setting out of the tourist seasonality in the spa resorts in Romania. The interpretation of the results show that in these spa resorts the tourist season differs very little from the tourist season registered at the national level, the periods of the tourist season being approximately identical for of all three indicators. Further, the results show that in the case of tourists' arrivals, the seasonal tourism in Romania (May-September) is one month longer than the seasonal spa tourist season in Romania (June-September), in the case of tourists' overnight stays, the seasonal tourism in Romania (June-September) is identical with the seasonal tourism in the Romanian spa resorts (June-September), and in the case of the average tourists' stay, the seasonal tourism in Romania (June-November) is shorter by one month, compared to the seasonality of the spa resorts in Romania (May-November).

Key words: seasonality, tourist flows, arrivals, overnight stays, average stay, spa resorts, Romania

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INTRODUCTION

Seasonality is a variation in tourism activity, caused by natural or socio-economic elements. It is usually associated with the annual seasons and, it has in most cases an identical repetitiveness. A specific feature in the traditional tourist services (Karadzhov, 2014), seasonality is a dominant but not well understood feature of tourism (Jang, 2004). It is the third largest industry in the world (Maghsoodi Tilaki et al., 2017), being crucial to the success of the tourism industry (Deery et al., 2009). When creating a product that is meant to be active for the whole year, for the tourist market, seasonality is one of the elements that,

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through specific policies, needs to be addressed. However, we should consider that some tourist products, for reasons related to seasonality, are only seasonally active (summer or winter). In fact, according to the Great Dictionary of Neologisms, seasonality is defined as *"the appropriation of what is seasonal"* (Marcu, 2000), and seasonally, according to the Explanatory Dictionary of the Romanian Language is defined as something *"connected to a certain season, lasting for the season, referring to a season"* (DEX, 2009).

As a factor affecting tourist activities, having to be overcome with relatively little research conducted (Butler, 1998), seasonality is responsible for the measures taken by tourism service providers to improve its direct and indirect effects, through specific methods, to accommodate the off-season tourism demand, like development of the cultural tourism products for example, as way to reduce seasonality (Borges, 2013). Seasonality is a great challenge for a large part of the tourism destinations (Connel et al., 2015), as these destinations have a "high" season when employment, tourists and the attached spending are at a peak, and a "low" season when employment, tourists and the attached spending are at the lowest (Ahas et al., 2007; Koc, Altinay, 2004; Morse & Smith, 2015), this could represent a major constraint for the overall tourist growth (Rizal & Asokan, 2014). Seasonality is also influenced by the natural and socio-economic elements. The natural elements refer to the climatic conditions and the succession of the seasons, and the socio-economic elements refer to the regime and structure of holidays, the vacations of the school year, the available leisure time, the personal habits, the frequency of the events (festivals, concerts, fairs etc) (Petrevska, 2013). From a different perspective, seasonality includes the supply side of the tourism system, like marketing, labor market, business finance, stakeholder management (Baum, 1999).

Academic environments in the literature have approached the issue from a variety of perspectives, and as such, seasonality is generally defined according to the context in which is studied, e.g. hospitality, tourism or leisure. Commons and Page (2001), for example, suggest that seasonality is indissolubly linked to tourism and that tourism flows are determined by both natural and transient natural factors (Commons & Page, 2001). Manning and Powers (1984, 25) capture the essence of the problem in the following quote explaining the seasonality and negative effects: *"The uneven distribution of the use of tourist facilities in time is one of the most widespread issues in tourism, causing inefficient use of resources, potential, the emergence of social problems and ecological support capacities, as well as administrative planning difficulties"* (Manning, Powers, 1984, 25). Manning and Powers (1984) are concerned that in extra seasonal periods facilities and services may be underused. On the other hand, the implications of overloading facilities over seasonal periods may have negative effects on tourism. For example, seasonality may exert tremendous pressure on tourism businesses, which become vulnerable due to lack of coherence in tourism services. Consequently, any strategies that have been used to combat the negative effects of seasonality (as well as those used to increase its positive impact) can not be transferred across the industry. As a result of these general findings, a comprehensive review of the literature to identify the causes and effects of seasonality (with a particular focus on those businesses located in remote or isolated regions) is needed (Manning & Powers, 1984). This paper analyzes the tourist seasonality, a vital component of tourism, in the spa resorts of national interest in Romania, where the tourist activity is dealing with the treatment based on the main natural factors (Ilieş et al., 2011).

METHODOLOGY

The analysis of the tourist seasonality lies at the basis of the concept of economic efficiency of the tourist facilities with accommodation functions. By analyzing the seasonality and its effects, it is attempted to maximize the profitability in tourism (Zaman &

Geamănu, 2006). From a larger perspective, the tourism seasonality can not be analyzed as in other economic activities, because, depending on the type of specific services, it is differentiated and distinct from them (Bârsan and Șușu, 2013). The tourism activity shows a frequent unequal distribution of the demand for tourist services, equivalent to a pronounced concentration of arrivals of tourists in a certain or at certain times of the year, and the diminution or, in some cases, the cessation of arrivals of the tourists at other times of the year. These seasonal travel movements have organizational, economic and social effects and implications on agents who offers touristic services. In order to correctly assess the seasonal implications of tourism activities, a systematic approach to elements that have direct or indirect effects on seasonality (Bell et al., 2012) is needed:

- periodic modeling of time series, the introduction, application and comparison of different seasonal models;
- the estimation of the time series components and the broader implications this has for estimating the adjustment and the seasonal business cycle;
- quantification of seasonal errors, with error comparisons in seasonal model-based adjustments;
- practical issues that occur in seasonal adjustment: Creating filters during the asymmetric trend cycle, dealing with both temporal and contemporary reference constraints, detecting day-to-day trading effects in monthly and quarterly time series, and use of diagnostics in conjunction with the seasonal adjustment model;
- detection and modeling of chronological series containing extreme values, development of new procedures and extension of previous works;
- alternative models and inferential procedures for analyzing seasonal economic time series;
- aspects of modeling, estimation, and prognosis for nonseasonal economic time series.

The present study was carried out taking into account two major elements: spa resorts of national interest (according to GD 852/2008), as well as the time series provided by the Romanian Institute of Statistics (www.insse.ro). Thus, for the spa resorts of national interest taken in this study, the following resorts or groups of resorts were chosen (Figure 1):

- Moneasa (Arad County)
- Slănic-Moldova (Bacău County)
- Băile Felix-1 Mai resorts (Bihor County)
- Sângerorș-Băi resort (Bistrița-Năsăud County)
- Băile Herculane resort (Caraș-Severin County)
- Eforie Nord-Eforie Sud resorts (Constanta County)
- Mangalia-Olimp-Neptun resorts (Constanta County)
- Techirghiol resort (Constanta County)
- Covasna resort (Covasna County)
- Pucioasa resort (Dambovită County)
- Băile Tușnad resort (Harghita County)
- Geoagiu resort (Hunedoara County)
- Amara resort (Ialomița County)
- Sovata resort (Mureș County)
- Vatra Dornei resort (Suceava County)
- Buziaș resort (Timiș County)
- Băile Govora resort (Valcea County)
- Băile Olănești resort (Valcea County)
- Călimănești-Căciulata resorts (Vâlcea County)
- Voineasa resort (Valcea County)

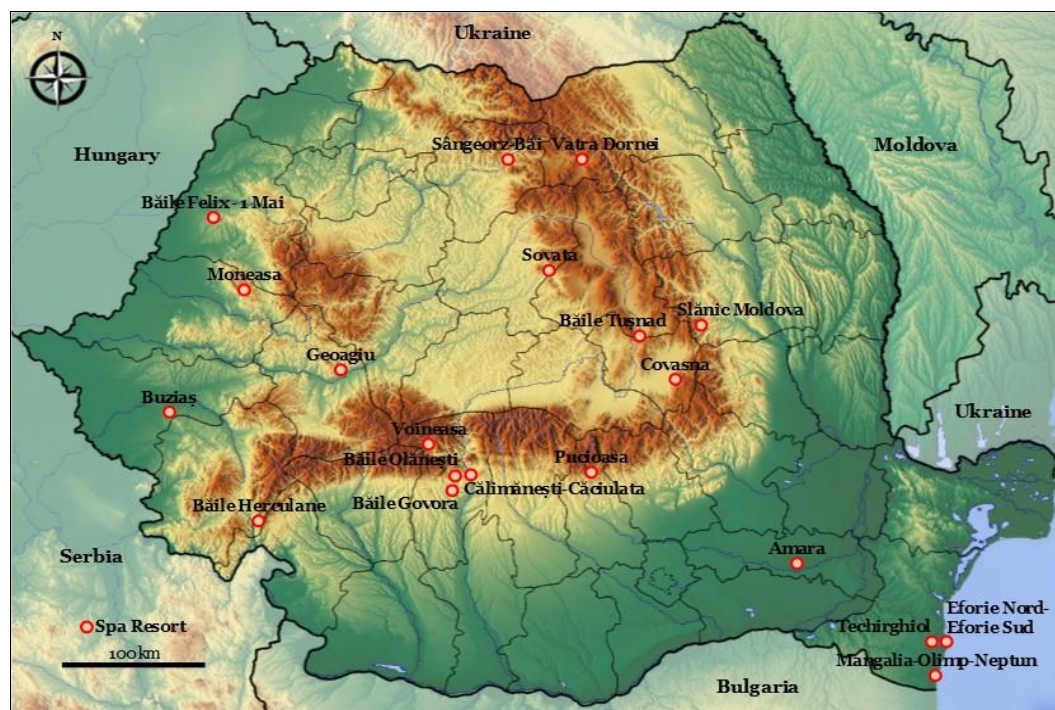


Figure 1. The spa resort of national interest of Romania
(Source of map: GIS shape, with additions)

As for the time series, they have two variables: the actual period, which in the present study is monthly and has a temporal dispersion between January 2010 and December 2016 and the tourist flow, which in turn has for the analyzed part three sub-variables: arrivals of tourists, overnight stays of tourists and respectively, the period of stay.

ANNUAL TOURISM CIRCULATION

The Tourists Arrivals

In the period 2010-2016, a total of almost 58 million tourists arrived in Romania. The average increase in tourists' arrivals for the whole period was 80.6%, and the annual average increase of tourists' arrivals was 10.5% (annual values ranged between 3.5% and 17.2%). Thus, if in 2010 there were just over 6 million arrivals of tourists, in 2016 their number reached almost 11 million. At the same time, the average increase in the number of tourists' arrivals in the spa resorts in Romania for the whole period was 60.3%, and the average annual increase in the number of arrivals of tourists was only 8.5% (the annual values were between -4.8% and 16.2%). Thus, if in 2010 there were just over 850 000 arrivals of tourists in spa resorts in Romania, in 2016 their number reached almost 1.4 million. On average, tourists arriving in spa resorts in Romania accounted for 12.9% of the total arrivals of tourists in Romania during 2010-2016 (average annual values ranging from 12.3% to 14.2%) (Figure 2).

The Tourist Overnight Stays

The nearly 58 million tourists arriving in Romania between 2010-2016, generated nearly 150 million overnight stays. Similar to the number of tourists' arrivals, tourists' overnight stays have increased year by year, throughout the studied period. Thus, the average number of tourists overnight stays increased by 58.3% and the average annual

increase in tourists' overnight stays was 8.1% (annual values ranging from 1.1% to 15.9%). Thus, if in 2010 there were almost 16 million overnight stays of tourists, in 2016 the number reached over 25 million. Following the national trend, the average increase in the number of overnight stays in the spa resorts in Romania for the period 2010-2016 was 30.9%.

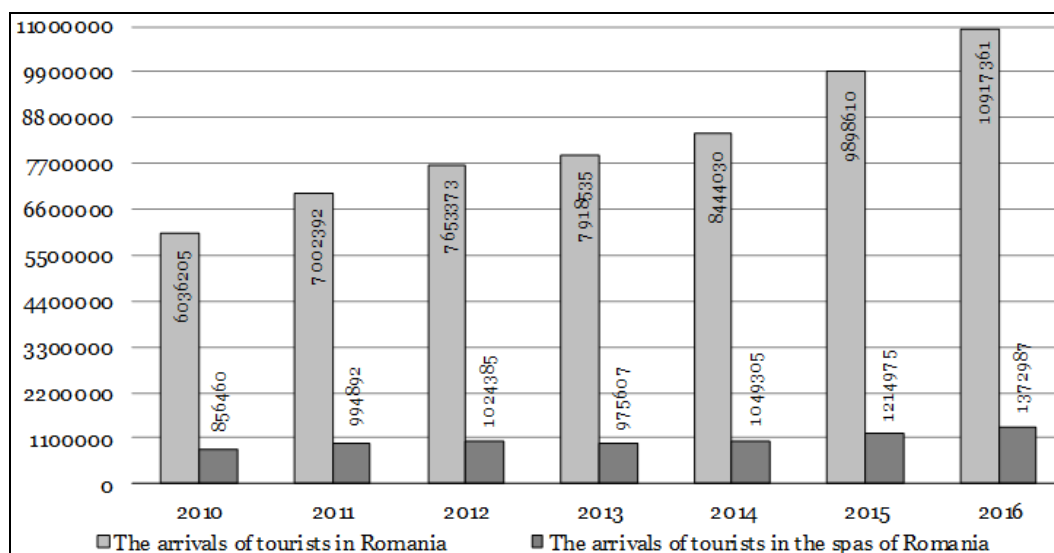


Figure 2. The arrivals of tourists in Romania and in the spas of Romania
(Data source: <http://statistici.insse.ro/shop/>)

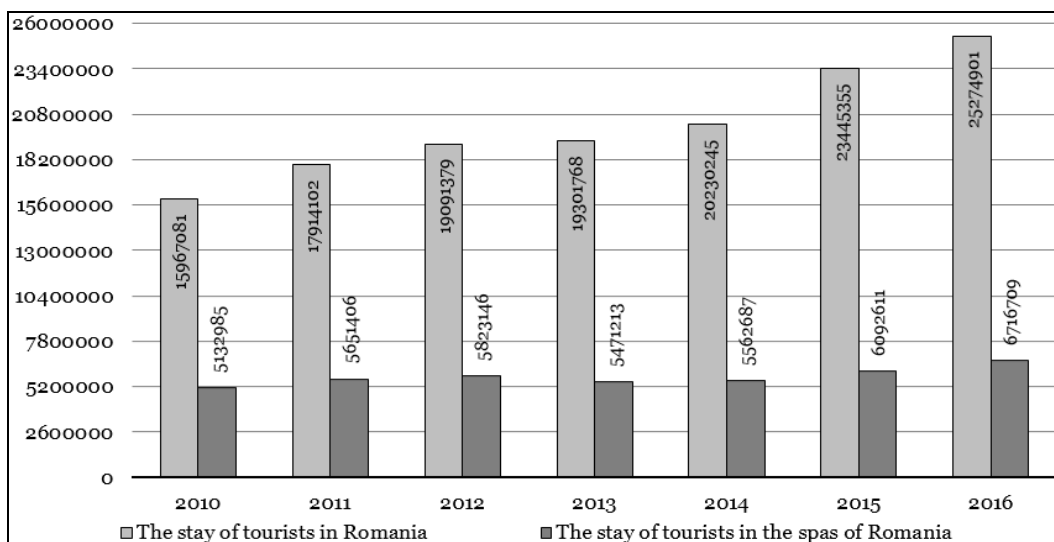


Figure 3. The stay of tourists in Romania and in the spas of Romania
(Data source: <http://statistici.insse.ro/shop/>)

Under the same conditions, the average annual increase in the number of overnight stays of tourists was only 4.8% (annual values ranging from -6.0% to 10.2%). Thus, if in 2010 there were 5.1 million overnight stays in the spa resorts in Romania, in 2016 their number reached 6.7 million. Unlike tourists' arrivals in spa resorts in

Romania, which accounted for an average of 1/7 of the national flow, the number of overnight stays in the spa resorts in Romania represents almost 1/3, respectively 27.0% (the annual values ranged between 26.0% and 32.1%) (Figure 3).

The Average Tourist Stay

From the ratio of the two above-mentioned indicators, the arrivals of the tourists and their overnight stays, we can determine the average stay. Thus, during the period 2010-2016, the 57 870 506 tourists arrived at national level generated 149 856 222 overnight stays, resulting in a national average stay of 2.36 days/stay. Throughout the study period (2010-2016), the annual average annual holidays decreased year-by-year, being recorded a decrease of -12.7% and an annual average decrease of -2.2% (the annual values were between -3.9% and -1.0%), from 2.55 days/stay in 2010 to 2.22 days/stay in 2016.

From the same ratio applied at the level of the arrivals and overnights indicators within the spa resorts in Romania, it results an average stay of 6.05 days/stay (from 7 488 611 arrivals of the tourists in the spa resorts in Romania and 40 450 757 for the period 2010-2016) of overnight stays of tourists in spa resorts in Romania. Similar, at national level, in the spa resorts in Romania, the annual average stay has decreased year-by-year. The decrease for the whole studied period (2010-2016) was -20.6% at an annual average rate of -3.8% (annual values ranged between -4.7% and -1.8%), from 6.83 days/stay in the year 2010 at 5.43 days/stay in 2016.

The average stay recorded in the spas in Romania is significantly higher than the average stay in Romania, respectively 6.05 days/stay compared to 2.36 days/stay, resulting in a 2.6 times longer stay in favor of spa stays in Romania. Within each year the same situation is recorded, the differences being between 2.4 and 2.7 times higher in favor of spa stays in Romania (Figure 4).

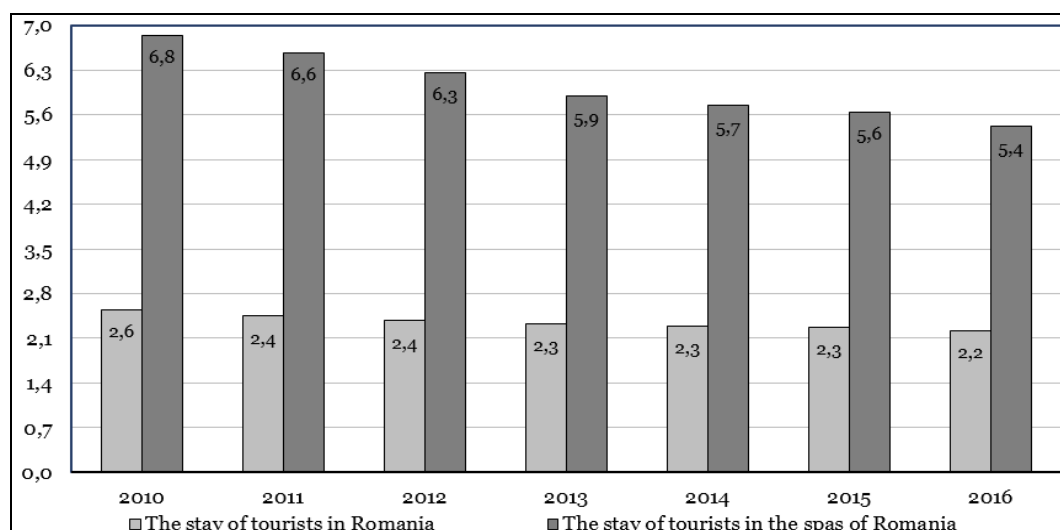


Figure 4. The average stay of the tourists in Romania and in the spas of Romania
(Data source: own calculations from the data obtained from <http://statistici.insse.ro/shop/>)

TOURISM CIRCULATION

The Tourist Arrivals

According to the data obtained for this study from the Romanian National Institute of Statistics for the period 2010-2016, the highest share of tourist arrivals in Romania was registered in August, 14.3% of the total number of tourists arrivals of tourists in Romania,

and the lowest share of tourist arrivals in Romania was registered in January, this month accounting for only 5.2% of the total arrivals of tourists in Romania. Considering a month of tourist season, that month's weight ratio is higher than the ratio between the maximum possible share (100%) and the total number of months in a year (12), resulting in an average of 8.3(3)%, we can say that in Romania, during 2010-2016, the tourist season in terms of arrivals of tourists was between May-September, when in 41.7% of the year there were 54.8% of the total of arrivals of tourists from Romania. At the same time, according to the same considerations, we can state that the tourist season in terms of arrivals of tourists was between October and April, when in 58.3% of the year there were 45.2% of the total arrivals of tourists in Romania (Figure 5, Table 1).

Within the spa resorts in Romania, the largest share of tourists' arrivals was recorded also in August, this month accounting for 25.6% of the total arrivals of tourists in spa resorts in Romania, and the lowest share of tourists' arrivals in spa resorts in Romania was recorded in March, this month accounting for only 2.8% of the total arrivals of tourists in spa resorts in Romania. The tourist season in the spa resorts in Romania, in terms of arrivals of tourists, ranges from June to September, when in the 33.3% of the year there were 66.2% of the total arrivals of the tourists in the spa resorts in Romania, and the tourist season, in terms of tourists' arrivals, ranged from October to May, when only 33.8% of the total arrivals of the tourists in the spa resorts in Romania accounted for 66.7% of the year (Figure 5, Table 1). Of the 20 spa resorts in Romania analyzed in this study, the majority had the maximum arrivals of tourists in August (with values between 13.7% and 43.4%).

Only three of them had the maximum arrivals of tourists in other months: in July Techirghiol (17.2%) and Pucioasa (11.4%) and Buziaș in September (10.9%). At the opposite end, the fewer arrivals of tourists are more complex. In nine of the 20 resorts the minimum was recorded in January (with values between 0.1% and 4.5%). In the other balneal stays, the minimum arrivals of tourists were registered in other months as follows: in November in Voineasa (2.8%), in December in Geoagiu (4.1%), in February in Slănic-Moldova (3.4%), Sângeorz 0.4%), Herculane (3.0%) and Olănești (2.2%), in March in Tușnad (3.0%), Sovata (5.5%), Vatra Dornei (3.5%), Govora (1.2%) and Călimănești-Căciulata 3.9%) (Figure 5, Table 1). At the same time, depending on the number of tourists' arrivals in the spa resorts in Romania, 6 categories can be set according to the seasonality periods in the spa resorts in Romania (Figure 5, Table 1):

- 3 months (June-August): Mangalia-Olimp-Neptun;
- 4 months (June-September): Eforie Nord-Eforie Sud, Tușnad, Geoagiu and Sovata;
- 5 months (May-September): Herculane and Călimănești-Căciulata;
- 5 months (June to October): Moneasa and Techirghiol;
- 6 months (May-October): Slănic-Moldova, Felix-1 Mai, Sângeorz, Amara and Olănești;
- 7 months (May-November): Covasna, Pucioasa, Buziaș and Govora.

Among the 20 spa resorts analyzed are two cases where, because of their location in the mountainous areas, they have two tourist seasons, one in summer and one in winter. Thus, in Vatra Dornei the tourist seasons are in June-September and December-February, and in Voineasa the tourist seasons are in July-September and February (Figure 5, Table 1).

The Tourist Overnight Stays

Taking into account the same ratio, as in the tourists arrivals, between the maximum possible weight (100%) and the total number of months in a year (12), it can be stated that, from the point of view of tourists' overnight stays in Romania, the tourism season was between June and September, when in the 33.3% of the year there were 52.3% of the total number of overnight stays of tourists in Romania, while the tourist season in terms of overnight stays was between October and May, when 66.7% of the year recorded 47.7% of the total number of overnight stays in Romania (Figure 5, Table 2).

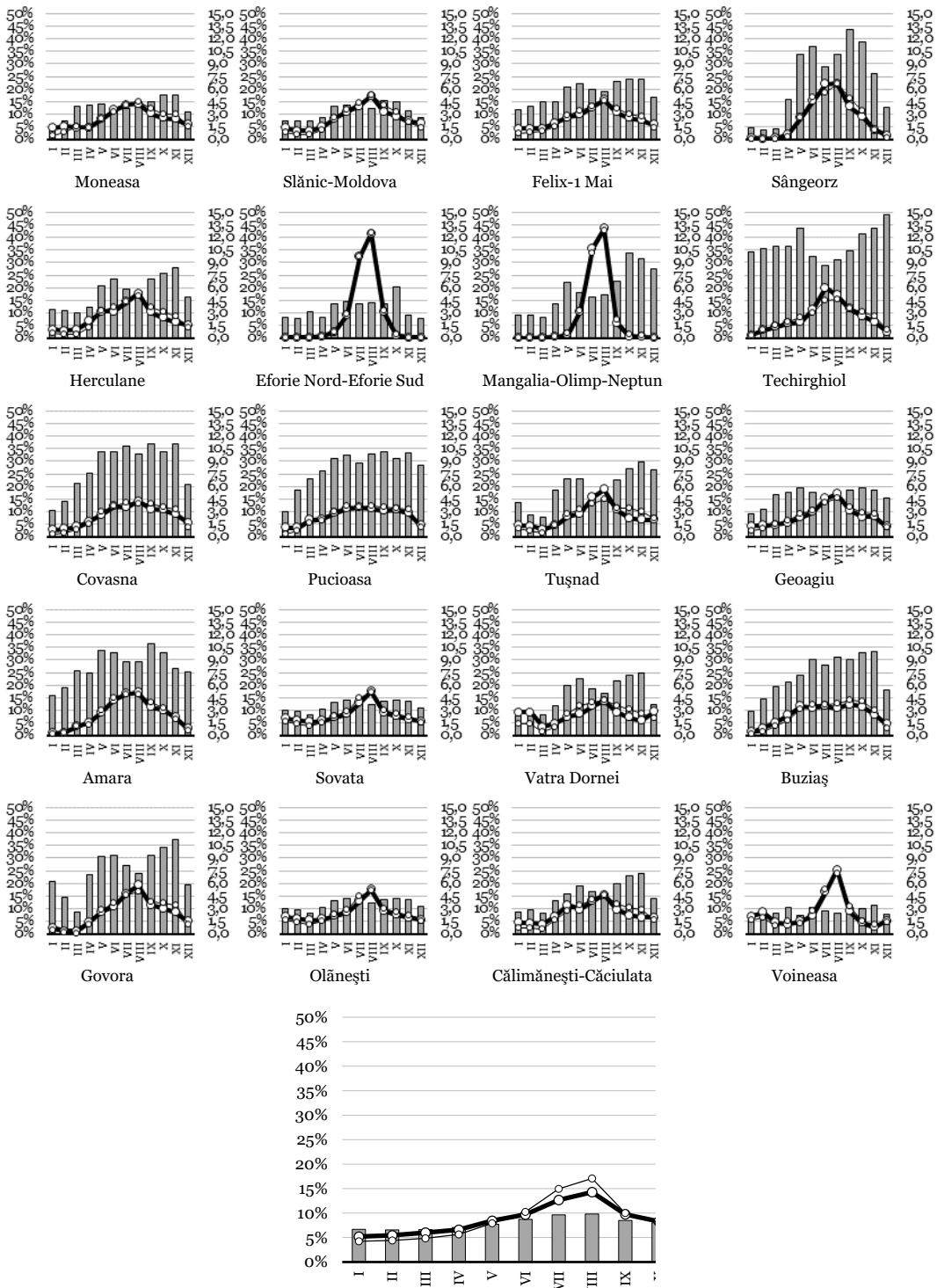


Figure 5. The average tourist stay, arrivals and staying overnight of tourists in spas of Romania and Romania (Data source: own calculations from the data obtained from <http://statistici.insse.ro/shop/>)

Table 1. Tourists in accommodation facilities

 (Data source: own calculations from the data obtained from <http://statistici.insse.ro/shop/>)

Spa	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Moneasa	4.5%	5.2%	4.7%	4.8%	8.1%	11.6%	13.8%	14.3%	10.4%	8.5%	8.1%	5.9%
Slănic-Moldova	4.5%	3.4%	3.4%	5.0%	8.4%	11.0%	13.2%	17.2%	11.0%	9.2%	7.3%	6.5%
Băile Felix-1 Mai	4.3%	4.3%	4.4%	6.6%	8.8%	9.9%	12.8%	15.9%	10.9%	8.6%	7.7%	5.8%
Sângeorz-Băi	0.8%	0.4%	0.6%	2.1%	8.7%	15.3%	21.9%	22.1%	13.1%	9.3%	3.9%	1.8%
Băile Herculane	3.4%	3.0%	3.5%	6.7%	10.5%	10.7%	14.4%	17.7%	10.4%	8.2%	6.3%	5.2%
Eforie Nord-Eforie Sud	0.2%	0.3%	0.3%	0.8%	2.6%	9.2%	32.4%	41.4%	10.7%	1.1%	0.4%	0.4%
Mangalia-Olimp-Neptun	0.1%	0.2%	0.2%	0.5%	1.5%	10.6%	35.7%	43.4%	6.2%	0.8%	0.6%	0.2%
Techirghiol	1.3%	3.2%	4.7%	5.9%	6.4%	11.6%	20.0%	17.2%	11.7%	8.9%	6.7%	2.5%
Covasna	2.7%	3.3%	4.1%	6.2%	8.9%	12.2%	11.7%	14.3%	11.1%	10.8%	9.1%	5.7%
Pucioasa	3.6%	3.7%	6.7%	7.1%	9.5%	11.3%	11.6%	11.4%	10.4%	10.8%	9.5%	4.5%
Băile Tușnad	4.6%	4.3%	3.0%	4.7%	8.1%	9.2%	15.7%	18.8%	10.7%	7.6%	6.8%	6.7%
Geoagiu-Băi	4.3%	4.6%	4.8%	5.7%	7.7%	9.9%	15.2%	17.0%	10.5%	8.0%	8.0%	4.1%
Amara	0.9%	1.3%	3.7%	5.2%	9.3%	14.3%	16.7%	17.0%	11.4%	10.1%	7.3%	2.7%
Sovata	6.9%	6.1%	5.5%	6.0%	7.3%	8.6%	13.0%	17.5%	9.2%	7.7%	6.6%	5.7%
Vatra Dornei	9.2%	9.2%	3.5%	4.8%	7.4%	8.6%	11.7%	13.7%	9.2%	7.3%	5.8%	9.5%
Buziaș	1.4%	3.0%	5.3%	8.0%	11.6%	11.2%	11.7%	10.9%	12.5%	11.5%	8.4%	4.6%
Băile Govora	2.6%	1.2%	1.2%	4.7%	8.7%	10.9%	15.9%	19.3%	11.6%	10.1%	8.7%	5.1%
Băile Olănești	3.2%	2.2%	3.0%	4.9%	9.1%	11.7%	15.0%	17.2%	11.7%	10.1%	6.4%	5.3%
Călimănești-Căciulata	4.6%	4.2%	3.9%	7.0%	11.5%	9.8%	12.9%	15.6%	9.7%	7.5%	6.6%	6.7%
Voineasa	7.1%	8.7%	4.5%	3.8%	5.1%	7.4%	16.7%	25.3%	9.1%	4.5%	2.8%	5.1%
Total Spa	3.0%	2.9%	2.8%	4.2%	6.5%	10.2%	20.9%	25.6%	9.5%	5.8%	4.8%	3.9%
Romania	5.2%	5.4%	6.0%	6.6%	8.4%	9.7%	12.7%	14.3%	9.7%	8.3%	7.2%	6.4%

Note: X.X% – tourist season, X.X% - no season

The largest share of tourists 'overnight stays in spa resorts in Romania was recorded, as in the case of tourists' arrivals in spa resorts in Romania also in August, when 24.0% of the total number of overnight stays in the spa resorts in Romania were registered, and the lowest share of tourists' nights in spa resorts in Romania was in January, when only 1.6% of the total number of overnight stays of tourists in spa resorts in Romania was recorded. From the data analysis, it can be said that in terms of tourist overnights in the spa resorts in Romania, the tourist season is between June and September, when in 33.3% of the year there were 66.5% of the total overnight stays of tourists in spa resorts in Romania, while the tourist season is between June and September, when 66.5% of the year recorded 33.5% of the total number of overnight stays in the spa resorts in Romania (Figure 5, Table 2).

Most of the 20 spa resorts in Romania, analyzed in this study had the maximum tourist overnight stays in 2010-2016 (with values between 12.4% and 42.6%). However, in three of the spa resorts in Romania, the maximum overnight stays of tourists were recorded in other months: in July in Covasna (13.8%) and Amara (16.2%), and Buziaș in September (13.9%). As for the fewest overnight stays of tourists, the situation is more complex. Thus, in 11 of the 20 spa resorts, the minimum tourist overnight was registered in January (with values ranging from 0.1% to 2.7%), in 6 out of the 20 spa resorts the minimum tourist overnight was registered in January (with values ranging from 0.4% to 3.8%), and in 6 of the 20 spa resorts, the minimum tourist overnight stays was also registered in January (with values between 0.04% and 2.1%).

Depending on the percentage of tourists' nights spent in spa resorts in Romania, a total of 6 categories can be set according to the tourist seasonality periods in the spa resorts in Romania (Figure 5, Table 2):

- 3 months (June-August): Mangalia-Olimp-Neptun;
- 4 months (June-September): Eforie Nord-Eforie Sud and Voineasa;
- 5 months (June to October): Sovata;
- 6 months (May-October): Slănic-Moldova, Sângeorz and Amara;

- 6 months (June to November): Techirghiol;
- 7 months (May-November): Moneasa, Felix-1 Mai, Herculane, Covasna, Pucioasa, Tuşnad, Geoagiu-Băi, Vatra Dornei, Buziaş, Govora, Olăneşti and Călimăneşti-Căciulata.

Table 2. Overnight stays of the tourists in the structure of tourists accommodation(Data source: own calculations from the data obtained from <http://statistici.insse.ro/shop/>)

Spa	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Moneasa	1.6%	2.9%	5.0%	4.7%	8.4%	11.1%	13.7%	15.2%	12.3%	10.2%	9.9%	5.1%
Slănic-Moldova	2.9%	2.1%	2.2%	3.8%	8.8%	12.0%	14.3%	17.9%	13.8%	10.9%	6.8%	4.7%
Băile Felix-1 Mai	2.7%	2.9%	3.4%	5.1%	9.4%	11.2%	13.3%	15.5%	12.5%	10.2%	9.1%	4.8%
Sângeorz-Băi	0.1%	0.0%	0.1%	1.1%	8.9%	16.6%	18.7%	21.9%	16.5%	11.3%	3.9%	0.9%
Băile Herculane	1.9%	1.6%	1.7%	4.1%	11.1%	12.3%	14.4%	16.8%	12.5%	10.6%	8.7%	4.2%
Eforie Nord-Eforie Sud	0.1%	0.2%	0.2%	0.5%	2.4%	9.5%	32.5%	41.9%	10.8%	1.5%	0.2%	0.2%
Mangalia-Olimp-Neptun	0.1%	0.1%	0.1%	0.4%	2.0%	11.0%	33.5%	42.6%	7.4%	1.4%	1.0%	0.3%
Techirghiol	1.3%	3.5%	5.0%	6.3%	8.3%	10.3%	15.1%	15.6%	11.7%	10.7%	8.8%	3.5%
Covasna	0.9%	1.5%	2.9%	5.2%	9.9%	12.4%	13.8%	13.3%	13.3%	11.9%	10.9%	3.9%
Pucioasa	1.2%	2.6%	5.6%	6.4%	10.0%	12.2%	11.6%	12.4%	11.8%	11.5%	10.8%	4.0%
Băile Tuşnad	3.2%	2.6%	1.3%	4.6%	9.1%	11.0%	13.1%	14.9%	11.3%	11.3%	10.1%	7.5%
Geoagiu-Băi	2.7%	3.3%	5.2%	6.5%	9.1%	10.3%	13.5%	15.2%	11.9%	9.8%	9.0%	3.6%
Amara	0.7%	1.3%	3.6%	4.2%	10.2%	15.0%	16.2%	16.1%	13.3%	10.9%	6.5%	1.9%
Sovata	5.7%	4.7%	3.8%	5.0%	7.8%	9.7%	15.1%	17.1%	10.2%	8.5%	7.3%	5.0%
Vatra Dornei	4.5%	4.6%	1.8%	3.5%	8.9%	11.7%	13.2%	13.9%	11.9%	10.6%	8.5%	7.0%
Buziaş	0.5%	1.7%	4.0%	6.2%	10.5%	12.2%	12.2%	12.6%	13.9%	13.4%	10.1%	2.9%
Băile Govora	1.4%	0.5%	0.4%	3.7%	9.7%	12.3%	15.5%	16.6%	12.5%	12.4%	11.3%	3.6%
Băile Olăneşti	1.0%	1.5%	3.1%	4.7%	10.1%	12.6%	14.2%	15.7%	12.8%	11.8%	9.1%	3.4%
Călimăneşti-Căciulata	2.3%	2.3%	2.0%	5.7%	9.2%	11.6%	13.8%	15.4%	11.9%	10.7%	9.7%	5.4%
Voineasa	5.7%	6.4%	3.5%	5.3%	4.3%	9.1%	17.6%	23.8%	10.9%	5.1%	3.6%	4.9%
Total Spa	1.6%	1.7%	2.1%	3.5%	7.2%	11.4%	20.0%	24.0%	11.1%	7.8%	6.4%	3.2%
Romania	4.2%	4.4%	4.8%	5.6%	7.9%	10.2%	14.9%	17.1%	10.0%	8.1%	7.0%	5.6%

Note: X.X% – tourist season, X.X% - no season

The Average Tourist Stays

The tourist season periods according to the average monthly stay were calculated according to the annual average of the stay. Thus, the months in which the average monthly staying was higher than the average annual stay, were considered as months belonging to the tourism season. It is worth noting that these periods were determined by the annual average stay obtained in turn from the ratio between the annual number of overnight stays of tourists and the annual number of tourists' arrivals.

Depending on the quality of services offered by spa resorts (Stupariu & Josan, 2014), as well as the types of procedures and treatments and the therapeutic recommendations respectively, the average stay has different values from one spa resort, to another spa resort. It should also be noted that medical tourism is mostly practiced in spa resorts, which is another reason for the differences in the average stay. Thus, average annual tours with great value are recorded in spa resorts: Techirghiol (11.2 days/stay), Olăneşti (8.4 days/stay), Covasna (8.4 days/stay), Amara (8.3 days) and Pucioasa day / night). At the opposite end, smaller annual average tourist stays are recorded in the spa resorts: Voineasa (2.7 days/stay), Slănic-Moldova (3.3 days/stay), Eforie Nord-Eforie Sud (3.5 days/stay) and Moneasa (3.8 days/stay) (Figure 5, Table 3).

For most spa resorts, the tourist season, from the point of view of the average stay, is between May and November (situation found in 9 of the 20 cases).

A distinct element in the average stay is the existence of lower average values than the previous and the following months in the maximum period of arrivals of tourists and maximum of tourists' overnight stays. This situation is found in 17 out of 20 spa resorts (Figure 4, Table 3). In some of these 17 spa resorts, the size of the average stay decreases

so much that one can speak of an extra off-season for the average stay. Such situations are found in 7 of the 17 spa resorts. In Voineasa resort the average annual stay is exceeded in three cases: in April, June-July and September-November (Figure 5, Table 3).

Table 3. The average stay of the tourists in the structure of tourists accommodation
(Data source: own calculations from the data obtained from <http://statistici.insse.ro/shop/>)

Spa	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avr
Moneasa	1.4	2.2	3.9	4.0	4.2	3.7	3.7	4.0	4.5	5.3	5.3	3.3	3.8
Slănic-Moldova	2.2	2.3	2.2	2.7	4.0	4.1	3.9	3.7	4.6	4.5	3.4	2.7	3.3
Băile Felix-1 Mai	3.6	3.9	4.5	4.6	6.3	6.7	6.0	5.7	6.9	7.1	7.2	5.0	5.6
Sângeorz-Băi	1.3	1.1	1.3	4.8	10.2	11.1	8.6	10.1	13.0	11.7	7.9	3.9	7.1
Băile Herculane	3.4	3.3	3.0	3.7	6.2	7.0	5.8	5.5	7.1	7.7	8.3	4.9	5.5
Eforie Nord-Eforie Sud	2.5	2.3	3.1	2.5	4.0	4.3	4.2	4.2	4.1	6.1	2.7	2.3	3.5
Mangalia-Olimp-Neptun	2.7	2.7	2.5	4.1	6.7	5.5	4.9	5.1	6.8	10.1	9.4	8.3	5.7
Techirghiol	10.3	10.6	10.9	10.9	13.1	9.8	8.6	9.3	10.4	12.4	13.1	14.7	11.2
Covasna	3.1	4.2	6.4	7.5	10.1	10.1	10.8	9.9	11.1	10.1	11.0	6.3	8.4
Pucioasa	3.0	5.6	6.9	7.9	9.3	9.7	8.8	9.8	10.2	9.3	10.0	8.5	8.3
Băile Tuşnad	4.0	2.6	2.4	5.6	6.9	7.0	5.2	4.7	6.8	8.2	8.9	7.9	5.8
Geoagiu-Băi	2.8	3.3	5.0	5.3	5.8	5.2	4.4	4.5	5.5	5.9	5.5	4.6	4.8
Amara	4.8	5.7	7.7	7.4	10.2	9.8	8.8	8.8	11.0	9.9	8.0	7.6	8.3
Sovata	3.1	2.8	2.5	3.2	3.9	4.3	4.4	3.6	4.1	4.2	4.1	3.3	3.6
Vatra Dornei	2.4	2.5	2.5	3.6	5.9	6.8	5.6	5.1	6.4	7.2	7.4	3.6	4.9
Buziaş	2.9	4.3	5.8	6.3	7.2	9.1	8.3	9.3	9.0	9.8	9.9	5.4	7.3
Băile Govora	6.3	4.4	2.7	7.0	9.1	9.3	8.1	7.1	9.3	10.3	11.1	5.8	7.5
Băile Olăneşti	3.1	6.4	9.0	8.5	9.7	9.4	8.3	8.0	9.7	10.2	12.5	5.8	8.4
Călimăneşti-Căciulata	2.7	2.8	2.5	4.0	4.7	5.7	5.0	4.7	5.9	6.9	7.2	4.2	4.7
Voineasa	2.2	2.3	2.4	3.1	2.2	3.1	2.7	2.4	3.2	3.0	3.4	2.4	2.7
Total Spa	3.3	3.8	4.3	5.3	7.0	7.1	6.3	6.3	7.5	8.0	7.8	5.5	6.0
Romania	2.0	2.0	2.0	2.1	2.3	2.6	2.9	2.9	2.5	2.4	2.4	2.1	2.6

Note: X.X – tourist season, X.X – no season

CONCLUSIONS

From the point of view of tourist arrivals and overnight stays in Romanian spa resorts, the tourist season ranges from June to September, and from the point of view of overall overnight stays, the tourist season is between May and November. It is worth noting that these tourist season periods are medium and they are overlapping over favorable periods in many ways (climate, economic, social etc). Following a separate analysis of the individual resorts it can be stated that the seasonality in the spa resorts in Romania has distinct characteristics determined by the particular situations encountered in each of the 20 resorts or groups of resorts considered in this study.

Among its many advantages, seasonality allows the tour operators to formulate objective decisions based on a logical, verifiable and operational methodology, creating a background of market trends in most of the time and in most markets, and providing historically valid inputs to support other analytical methods and timing indicators. The essence of seasonality is found in its long history and statistical testable methodologies.

Seasonal character and its economic, social and environmental impacts are a major issue for the tourism industry.

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WHAT FUTURE FOR THE LAND OF THE WOODEN CIVILISATION? VERNACULAR ARCHITECTURE FROM MARAMURES AS SUBJECT OF A LONG STANDING DEBATE

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Abstract: Maramures Land is a Romanian historical and ethnographic region known as “the land of the wooden civilisation” due to high concentration of vernacular architecture in wood and remarkable virgin forests. Preservation of the architectural heritage has a long standing history as debate subject: authorities and stakeholders recognise its endangered status and complicated evolving paths. Therefore, this paper looks at the specifics of the discourse regarding vernacular architecture in Maramures - heritage sites and common structures - in order to outline the preservation strategies developed along the last twenty years, focusing on policies, programmes, local initiatives and impact. The main result is a multi-scale analysis on a geo-database with the traditional buildings in the rural area of the region. In addition, the timeline revealed the milestones of the debate on wooden architecture, in respect with two case-studies: UNESCO and a Local Action Group.

Key words: Maramures, vernacular architecture, heritage preservation, wooden church, wooden house, wooden gate

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INTRODUCTION

Vernacular architecture from Maramures (Romania) is a well-defined concept, comprising the traditional way of building in wood developed by local masters upon traditional knowledge (Dancus, 2010). This is a subsidiary of the basic definition employed by Brunskill (2000), as the usual way of building in a place, based on climatic constraints and cultural norms. Climatic limitations refer to conditions such as natural setting, type of wood, land use, as well as harvesting season. Cultural norms direct the woodcraft according to the functions of the building. Moreover, there is a set of social status constraints originating from the regions' historical narratives.

Consequently, the rural built landscape evolved with difficulties, determining relevant shifts in the public discourse regarding the conservation state and the appropriate protection plan. Two important characteristics of this evolution path have triggered the debate on the endangered status of the traditional architecture in Maramures: (1) the obvious decrease in number and diversity of new wooden dwellings, and (2) the eventual disappearance of the old wooden houses, demolished or marketed as reclaimed material. In contrast, the number of wooden churches and gates built in Maramures style is raising, being constantly assimilated into common Romanian identity marker. Therefore, this study analyses the specifics of the discourse in order to outline the preservation strategies developed along the last twenty years, with accent on their outcomes: policies, programmes, local initiatives and impact.

MATERIALS AND METHODS

The main result of the study is a multi-scale analysis. The subsequent geo-database with traditional buildings in the rural area is essential to the development of the research on the conservation state and evolution, while using specific fieldwork tools (spatial data retrieval, photographs, interviews with the main stakeholders and with locals) and GIS (open source Quantum GIS, software for mapping and visualisation). Basic classification and hierarchical clustering operations were applied to the retrieved data, in order to assess the properties with higher cultural value; applying buffering methods and computing several dispersion indexes revealed the areas that needed more attention or, on the contrary, the high density streets suitable for sightseeing products. Research results were then transferred towards the local communities in order to enhance the activities as restoring the authentic aspect of the village, embellishing the facades with woodcraft pieces, funding repairs on the buildings visible on the public domain.

Longitudinal analysis generated a timeline, both comprehensive and relevant for the evolution of the traditional buildings. Firstly, the work package focused on official strategic documents, reports and other online available sources. This allowed the compilation along a timeline with key-moments and shifts. Secondly, a set of unstructured interviews with local stakeholders completed the study, completing the knowledge on the public discourse concerning the vernacular architecture. Nevertheless, full statistical data description does not make the object of this study.

STUDY AREA

In Romania, the lands are regions with boundaries strongly marked by their historical evolution and ethnographic features. In a more extensive approach, they are regional matrices preserving the archaisms, the traditional way of life, where regional identity and social capital are obvious (Coccean, 1997). Regional researches and reports list

them as 'countries' due to the strong resemblance to the French term of 'pays' (Claval, 1994), or after their historical name 'tara/terra' in early stage translations (ICOMOS, 1999). There are twenty-one land regions, situated in lowlands around the Carpathian Mountains and Maramures is one of them. Maramures Land located to the north of Romania, on the border with Ukraine, stretches on 3310km² along the Tisza River and its left side tributaries. Nowadays it is also known as 'the Land of the wooden civilisation' due to its vernacular architecture in wood and remarkable pristine forests. Nevertheless, valuable heritage sites in the area, both natural and historical, made Maramures an important tourist destination, especially for cultural rural tourism (Figure 1).



Figure 1. Maramures Land. Location of new wooden churches beyond the region

The traditional built landscape has three distinct functional elements: wooden dwellings, wooden gates and wooden churches. The old constructions dating from the 17th and 18th century coexist with the newest structures constructed in a similar way. Traditional wooden houses are built on simple rectangular plans, with two or three rooms, low ceiling and small windows. The walls are squared logs from oak or pine, depending on the forest nearby, starting from a stone foundation. The high, shingled roof truss has four slopes, at approximately 60°. In front of the house several sculpted pillars support the terrace (Figure 2). Although they are important representatives of the traditional society in the region, heritage protection policies never listed the houses.

The shape and size of the homes do not depend on the social status of the family, but on the nature of the available material and the legal regulations for timber. In the region there are 63 villages that house 200 000 inhabitants, 50% of which live in wooden buildings according to the 2011 National Census Data (INSSE, 2016). Furthermore, the statistical data do not show the share of the buildings with high cultural value, as described by ethnographers and other relevant voices in the field, leaving the ground for extensive research. Wooden gates in Maramures are monumental structures that mark the entrance not only into the private realm of a family, but also on important symbolical properties as churches, schools, town halls and other. Important visual elements comprise the scale, the material and decorations (Figure 2).



Figure 2. Illustrative examples of traditional wooden architecture in Maramures Land. [1] Ieud (1364); [2] Desesti (1770); [3] Rona de Jos (1665); [4] Ieud (2003); [5] Sarbi (1785, now in the Museum); [6] Budesti (1968, in situ); [7] Budesti (1974, altered, in situ); [8] Harnicesti (2008, B&B); [9] Barsana (1895, now in the Museum); [10] Sarbi (1975, in situ); [11] Barsana (2003, wood masters' gate); [12] Sighetu Marmatiei (2014, Marmatia Winter Festival)

Oak is the general choice for material, its features making the carving process durable and the structure stable (3-4m height and 4-5m width). The vertical pillars are decorated with carvings having very strong symbolic value: sun rosettes, ropes, and geometric shapes in general, forming a composition named the tree of life (Biltiu, 2010: Dancus, 2010). The size and the richness of the carvings demonstrate the social status of

the owner. Given the ephemeral nature of the material, wooden gates do not last over 50 years without restoration, although there are very old specimens on the ethnographic museums' premises (dating from the 19th century).

The gates are mostly perceived as artworks than heritage pieces, contributing to the general vernacular aspect of the village through their monumental characteristics demonstrating the artisanship of the masters. Their number is increasing, presently being inventoried more than 2000 pieces (fieldwork from 2010). The wooden church is an iconic feature of the regional identity; it is the logo on a wide range of tourism and place branding documents. Almost every community has at least one, 42 of them are listed monuments, eight on UNESCO's World Heritage List. In addition, 22 new churches built in the traditional Maramures style are located in the region, 15 in other parts of Romania and eight worldwide (USA, Canada, Japan, Switzerland and other). The planimetry of the churches in Maramures is uniform as concept, the same used in specific orthodox Romanian medieval architecture (Porumb, 1982). The silhouette of the wooden church given by the high arrow-shaped tower riding the roof conducted the specialists towards defining a separate Maramures style, also known as Romanian gothic (ICOMOS, 1999).

CONSERVATION STATE AND DISCOURSE

Obvious decrease in number and diversity of traditional houses

Peasant dwellings in the region feature the usual functional elements needed by a rural lifestyle. Long-standing researches conducted by ethnographers, museum professionals and scholars revealed that the wooden house has maintained the general aspect of the buildings from 18th and 19th century, with minor changes on the plan (Biltiu, 2010; Dancus, 2010; Herman & Wendt, 2011; Ilieș et al., 2011; Petrescu, 1974). Ephemerality of the wood as construction material has oriented the specifics of restoration works towards the continuous replacement of the damaged parts, that is why in the 1970's very old beams, dating from the 17th century were discovered in an interior structure of a functional house (substantiated with dendrochronological measurements and original inscriptions (Dancus, 2010). Twenty-eight wooden houses dating from 1611-1870 AD have been restored and protected on the premises of the Ethnographic Museum in Sighetu Marmatiei (the central town of Maramures Land).

In situ, that old houses cannot be identified. Consequently, in 2007-2009 period, architects, geographers and tourism scholars conducted field researches which show that majority of the wooden dwellings date from the 20th century (Zaharie, 2009; Ilies et al., 2014). This detail generated large debates on the cultural value of the traditional house versus their market value. The traditional way of building of these simple homes is the result of an ancestral knowledge system, and because perpetuated in mountain areas it has become important to the substantiation of resilience thesis for rural communities (Ilies et al, 2010). Moreover, changes in the general aspect and continuity in terms of building techniques, demonstrate the responsive character of the shifts, the coping mechanisms to social, economic and political disturbances. The volume of the traditional wooden house increased due to growing needs of the families, the high roof flattened in some degree for economic reasons, wooden decorations were added on the facades and parts of the front terraces were closed by windows (Figure 3). In contrast, the old blockbau building system remained, due to its efficiency in certain environmental conditions. This is only the case of wooden structures, because these very same weather conditions generated a shift towards new building materials instead of the search for new heating solutions. The built landscape adopted the brick house, which in the early stage has had similar volumetry, shape and plan with the traditional wooden house.

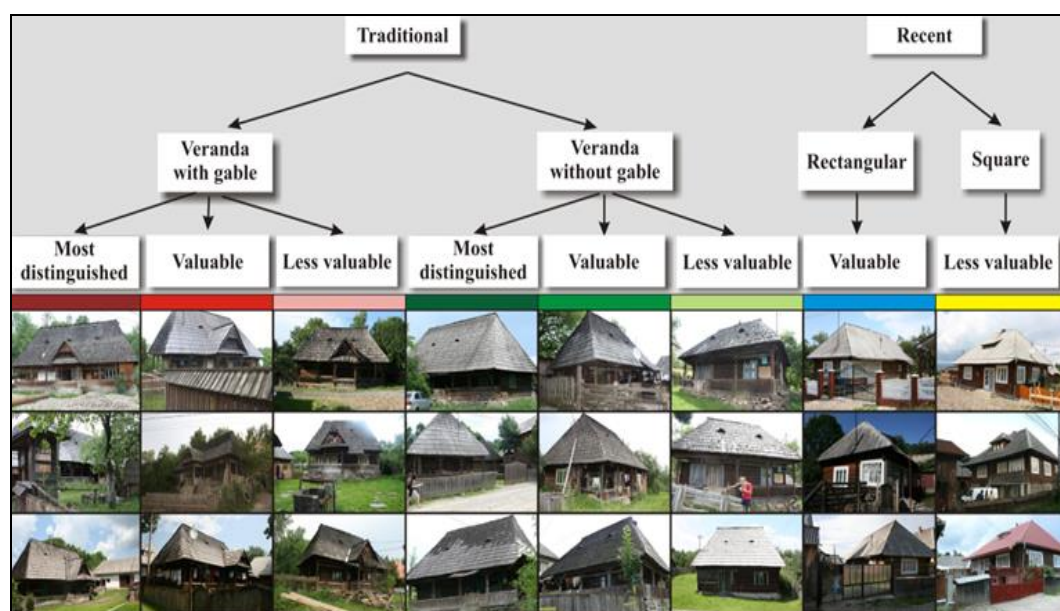


Figure 3. Classification of traditional houses in Maramures

Finally, the common home has suffered a second shift, generated by the periodical migration for work in other Romanian regions (before 1990) and towards western European countries and the subsequent acculturation of émigrés, importing new styles (after 2003). Therefore, the built landscape of Maramures is a mix of unregulated traditional buildings in wood and brick (Figure 4).

High cultural value houses tend to concentrate along secondary roads, isolation and accessibility being the most relevant cause for this situation. A decrease in number of these houses along the main communication axes generated at least two types of public discourse: (1) the traditional village is disappearing, and (2) the entire built landscape in rural areas with high cultural value is endangered. Meanwhile, cultural rural tourism has capitalized on heritage assets, vernacular architecture becoming the central core of the Maramures tourist brand, triggering the demand for accommodation with specific regional features, exterior as well as interior design. Bed-and-breakfasts extended their business by building in wood or restoring/adapting old houses to tourism.

Heritage protection policies were never tackling the traditional village in full, as national government fosters top-down approach but does not allocate budget. Communities have reacted with a bottom-up vision, considering the lack of public support for the national policies (Ilies & Ilies, 2015; Ilies et al, 2010; Ilies et al, 2015).

Traditional gates as art form are not endangered

Traditional wooden gates are impressive structures that mark physically and symbolically the entrance into a special realm. The old gates coexist with the newly constructed, their number being significantly higher than that of the traditional houses, due to the habit of installing them in front of a great variety of properties. Old gates, in terms of artistic features and age, similar to the gates conserved in the open-air museum, are on a descending trend. In contrast, new monumental gates are installed continuously, in a more elaborated style, featuring rich carvings and several solid pillars. From artistic vantage point, they are at the margin between traditional and kitsch.

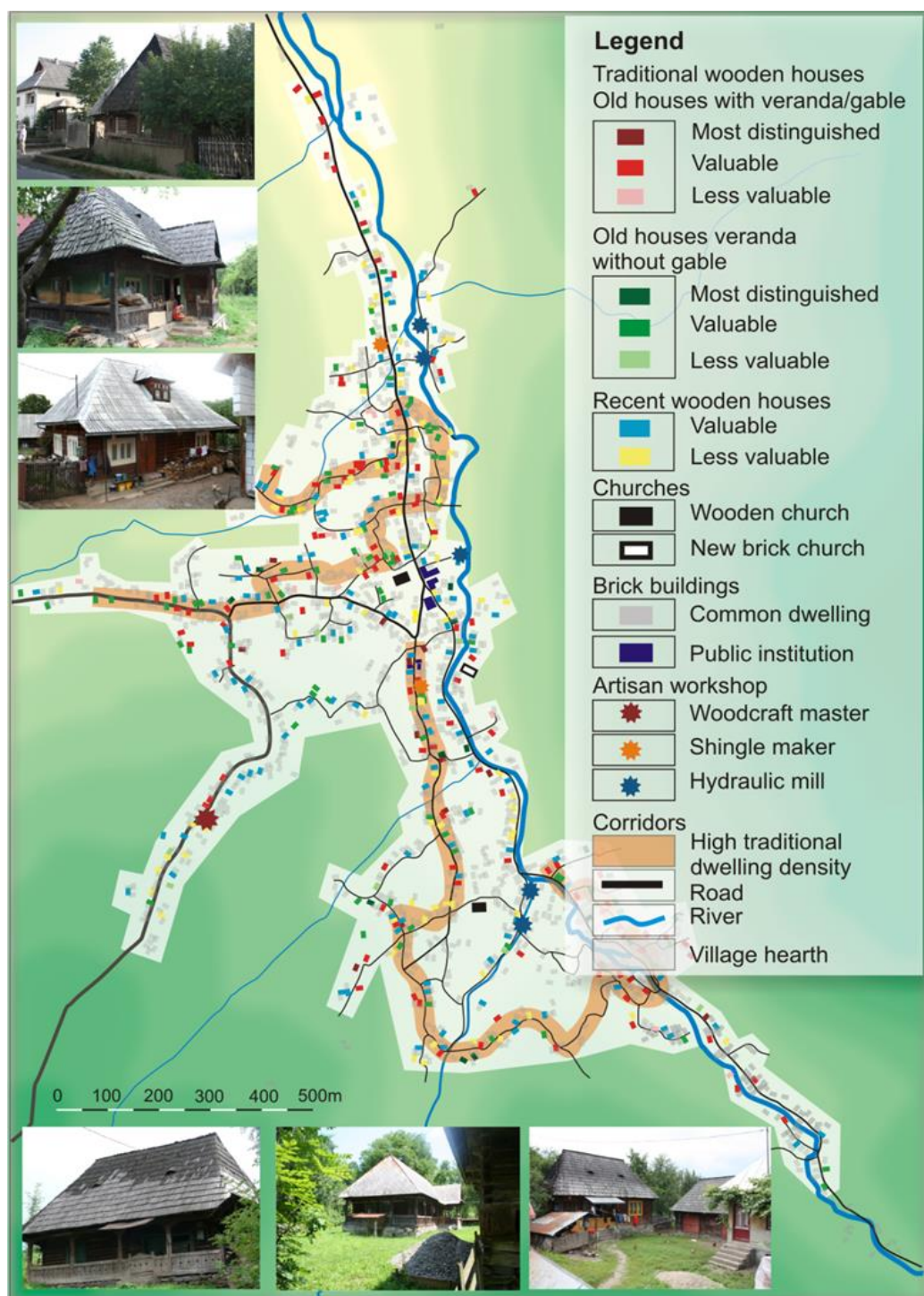


Figure 4. Budesti village: conservation state of the vernacular architecture.
 (Source: adapted from Ilies, Ilies & Hotea, 2010)

On the other hand, building a comprehensive database containing the gates is a difficult task, given the momentum. Spatial data show a higher density in the villages that harbour wood master workshops: Barsana, Desesti, Vadu Izei (see also Figure 2).

Symbolic gates are evenly dispersed, in all villages and towns of Maramures. In conclusion, preservation issues focus mostly on the type of approach, than on an extensive plan. The views employ both the traditionalist side, which states that certain aesthetic norms should be followed, inspired from the 1970-1980 masters' portfolio and the golden ration, and the functional side, which values innovation.

Wooden churches as Romanian identity marker

Three types of wooden churches are relevant in Maramures, with different protection needs: 'A list' heritage monuments, included on UNESCO's World Heritage List, along with national patrimony properties and modern day buildings in Maramures style, without listing. Cultural and spiritual norms prohibit the demolition of the churches; therefore, communities donated their former church to other less fortunate villages before constructing a more suitable one. This is why the history of restoration and other works is difficult to trace and the metaphor 'traveling churches' gained shape in the media (Babos, 2004). There is an important number of wooden churches built before 1717: Ieud (1364), Bârsana (1380), Breb (1531), Sat Șugatag (1642), Budești (1643), Mănăstirea (1653), Valea Stejarului (1600), Rozavlea (1661), Strâmtura (1661), Sârbi (1665) according to Toth (1969), Dancus (2010), and Ilies et al., (2016) .

Other churches were rebuilt after the great tartar invasion on the same plan. Dendrochronology studies revealed newer construction periods than known from archives, sparking debate on the real age of older churches (Dezsi et al., 2014; Baias et al., 2016, Gozner et al., 2016). Religious sermon is conducted only annually in the protected churches, due to the heritage protection plan aligned to the UNESCO guidelines, as highlighted by ICOMOS in the 1999 report. It was a serious issue with the administrative capacity of the sites, at that time, situation solved later by the county council and its heritage protection department (www.cjmm.ro).

Public discourse on vernacular architecture from Maramures

Previous sections of this study highlighted the concept of "the land of the wooden civilisation" from heritage perspective. In order to complement the analysis, the role of the public discourse on the matter is decoded as core feature of the traditional village: rural culture forged on wood and built environment dominated by timberworks with incorporated special knowledge. This type of regional discourse dates back in the 1970s, when ethnographers started to communicate the threats on the rural lifestyle: industrialisation, rural – urban migration and modernisation in general (Dancus, 2010). Large open-air museums across Romania were organised to preserve the heritage, replacing small local collections from the interwar period. Additionally, several popular folk-life festivals capitalised on the traditional holydays: spring events linked to the agrarian calendar, summer meetings in high mountains and market places and disguised winter Christmas customs. The latter in Sighetu Marmatiei, was so popular that it has remained unattained for 48 years, until today, featuring wooden decor and allegoric carriages linked to woodcrafts (see also Figure 2).

Political changes in the 1990s (downfall of the communist regime) aggravated the social issues of Romanian rural communities, triggering a descendent demographic trend, population aging and periodical migration for international work (INSSE, 2016). Meanwhile, the property regime on the forest changed from public to private, organised in compossessorates (a medieval co-ownership on the forest) facilitating deforestation. This made the wood harvesting under legal conditions very difficult and expensive.

Therefore, the rhythm of building in wood decreased leaving the traditional landscape in a neglected state and in silence. Scholars and museum practitioners continued to write about the cultural values of the wooden architecture, with important steps towards protection, and ultimately, UNESCO was perceived as the only effective structure that could help with this matter (Cristea & Dancus, 2000).

Another turning point, around the year 2000, was the acknowledgement of the market value of the wooden houses, this time as reclaimed wood. Local entrepreneurs entered a Swiss network of recycled materials, which started to purchase old oak houses for this purpose. Given the low value of a standing wooden house (3000 - 4000EUR) an unprecedented demolition process was in place, starting with the buildings along the main communication axes. The process did not evolve unnoticed, NGOs and local stakeholders published editorials in media, implemented educational projects in order to minimise the impact of this loss. In addition, research teams focused on projects to substantiate scientifically the phenomenon during 2006-2009.

In 2008, the conservation state of the vernacular architecture reached into public discourse, as statement it was included in the text of local development strategies as priority. As formulated, the preservation plans have been inspired by the nature preservation guidelines, asking for a higher regulation sets for owners and architects. General themes of this new discourse are:

- (1) the need to protect acknowledged cultural assets, vernacular architecture among them,
- (2) improvement of the communication strategies regarding these values, through tourist information centres,
- (3) involvement of the younger generation in the process, specially organised events, and
- (4) enforcement of the existing urbanism regulations for new buildings.

Table 1. Priorities and operational objectives for the local development strategy of LAG Mara-Gutai (Data source: UNSG, 2016)

PRIORITY	ACTIONS	DISCOURSE
Raising the attractiveness of the territory	Supporting cultural activities and events	<i>Authentic</i> cultural products associated to the rural tourism activities in the area
	Developing the promotion and communication tools	<i>Website</i> design and layout with visual elements derived from traditional woodcarving, textiles and painting.
	Renovation of cultural infrastructure	Authentic folk <i>costumes</i> reinforce the pride of wearing them and re-launch the production.
	Valorisation of natural and cultural heritage	Support authentic features in the <i>architecture</i> of the future tourist infrastructure; Respect the tourist carrying capacity of the protected areas
Increasing competitiveness and economic viability	Diversification of local produce offer	Encouraging local groups to form <i>cooperatives</i> and to concentrate on local produce
	Enhancing the storage and selling capacity for local produce	Building <i>markets</i> and storages
	Encouraging small farms to enter the produce market	<i>Support</i> small farms with funding and logistics
Developing the cooperation and management capacity	Partnership development	Common tourist attractions and infrastructure <i>promotion</i>
	Local management abilities	Good project <i>team</i>

After a very long debate, the county council implemented only one relevant project, concerning the tourism integration of the UNESCO churches across the region, between 2010 and 2016. At local level, four of well-defined projects on the traditional architecture attracted 50,000EUR funding for LAG Mara – Gutai. (Table 1).

CASE-STUDY: UNESCO

The listing process of Maramures wooden churches on the World Heritage list stretched on a five-year period, while Romania was struggling with unprecedented social and economic changes due to the post-socialism transition (Ianos, 1996). The communities with a church on this list (Barsana, Budesti, Ieud, Deseti and Poienile Izei) extended the guidelines into their own sustainable development plan, but funding was insufficient. In addition, the villages holding a wooden church similar in age and cultural value to the listed ones have been inspired by these guidelines, hoping for a comparable attention on heritage protection.

„The Maramures wooden churches represent a selection of eight outstanding examples of different architectural solutions from different periods and areas. They provide a vivid picture of the variety of design and craftsmanship expressed by narrow but high timber constructions with their characteristic tall, slim clock towers at the western end of the building, single or double roofed and covered by shingles. As such, they are a particular vernacular expression of the cultural landscape of that mountainous area of northern Romania.”(ICOMOS, 1999).

Table 2. Comparative analysis on the outlined priorities and discourse on local vernacular architecture

Measures	Priorities	UNESCO's discourse	LAG Mara-Gutai discourse
Development planning measures	National framework	National division signing every relevant agreement on cultural heritage preservation	Aligning to the LEADER+ initiative on rural development
Measures aimed at achieving economic, social, cultural or environmental outcomes	Sustainable development and resilience	Supporting the cultural and creative sector Supporting start-ups and business incubators for SMEs in the cultural sector. Marketing and promotion Training and skills development Supporting cultural institutions	Supporting authentic cultural creative sector; Supporting small groups of tourism and related SMEs Promoting non-formal education and apprentice /shadowing classes Supporting cultural institutions
Measures aimed at achieving regional equity	Polycentric approach	Top – down heritage preservation guidelines according to the European approach on cultural value	Bottom-up strategies are best adapted to the culturally sustainable community

The selection process of only eight churches from a group of twenty-eight was a difficult process; the debates sparked then may be heard even after twenty years. Features as ‘the interchange of Orthodox religious traditions with Gothic influences’ or ‘a high level of artistic maturity and craft skills’ (ICOMOS, 1999) are representative for almost every traditional wooden church in Maramures, old or new, Orthodox or Greek-

Catholic. This aligns with the theoretical framework outlined by Di Giovine (2008) as museological procedure of place making without the traditional recontextualisation (Table 2). Although, wooden churches usually do not belong in museums, there are several specimens across Romania in Sighetu Marmatiei, Cluj Napoca, Sibiu and Bucharest, forming a larger base for cultural value assessment of the entire group in Maramures.

For the listed properties, UNESCO has been a quality label in respect with cultural tourism branding, leaving out of the main flow the unlisted wooden churches. It signifies the need of Romania, following the example of other European countries, to present its history through tangible heritage, its Dacian-Roman as well as Orthodox identity, and create new stories and new post-communist image with a clearly diversified nation of various ethnicities and religions (Kocoji, 2015). The relationship between heritage protection and cultural tourism is that of a 'working relationship' described by McKercher, B, Du Cross H (2002) as "realisation of common needs and interest, begin dialogue and work to ensure that both interests are satisfied". Tourism branding strategies constantly capitalise on the universalism of the vernacular architecture from Maramures Land, the interpretation and translation into Romanian culture of this status is working well because the properties are neither in an advanced stage of degradation nor in danger (Beck, 2016; Labadi, 2013). Nevertheless, there is a need for further research on the carrying capacity of each protected site, the tourist number limitations are not real, nor the control on the risk factors for the interiors of these churches.

As Throsby, D. (2015) argued sustainable development strategies underline the "formulation of strategies to achieve culturally sustainable development, a concept that brings together the cultural and economic dimensions of development in a framework emphasizing growth, equity and cultural integrity in the development process".

CONCLUSION

Analysis revealed that the great debates on the endangered status of the rural vernacular architecture have focused only on the overall landscape, from a superficial perspective. More profound issues as the perceived value of the wooden dwellings, the most effective ways of adapting it to the contemporary lifestyle, resilience, sustainable usage of heritage tourist sites, etc. are transferred to administrative levels. A bottom-up approach and the involvement of academic research have had a great role in coordinating these strategies. Refined discourses regarding the wooden architecture in Maramures acted as funding triggers. In addition, innovative architectural concepts inspired by traditional wooden buildings are crucial for the future of the Land.

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A GEOTOURISTIC ITINERARY: A PROPOSAL FOR GEOTOURISM AND ARCHAEO TOURISM DEVELOPMENT OF LENGGONG VALLEY, PERAK, MALAYSIA

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Abstract: The Archaeological Heritage of Lenggong Valley has a high potential to be developed as geotourism and archaeotourism destination. The diversity in geology and geomorphology of the area represent scientific, cultural, aesthetic as well as recreational values and together define the geodiversity of this area. This paper proposes a basic geotouristic itinerary connects a series of impressive geosites distributed in Lenggong Valley which can explain the high potential interest of the area in geotourism and archaeotourism terms. In order to enhance and highlight their importance to the geological and archaeological heritage, the location, accessibility, important geological-scientific features or historical-cultural interest, related activities as well as available facilities was described. The motivation for establishing this itinerary mostly resides in the great scientific and cultural interest of the geosites that will hopefully facilitate their conservation and the development of geo-archaeotourism to continuously attract a large number of visitors year by year. The itinerary can be used for teaching purposes at different educational levels, geotourists and geopark guides and for university courses. In addition, non-geologists may follow the itinerary guided by expert volunteers to discover the geological and archaeological heritage of the area.

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Key words: geotourism, archaeotourism, geotouristic itinerary, geo-archaeotourism development, Archaeological Heritage of Lenggong Valley

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INTRODUCTION

A geosite is understood as a remarkable geological location where one or more elements of geodiversity are present and unique values of scientific, pedagogical, cultural or touristic interest are shown. According to Komoo (2004), geosite refers to any geological site or landform which contains a significant geodiversity component that indicates the high geoheritage value. Geosites present a particular importance for the comprehension of Earth history, geological or geomorphological objects and evidence of ancient life (Migon & Pijet-Migon, 2016) that have acquired scientific and additional values as due to human perception or exploitation (Kubalíková, 2013) as well as to its potential of use (Fassoulas et al., 2012). According to Newsome & Dowling (2010), geotourism is form of natural area tourism that specifically focuses on landscape and geology. It promotes tourism to geosite and the conservation of geodiversity and an understanding of earth sciences through appreciation and learning. This is achieved through independent visits to geological features, use of geo-trails and viewpoints, guided tours, geo-activities and patronage of geosite visitor centres. Geotourism has developed to address the need to minimize the negative impacts of mass tourism at tourist sites based around geological and geomorphological attractions. They stress that its central goal is an emphasis on sustainable tourism development in primarily rural and natural environments (Ólafsdóttir & Dowling, 2014). Geotourism can also be understood at a broader sense as geographical tourism or tourism that sustains or enhances the geographical character of a place – its environment, culture, aesthetics, heritage, and the well-being of its residents (Kubalíková, 2013). This concept is similar to the geomorphosite concept – it does not include only the abiotic features, but it takes into account cultural and aesthetic values (Panizza & Piacente, 2008; Reynard, 2008).

The Lenggong Valley (Figure 1) is in an area extending from 5°4'40" N to 5°8'57" N and 100°58'20" E to 100°59'31" E. Lenggong Valley is a sub district in Hulu Perak, located in the State of Perak, upper Peninsular Malaysia and bordered by the states of Kelantan, Pahang, Selangor, Penang and Kedah. It is thus located about 100 km from the state capital, Ipoh. The area is easily accessible by land from neighbouring state by the excellent Malaysia's prime North-South Highway and several alternative trunk roads. It was declared as a World Heritage Site in 2012 for its outstanding cultural value. Lenggong Valley is the fourth World Heritage Site for Malaysia and the 935rd in the world. It possesses beautiful geological landforms, unique geological phenomena and precious earth materials including hills, caves, waterfalls, river and quaternary deposits. Lenggong Valley is commonly considered by tourists and students alike for its renowned archaeological site. It offers an abundance of archaeological and geological evidences that pinned this area in the world's scientific and archaeological map. It has an exceptional archaeological site containing evidence of human habitation traversing through three prehistoric periods, known as Palaeolithic, Neolithic and Metal, holds the key to one of the longest hominid histories dated from 1.83 million to 1,000 years ago in a single locality together with relatively undisturbed in-situ stone tool workshops and existence of early hominid presence outside Africa with the discovering of a unique Palaeolithic skeleton – Perak Man in Gua Gunung Runtuh (Department of National Heritage, 2011). The extraordinary existence of Palaeolithic stone tools found in Bukit Bunuh area was protected by melted suevite from

meteorite strikes about 1.83 million years ago. This has contributed to undisturbed in-situ sites has made Lenggong Valley an obvious prehistoric site for inscription as World Heritage Site by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2012 and known as the Archaeological Heritage of Lenggong Valley (AHLV).

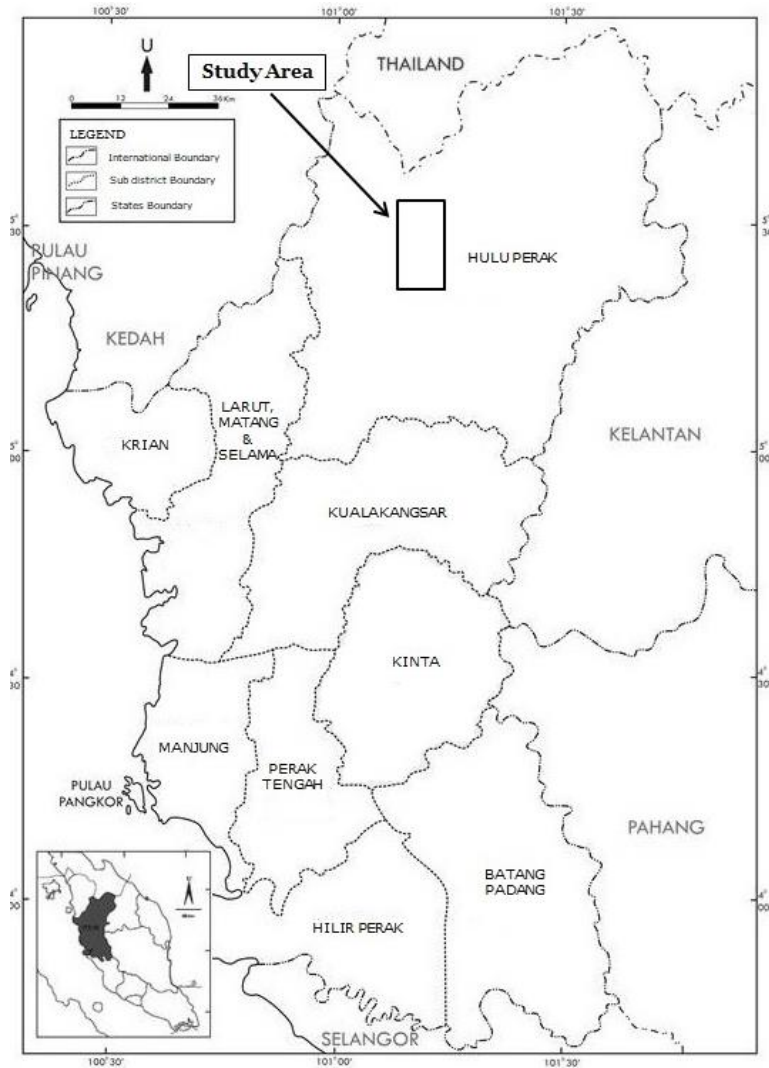


Figure 1. Location map of the study area.

Lenggong Valley is located in the upper part of Perak state, Malaysia

The place is like an open-air museum and is home to legends, skeletons, cave drawings and previous finds such as jewellery, pottery, weapons and stone tools. The Lenggong Valley covers an area of 9,773 hectares and the size of the nominated property for the World Heritage Site is 2,185.41 hectares (Department of National Heritage, 2011). For the management purposes, this area has been divided into three zone categories which include the “core zone”, “buffer zone” and “buffer to buffer zone”. Most of the geosites located in the core zone (except Bukit Sapi area, Lata Kekabu and Sungai Perak)

that were divided into two clusters (Cluster 1 and 2), located 5 km apart on the Sungai Perak separated by Lenggong Town (Figure 2). Cluster 1 consists of the Bukit Bunuh-Kota Tampan core zone and its own buffer zone, while Cluster 2 consists of three core zones, namely Bukit Kepala Gajah, Bukit Gua Harimau and Bukit Jawa, all enclosed within a single buffer zone. All the area outside of Cluster 1 and Cluster 2 is known as “buffer to buffer zone”. The share lithic tradition in the two clusters serves as the common element to hold the two clusters together as a single nominated property. The area located between the boundary of the core zones’ buffers and the boundary of the Special Area Plan (SAP) is known as buffer to buffer zone (Department of National Heritage, 2011).

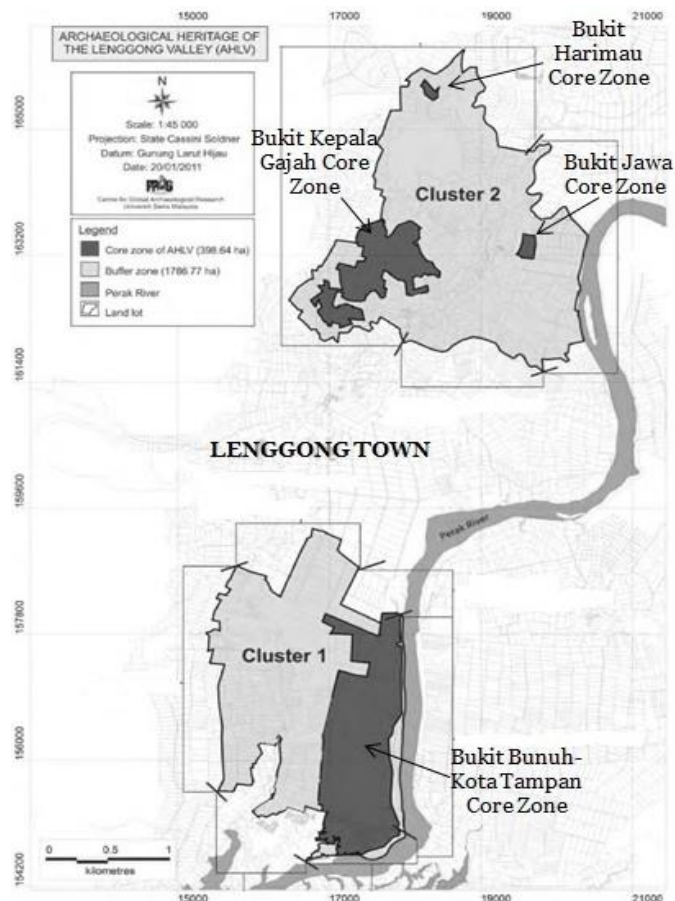


Figure 2. Core zone divided into two clusters - Clusters 1 and Cluster 2 separated by Lenggong Town (Source: Department of National Heritage, 2011)

The main aim of this paper is to present an itinerary to promote all geosites in Lenggong Valley in a scientifically correct way but accessible to the visitors ranging from non-specialist to academic geologists, the most significant steps for geotourism and archaeotourism development. It was designed to illustrate and enhance the natural history of this area from geological and archaeological perspectives as well as demonstrate how humans interacted with that environment in pre-historic times. The itinerary combines the main geosites, namely Bukit Bunuh, Kota Tampan, Bukit Jawa, Bukit Sapi,

Batu Berdinding, Lata Kekabu, Sungai Perak and Bukit Kepala Gajah Complex that contains several caves such as Gua Gunung Runtuh, Gua Teluk Kelawar, Gua Harimau, Gua Kajang- Asar-Puteri, with nearby supporting tourism product such as Tasik Raban Restaurant, Homestay Kampung Beng, Kota Tampan Archaeological Museum and Archaeological Research Centre (PLA USM). Each of the chosen geosite contains multidisciplinary geological and archaeological information. Thus, each of these sites containing particular geological features represents an important part of the cultural component because they are connected to historical events. They are also have been selected by taking into account some fundamental features such as good quality of the exposure, aesthetic and recreational values as they are surrounded by a pristine landscape with an interesting fauna and flora, which can be observed during the trip.

GEOLOGICAL SETTING

Geologically, the dynamic landscape of Lenggong Valley is flanked by two majestic granite mountain ranges known as Main Ridge Granite on the east and Bintang Granite on the west with the highest point at 1077m and slow meandering Sungai Perak as its spine that brings life to the valley, which flows N-S through this valley (Figure 3). Bintang Granite intrusion during Triassic time contains coarse-grained porphyritic adamellite-granite and medium-grained granite with biotite as the mafic mineral (Mohamed et al., 2012). These two granite bodies are huge batholith that caused the uplifted and the whole Peninsular Malaysia became a continent (Rushdan, 1994). The S-type of Bintang Granite turns the limestone, arenaceous and argillaceous rock of Kroh Formation into marble, quartzite and phyllite respectively (Mohamed et al., 2012). The archaeological study in AHLV has revealed a hidden throne of rich geological heritage of the area.

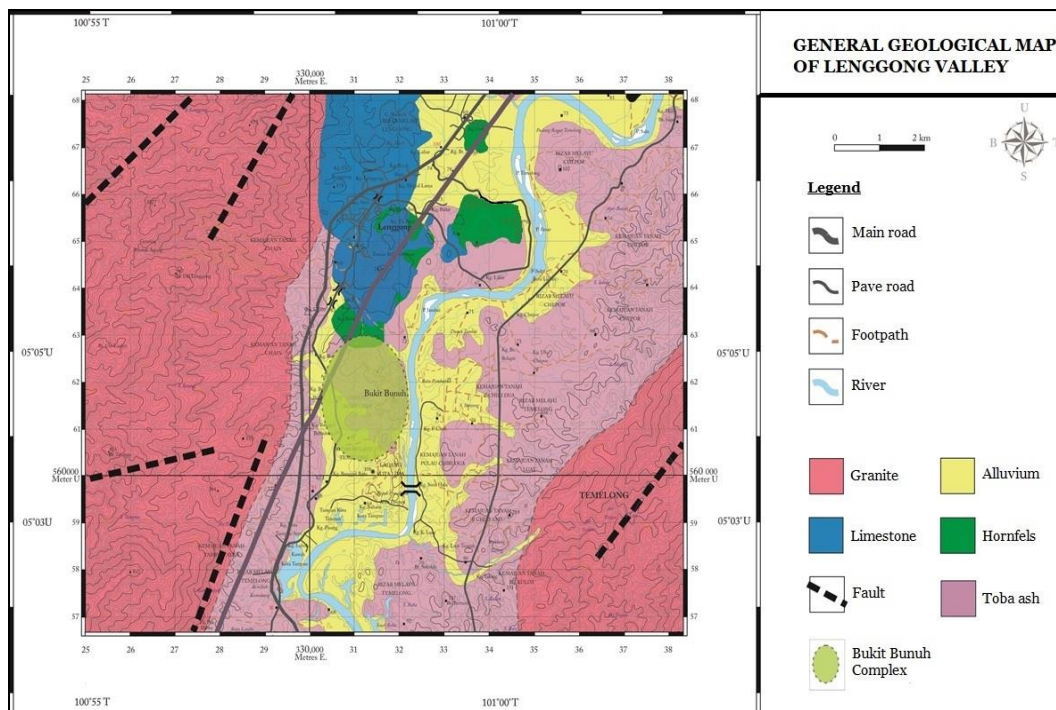


Figure 3. General geological map of Lenggong Valley (modified after Nur Asikin, 2013)

Despite its small size, this valley was bounded by two main granite bodies, has beautiful landscape and other geological elements such as caves, waterfall and v-shaped river valley that bear high geotourism and archaeotourism potential. The area has a wide spectrum of rock types and palaeoenvironments. It has granite intrusion together with shallow marine clastic as well as remaining quaternary deposits such old alluvial deposits and volcanic ash, largely deposited along the Sungai Perak. Volcanic ash known as Toba Ash has been dated approximately 74,000 years old. The most prominent geological heritage of the area is a new rock complex as the results of meteorite impact occurred at 1.83 million years ago (Department of National Heritage, 2011; Saidin, 2012a, 2012b; Mohamed et al., 2012). Areas of Bukit Bunuh consist of blocks of suevite rocks, partially to completely molten rocks, polymict impact breccias and impact granite and metasedimentary rocks.

Data from drilling also show that the granite in Bukit Bunuh was impacted, and this suggests that meteorite impact occurred at Bukit Bunuh. All the blocks and also the granite which have been formed or deformed by the impact of this meteorite have been suggested to form a new stratigraphic unit (Mohamed et al., 2012) known as Bukit Bunuh Complex (Figure 3). The clastic sediments were metamorphosed and form a complex of limestone properties with several caves. Weathering and erosion of limestone have produced karst morphology and with beautiful cave formations. All the caves are very special in the sense of prehistoric habitat. Many caves within these properties are being excavated by archaeologist to obtain information on Palaeolithic civilization. The Perak Man skeleton remained almost intact for more than 10,000 years was excavated in Gua Gunung Runtuh in the property of Bukit Kepala Gajah (Department of National Heritage, 2011). AHLV offers outstanding scientific, aesthetic, cultural and recreational values that make the area very important in terms of geoheritage conservation. The geological features which provide useful insight into the geological history of the area may be utilized for educational purpose, as in geological tourism to add value to the existing attraction and archaeological heritage of the site. AHLV as a prominent archaeological site and rich with geodiversity could be promoted as geotourism and archaeotourism destination. The sprint off geotourism and archaeotourism development could benefit the locals and that would encourage them to conserve the geological and archaeological heritage resources of the area.

METHODOLOGY

Scientific interest, accessibility and good exposure of outcrops associated with historical-cultural resources as well as recreational and aesthetic values were essential components (Bentivenga et al., 2017; Palladino et al., 2013) for the development of the geotouristic itinerary in the AHLV. In this paper, we will first outline the location and accessibility of the geosite followed by geological-scientific features or historical-cultural interest in order to highlight their importance to the geological and archaeological heritage of the Lenggong Valley. Then, we will describe the stops on the geotouristic itinerary based on diversity, geological formation, uniqueness and current conservation status with all the information from the previous literature and the field observation. The geotouristic itinerary is designed to present, illustrate and enhance the natural history of this area from a geological perspective as well as demonstrate how humans have interacted with that environment in prehistoric times. The main reason for choosing Lenggong Valley for the itinerary is the scientific and cultural interests of the area and the presence of important geosites. However, this choice also derives from the recognition of this area as the World Heritage Site and enthusiasm of the local authorities, who provide maintenance for the sites. Currently, the key geosites within the area are protected and managed by the local administration (Department of National Heritage) and the research and development

including scientific and educational studies within the site is taking care by the Centre for Global Archaeological Research (CGAR) from University Sains Malaysia (USM). We believe, however, that the geological itinerary may play a fundamental role in the geoconservation of this special area, by raising the awareness of geological heritage within the local population.

GEOTOURISTIC ITINERARY

Geosites of AHLV were divided into two main groups based on their accessibility; (i) easy to access and (ii) difficult to access. Consequently, two-full day is needed to visit all the geosites. Easy access geosites are located nearby the main state and/or municipal roads that are used in the itinerary. Roads are generally in good conditions and can be travelled by car and/or motorbike. A short walk may be necessary for reaching the geosites and the best viewpoints. Bukit Bunuh, Kota Tampan, Bukit Jawa, Bukit Sapi, Batu Berdinding, Gua Kajang - Puteri - Asar, Sungai Perak and Lata Kekabu were considered as easy access geosites (Figure 4, see Table 1).

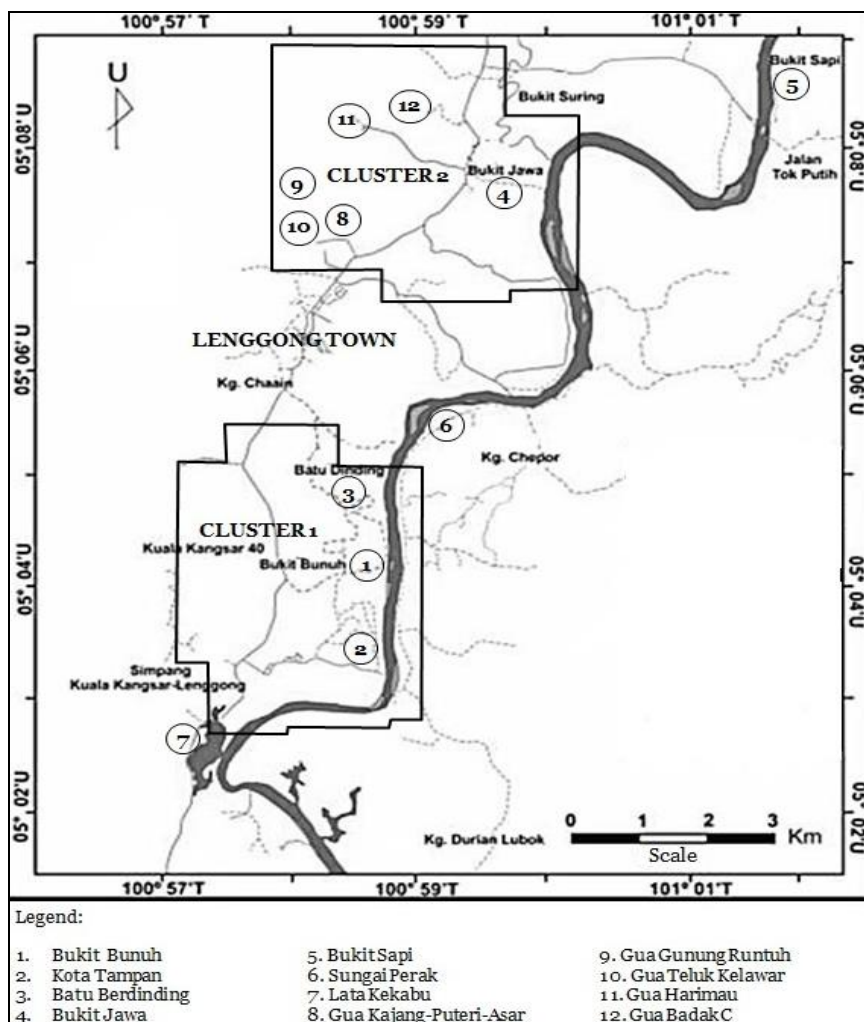


Figure 4. The selected geosites in AHLV for this study (Source: Dossier of Archeological Heritage of Lenggong Valley, Department of National Heritage, 2011)

Table 1: List of geosite in Lenggong Valley, coordinates, altitude, distance from Lenggong Town, accessibility and their related activities on site

No.	Name of Geosite	Latitude/ Longitude	Altitude (m.a.s.l)	Distance from Lenggong Town	Accessibility	Related activities
1	Bukit Bunuh	5°04'30"N/ 100°58'34"E	180	10 km	Motorbike and four wheel drives	Visiting for research and educational purposes
2	Kota Tampan	5°03'18"N/ 100°58'25"E	72-101	12 km	All means of transportation	Visiting and demonstration
3	Batu Berdinding	5°54'48"N/ 100°57'53"E	108	4 km	Motorbike and four wheel drives	Visiting for research and educational purposes
4	Bukit Jawa	5°07'44"N/ 100°59'34"E	104	8 km	All means of transportation	Visiting, demostation, fun excavation, camping
5	Bukit Sapi	5°08'48"N/ 100°01'28"E	73	18-20 km	All means of transportation	Visiting for research and educational purposes
6	Sungai Perak	5°20'25"N- 5°00'0"N/ 101°10'0"E- 100°09'0"E	<70	not specific	All means of transportation including water transportion	Water activities including boating, canoeing and kayaking
7	Lata Kekabu	5°02'41"N/ 100°56'57"E	106-130	9 km	All means of transportation	Variety of leisure activities including visiting, camping, guided hiking, fishing, swimming
8	Gua Kajang	5°07'71"N/ 100°58'08"E	76	6 km	Motorbike and four wheel drives (cave mouth)	Main activities including visiting for research and educational purposes, cave exploration and trekking.
	Gua Asar	5°07'56"N/ 100°58'80"E	78	6 km	Motorbike, walking for 30 minutes from Gua Kajang	
	Gua Puteri	5°07'53"N/ 100°58'82"E	94	6 km	Motorbike, walking for 40 minutes from Gua Kajang, climbing for 15 minutes	
9	Gua Gunung Runtuh	5°07'3"N/ 100°58'3"E	124	8 km	Four wheel drives, walking for 30 minutes, climbing for 15 minutes	Strictly limited to visiting outside hills and excavation areas only
10	Gua Teluk Kelawar	5°07'44"N/ 100°58'6"E	76	7 km	Four wheel drives, walking and climbing for 30 minutes-1 hour	Visiting for research and educational purposes
11	Gua Harimau	5°08'35"N/ 101°02'4"E	133	12 km	Four wheel drives, walking for 30 minutes - 1 hour	Visiting for research and educational purposes
12	Gua Badak C	5°00'51"N/ 100°59'19"E	126	13 km	Four wheel drives, walking and climbing for 10 minutes	Visiting for research and educational purposes

*m.a.s.l = meters above sea level

Whilst, difficult to access geosites are located quite far from the main road and only reachable by four wheel drives. They also required the visitors to climb and walk for some times with proper attires and tools. Gua Gunung Runtuh, Gua Teluk Kelawar, Gua Harimau and Gua Badak C fall in this category (Figure 4, see Table 1).

1. Bukit Bunuh

The first geosite is located at Bukit Bunuh area, an open-air site that has provided enormously significant geological and archaeological data contributing directly to our understanding of the palaeoenvironment and early human cognitive behaviour and

culture through their use of stone tools. Bukit Bunuh perhaps the most famous and most visited geosite in the Lenggong Valley as the highest point is over 180 meters above sea level covering area of 4 km² wide. This geosite is situated in an oil palm estate at latitude 5°04'30" N and longitude 100°58'34" E. It is reached about 4 km starting from the federal highway (Route 76) exit to Lenggong Archaeological Museum and located approximately 10 km from the Lenggong Town and accessible by motorbike and/ or four wheel drives. On the top of this central uplift, we can observe both east and west granite bodies which significantly beautify the area. An additional reason for the stop is the fact that it bears the geological scars of meteorite impact which have been dated as 1.83 million years ago by a fission-track method in Japan Geochronology Laboratory (Saidin, 2012b). The medium size of meteorite impact crater at Bukit Bunuh measures approximately 3.45 km in diameter with 0.7 km in depth (Nur Khairunnisa et al., 2007). At Bukit Bunuh site, more than 10,000 surface suevite rock associated with the hypervelocity impact has been counted within the impact, having been unearthed as a result of agriculture activities.

A new stratigraphic unit known as Bukit Bunuh Complex, dated as 1.83 million years ago by a fission-track method in Japan Geochronology Laboratory (Mokhtar, 2012a) was found in Bukit Bunuh area. Drilling data shows granite was impacted and suggested as meteorite impact occurrences and all blocks and granite have been formed or deformed by the impact to form this new stratigraphic unit. This area consists of suevite rocks, partially to completely molten rock, polymict impact breccias, impact granite and sedimentary rocks. Suevite can be formed only at high temperature and pressures from natural stones of the area suggest that meteorite impact occurred at Bukit Bunuh area (Kamal Roslan et al., 2012). Apart from the natural rocks material, stone tools were also found among the scattered rocks on the surface (Figure 5). A greater significance of Bukit Bunuh emerged in 2007, when a metaquarzite hand axe embedded in a suevite boulder was found among the surface artefacts. This hand axe is the oldest or among the oldest so far discovered outside Africa. A date of 1.83 million years ago was obtained which give rise to the astonishing revelation that the area was occupied by early humans at such early date.

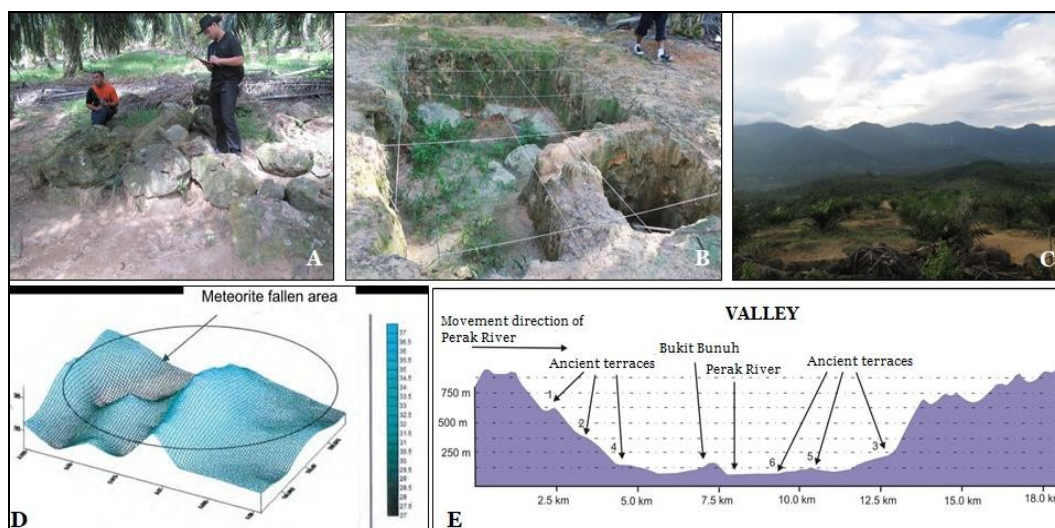


Figure 5. (A) Scattered suevite rocks in Bukit Bunuh area, (B) The excavation trenches in Bukit Bunuh, (C) Panoramic view from the top of Bukit Bunuh facing to the west (Bintang Granite), (D) Geophysical anomalies illustrate a meteorite impact crater in Bukit Bunuh, (E) The medium size of meteorite impact crater at Bukit Bunuh measures approximately 3.45 km in diameter with 0.7 km in depth. (Source: Department of National Heritage, 2011)

Given that the hand axe had to be present prior to the meteorite impact, human occupation of the site must have predated this impact. Therefore, this site would have been occupied by human earlier than 1.83 million years ago (Department of National Heritage, 2011). This hand axe is a bifacial symmetrically flaked pebble tool made from metaquartzite with a convex bottom having its sides converging to the top to end in a sharp point 20.3 cm away. Approximately the top fifth of the tool had broken off but it remained attached in the suevite. The sharp end is probably the result of damage that happened either during manufacture or from use. At its broadest, the hand axe is 10.8 cm and this occurs approximately 9 cm from the convex end thus it followed the classical tear-shaped template often referred to as the *Acheulean* or Mode II (Figure 6). Related activity can be done here is limited to visiting for research and educational purposes only. In terms of complementary facilities, basic facilities such as on-site interpretation boards, public toilets, parking space and pedestrian walkways will be provided in nearer future.

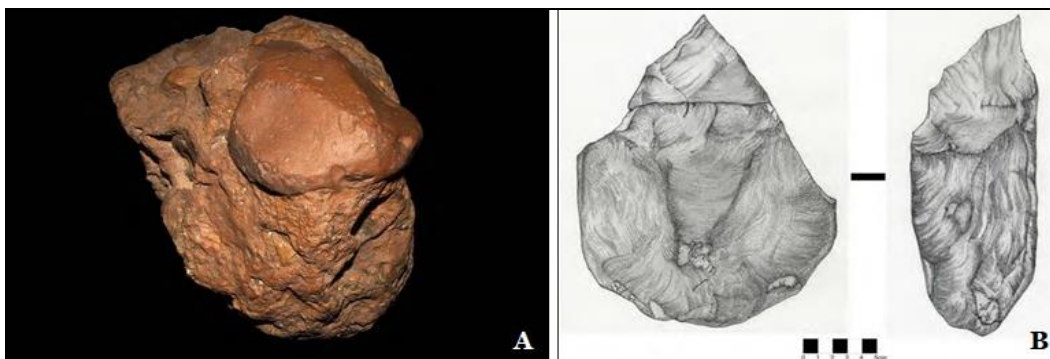


Figure 6. (A) A hand axe embedded in suevite rock. (B) A drawing of 1.83 million years metaquartzite hand axe based on CT scan. Source: Department of National Heritage (2011)

2. Kota Tampan

The Kota Tampan site is situated in an oil palm estate at latitude 5°03'18" N and longitude 100°58'25" E, about 1 km apart from Bukit Bunuh site and 12 km from Lenggong Town. The Kota Tampan site is made up of excavation trenches grouped as KT 1987, begun in 1987 and KT 2005, begun in 2005. KT 1987 is located at the elevation 72-76 meters above sea level while KT 2005 is located higher at the elevation 76-101 meters above sea level. It can be reached by any kind of transportation including small vehicles, car and bus. The two sites are 60 meters apart in a roughly north-south alignment, with KT 2005 occupying the northern end. KT 1987 revealed a thick cultural layer of stone anvils, cores, hammer stones, stone tools and debitage of predominantly quartzite material (Figure 7).

As an undisturbed Palaeolithic stone tool workshop, the association of artefacts such as raw materials, finished and unfinished tools and tool-making debris are clearly visible. This proved to be a rare and significant in-situ stone tool workshop from the Palaeolithic period. The stone assemblages uncovered show that the Palaeolithic inhabitants of Kota Tampan had a good understanding of the raw materials (quartzite and quartz) and knew how to produce type of tools needed that would be the most economic and efficient in terms of their manufacture and use, that is, they were forming a mental template for stone tools (Department of National Heritage, 2011). The assemblage of artefacts found at this site has revealed and made possible the identification and classification of multiple tool types with specialised functions, indicating a lithic technology in South-East Asia as sophisticated as anywhere else in the world. As such this

site is an important global reference site for Palaeolithic stone tool-making. However, no human fossils have been found at the site, so there is lively debate about whether the tools were made of pre-modern *Homo erectus* or by *Homo sapiens*. There is no doubt the site is and will remain a site of international importance in the big debates about the origin of our species. Its sudden abandonment was apparently due to a catastrophic event, the Toba mega-colossal volcanic eruption dated by optically stimulated luminescence (OSL) to at least 74,000 years ago, had mingled its volcanic ash with the lithic artefacts recovered at Kota Tampan and this mixture has suggested the 70,000-year date for the lithic workshop sites there (Gatti et al., 2013). Visiting for research and educational purposes as well as demonstration are several activities can be done here. Basic facilities such as on-site interpretation panel, public toilets, prayer room, camp site, boardwalk linkages to all archaeological spot and parking space will be provided in nearer future.



Figure 7. (A) Kota Tampan site located in an oil palm estate, (B, C) Scattered of stone anvils, cores, hammer stones, stone tools and debit age of predominantly quartzite material, (D) Commingled volcanic ash in the cultural layer which can be attributed to Toba mega-colossal volcanic eruption of 74, 000 years ago cause and date the abandonment of this area

3. Batu Berdinding

Batu Berdinding or Batu Dinding geosite located in buffer zone of Cluster 1 of the nominated area in a rubber estate. It is located at latitude 5°05'48" N and longitude 100°57'53" E, at 108 m above sea level. This geosite located approximately 4 km from Lenggong Town. It can be reached via trunk road by motorcycle or four wheel drives and located approximately 2 km away from the entrance (municipal road). Batu Berdinding geosite has been interpreted as a large impact granite rocks formed by meteorite erosion that

struck and centred at Bukit Bunuh about 1.83 million years ago. The evidence of the rock deformation can be seen clearly on the field. The geology of this area is formed by a metasediment rocks consisting of metaquartzite, filit and slate. Several geological structures such as recumbent folds, overturned folds, asymmetrical folds, shear zones, fault zones, clear poles prove the history of multiple phases that have been encountered by the rocks (Figure 8). This outcrop is well protected and is not threatened because it has not been fully explored by other researchers. This geosite has a very high potential to be developed and preserved for educational purposes. As this geosite is located nearer the ancient Sungai Perak, the evidence of early human activities came from the discovery of stone tools that used river gravels. They produce pebble and flake tools by using anvils, cores and hammerstones and that are crowded with thousands of debitage in the form of chunks, flakes and chips.



Figure 8. (A) The view of Batu Berdinding outcrop, (B, C, D) Several geological structures such as recumbent folds, overturned folds, asymmetrical folds, shear zones, fault zones and clear poles.

4. Bukit Jawa

The Bukit Jawa site in Cluster 2 core zone is an open air site in-situ tool workshop, situated at latitude $5^{\circ}07'44''$ N and longitude $100^{\circ}59'34''$ E. It is located at 104 metre above sea level at approximately 8 km away from Lenggong Town. It is situated about 100 meters away from state or municipal roads and accessible by car and bus. The Bukit Jawa site has been interpreted as a Palaeolithic tool workshop site on the shores of an island in a palaeo-lake now long desiccated. It has been determined from data that any location that is at least 72 metre above sea level and contains river gravel deposits is a potential archaeological site. The site is generally undisturbed with the cultural layer protected by a thick overburden. The richness and extent of the finds from two rescued excavation trenches due to highway

construction in 1996, suggest that the Palaeolithic population was relatively high, practised a similar lithic technology through time and probably settled on this site because it was a source of the raw material (Department of National Heritage, 2011). Evidence of early human activities come from the discovery of stone tools workshop that used river gravels from the ancient Sungai Perak to produce pebble and flake tools by using anvils, cores and hammer stones and that are crowded with thousands of debitage in the form of chunks, flakes and chips (Saidin, 1993, 2007a, 2007b; Saidin & Jeffrey, 2007). The technique of tool making using anvils and hammer stones was similar to but not as technologically developed as that uncovered at Kota Tampan. The completed tools appear to be prototypes of Kota Tampan. Generally, they were mostly from quartz, large and crudely produced with large flakes, and reminiscent of middle Palaeolithic tools. Some are so massive that require holding with both hands. Tools were mostly made from locally available quartz, but finds of sandstone tools led to the discovery of a nearby sandstone source at Bukit Suring (in the buffer zone). Since the tools were cruder and there was less understanding of stone lithology, these sites had to be older than Kota Tampan. From a consideration of the stratigraphy and the morphology of the finished products, it was concluded that Bukit Jawa could be relatively dated to 200,000-100,000 years ago (Saidin, 2004, 2007a, 2007b; Saidin & Jeffrey, 2007). This site is now protected as an exposed representative of the Bukit Jawa cultural layer (Figure 9). Propose activities including visiting, demonstration and fun excavation with the theme “Archaeologist for A Day”. Students will be given excavation tools and uniforms for hands-on experience guided by Department of National Heritage. To increase interaction, participants are awarded with junior archaeologist title (certificate). Once the proposed activity matures, the attraction will be scaled-up to be a summer camp program to attract international schools and university students.



Figure 9. (A) In-situ location of artefacts in Bukit Jawa site.
(B) Abundant quartz as raw material in making stone tools.

5. Bukit Sapi

The Bukit Sapi site is located quite far from the other geosites in Lenggong Valley. It is situated outside of Special Area Plan (SAP) boundary at latitude 5°08'48" N and longitude 101°01'28" E, approximately 18-20 km from the Lenggong Town. It can be reached via municipal route A167 from federal highway route 76. As all the other geosites located at the western side of the Sungai Perak, the Bukit Sapi area is the only site located at the eastern side of this river valley. However, the exposed outcrop at the Bukit Sapi located exactly next to the municipal road and can be reached by motorbike, bus and car. Related activity can be done here is limited to visiting for research and educational purposes only. In general, the entire sections of the valley in Lenggong area, especially lower than 72

meters above sea level were inundated with whitish to light grey colour materials, known as white soil or rocks by the locals (Figure 10). Essentially, it is volcanic ashes that came from the Toba eruption in Sumatra, Indonesia, about 74,000 years ago. The fresh ashes mostly free of organic material, but at the some places ashes mixed with the soil and clay and burrowing by organism or growth of plants roots. The outcrop is far from the riverbank and the ashes are fresher because they are not exposed too much and less weathering.

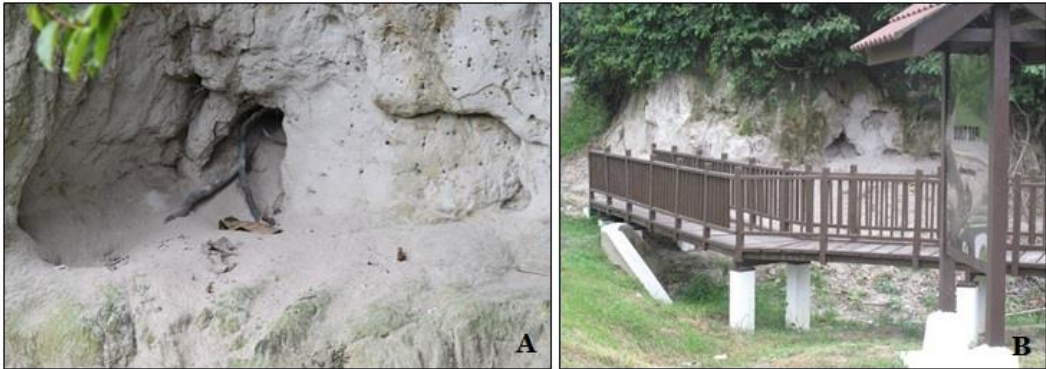


Figure 10. (A) Exposed outcrop of fresh Toba ash deposition in Bukit Sapi area, (B) Facilities provided include information board and wooden pathways.

For records, the Toba ashes reveal its distribution to the Indian Ocean. The presence of Toba ashes in the peninsular Malaysia was recorded at several locations such as the Sungai Perak valley by Scrivenor (1931), in western Pahang by Richardson (1939), in Selangor by Stauffer (1973) and Stauffer & Batchelor (1978) and in Baling, Kedah by Debaveye. Foo in 1990 described the ash found in Kuala Kangsar as Cegar Galah volcanic as layer resembling a rhyolite. In 2007, USM has mapped the Toba ash distribution in the Lenggong Valley which is found to be 7-10 meters thick, scattered around 70 km square. Based on archaeological evidence, the association of stone tools and Toba ash with the Kota Tampan artefacts shows the possibility that this catastrophe affected the extinction of prehistoric society (Department of National Heritage, 2011).

6. Sungai Perak (River)

Sungai Perak or Perak River is the longest river in Peninsular Malaysia that flows from Temenggor Lake throughout Lenggong valley before entering Chenderoh Lake. This river extends from the longitude of $5^{\circ} 20' 25''$ N to $5^{\circ} 00' 0''$ N and the latitude of $101^{\circ} 10' 0''$ E to $100^{\circ} 09' 0''$ E. Generally, the total length of Sungai Perak in Lenggong Valley District is 10 km away. It can be reached via any kind of transportation. Some Sungai Perak winds in short bends within a 6.5 km wide, NNE trending depression that is flanked by mainly granitic, hilly to mountainous topography. Some geomorphological features occur along the river such as cascades and rapids. The river becomes part of the transportation source for some of the villagers living nearby. A variety of recreational activities can be carried out including boating, canoeing and kayaking. The Sungai Perak with its little islands and tributaries flows through the valley (Figure 11), which is today essentially an agricultural landscape including rubber and palm oil plantations threaded with traditional villages. Geological evidence indicates that the Sungai Perak changed its course at various times, resulting in gravel deposits (Figure 11B), and creating lakes at Lenggong and nearby Lawin and Gerik in the ancient past (Tjia, 1993). A meteorite impact 1.83 million years ago blocked the river and diverted its course. During the period

of much lower sea levels 40,000 years ago the valley was part of a tropical savannah. Over a period of two million years the valley provided gravel suitable for prehistoric stone tool making and limestone caves for shelter (Department of National Heritage, 2011).



Figure 11. (A) Sungai Perak with its little islands and tributaries flows through the valley, (B) River gravel deposits (C) Leisure activities include boating, canoeing and kayaking, (D) Beautiful views of Sungai Perak

7. Lata Kekabu

Lata Kekabu is a beautiful waterfall and a major tourist attraction in this area. It is a part of Bintang Granite and located in Bintang Hijau Reserved Forest at latitude $5^{\circ}02'41''$ N and longitude $100^{\circ}56'57''$ E and is approximately 106-130 meters above sea level. The entrance to the waterfall located exactly next to the federal highway Route 76 (Figure 12a). This waterfall can be reached about 9 km from Lenggong Town and 1 km from the entrance by any vehicles including bus. The area surrounded by the tropical rainforest, has been developed as popular recreational area (Figure 12B) and equipped with various facilities and infrastructure such as camping site, public toilets, multi-purpose open hall, hanging pathway, praying room, gazebos and parking lot. The river flow at the downstream is very wide but is not so deep that it is suitable for swimming.

Fishing and guided hiking are other possible activities that can be done here. The waterfall also can be enjoyed all year round. Lithologically, Lata Kekabu is part of the Bintang Granite. Based on the field observation, this area is composed of porphyritic granite. The grey and pink colour porphyritic granite is because of the existence of alkali feldspar as the phenocryst. Muhammad Farhaan (2013) stated that the rock diversity in the site includes biotite-porphyritic granite, porphyritic granite, microgranite, quartzite, schist and granite. The uniqueness of this cascade is the existence of xenolith of different

sizes in the large body of granitic rocks (Figure 12c). Other geological features include joints and faults. The visible joints on the rock wall form a beautiful setting for the gushing water. In addition, veins can be seen in some parts of the cascade.



Figure 12. (A) Signage to Lata Kelabu located exactly next to the federal highway Route 76, (B) The area is surrounded by the tropical rainforest, has been developed as popular recreational area and equipped with various facilities and infrastructure such as hanging pathways and gazebo, (C) The existence of xenolith of different sizes in the large body of granitic rocks, (D) Scenic view of the upper area of Lata Kekabu

8. Gua Kajang - Puteri - Asar

The Bukit Kepala Gajah massive limestone, located in Cluster 2 is a large outcrop that occupies an area of six square kilometers with a summit 258 meters above sea level. The topography of the hill consists of steep-to vertical walls with rounded tops and contains more than 20 caves and rock shelters (Department of National Heritage 2011). Among four of the excavated caves, three of these revealed prehistoric burials – Gua Gunung Runtuh, Gua Teluk Kelawar and Gua Kajang. Lying approximately 6 km from the town of Lenggong Valley, Gua Kajang is a natural limestone tunnel through the Bukit Kepala Gajah massive limestone comprising three caves including Gua Asar and Gua Puteri. It is located at latitude $5^{\circ}07'36''$ N and longitude $100^{\circ}58'26''$ E and is approximately 72 meters above sea level. Gua Kajang is about 2 km by trail from Gua Gunung Runtuh. It is also easily accessible by vehicles from the surrounding smallholdings. The cave is oriented north-south and divided into three small portions: the front cave, back cave and a small chamber adjacent to the back cave. The front cave is the shelter facing north and the cave mouth is about 25 m in length (Figure 13). Two human burials excavated there in 2007 were dated to in the vicinity of 10,000 and 7,800 BP, one of which was distinguished as having *Australomelanesoid* features, which is reliable with Perak Man and other late Palaeolithic skeletons revealed so far in the Lenggong Valley (Zuraina et al., 2005).



Figure 13. (A) Signage to Gua Kajang-Asar-Puteri, (B) The front view of Gua Kajang, (C, D, E) Interesting speleothem formation in Gua Kajang

The floor of the tunnel is interspersed with deep man-made holes over which unrefined wooden stages had been laid to provide passage for wheeled vehicles between the two mouths of the tunnel. According to local knowledge the tunnel was utilized as a part of the current past as a thoroughfare for steed or buffalo-drawn carts. This cave has also been featured in a local movie as one of their shooting area. Earlier it had been mentioned that caves in the massive limestone at Lenggong Valley probably emerged from beneath water and accumulated soil on their floors only at the end of the Pleistocene or some 10,000 - 12,000 years ago. It would be about this time that man in the Lenggong Valley began to seek shelter in these caves as hunting camp, habitation or burial site.

Archaeological research in Lenggong Valley first emerged in 1917 when Evans (1918) unearthed fragments of human bones in Gua Kajang. Further analyses done by Duckworth (1934) on these human bone fragments suggested that prehistoric man of Gua Kajang may have had an ancestral link to the Australian aborigines. In 2007, Goh (2008) uncovered two further burials, GK 1 and GK 2, which were dated to between 10,000 and 7,800 years ago. Two in-situ human burials (GK 1 and GK 2) from two different cultural layers were also uncovered. These burials were partially disturbed but the skeletons in them remained intact as indicated by the bone articulation and burial goods. GK 1, a 50% complete female skeleton, was laid face down and in a flexed position (prone flexed) with both legs folded up to the chest while both arms were folded up to the shoulder.

Radiocarbon dates derived from the associated shell samples suggested a Late Palaeolithic age of $10,820 \pm 60$ BP (Beta-227446) for GK 1. GK 1 had a stature between 155 cm – 163 cm. Approximately 1 metre away and southeast of GK 1, the leg bones of another human skeleton associated with food remains and stone tools were also uncovered at a depth of 70-80cm and with a radiocarbon date of $7,890 \pm 80$ (Beta-227445). The original position of GK 2 was unfortunately indeterminated because it had been badly disturbed by guano collectors. The gender and the stature of GK 2 could not be determined due to the absence of indicators. The skeletal remains of GK 1 and GK 2 were identified as adults but their ages at death could not be determined.

Palaeoanthropological studies show that GK 1 bears *Australomelanesoid* features, which is quite consistent among the late Palaeolithic skeletons uncovered so far in the

Lenggong Valley. Gua Asar is located within the Bukit Kepala Gajah massive limestone. It is located at latitude 5°07'56" N and longitude 100°58'80" E, sits 78 m above sea level and is the neighbour to Gua Kajang. The cave bears an interesting limestone formation (Figure 14). The Asar Cave has yet to be carried out archaeological research in detail. It can be reached within 30 minutes walking via broadwalk from Gua Kajang.



Figure 14. (A) Gazebo and information panel in front of Gua Asar, (B) Gua Asar site



Figure 15. (A) Visitors are required to climb for a 10-15 minutes to reach Gua Puteri, (B, C, D) Interesting limestone formations inside Gua Puteri

Gua Puteri is also a cave within Bukit Kepala Gajah massive limestone, located at latitude $5^{\circ}07'53''$ N and longitude $100^{\circ}58'82''$ E and at an elevation of 94 m above sea level. Visitors are required to walk for 40 minutes from Gua Kajang and climbing for 15 minutes to reach the cave mouth. Interestingly, the limestone formations inside the cave can be taken for sculptures representing a map of Malaysia, a frog, a couple of wedding platform, an elephant's head, a mosquito net and others (Figure 15). Local legends have it that these were once alive but were calcified by an evil spirit called Sang Kelembai. Be as it may, geologically speaking, these are simply stalactites and stalagmites in their amazing varieties as they grew with the time into the available spaces. These caves are also the habitats for bats and doves. The guano digging activities have been stopped since the area was nominated as World Heritage Site. Main activities included visiting for research and educational purposes, cave exploration and trekking. In terms of amenities, on-site interpretation boards, parking space for 3-4 vehicles, gazebos and wooden broadwalks are available.

9. Gua Gunung Runtu

Gua Gunung Runtu in Cluster 2 core zone with difficult access category, is located at latitude $5^{\circ}07'3''$ N and longitude $100^{\circ}58'3''$ E, approximately 124 metre above the sea level and 75 meters above surrounding secondary rainforest. There are three entrances to the cave, of which the most convenient approach is through the south entrance. This cave located 8 km away from Lenggong Town and is part of small hamlet, Kg Gelok, accessible by four wheels drives or a footpath that takes half an hour to traverse and then a 15-minute climb (Figure 16). It is currently monitored and maintained by the Department of National Heritage. This cave has three chambers. The main chamber opens to the north-east.

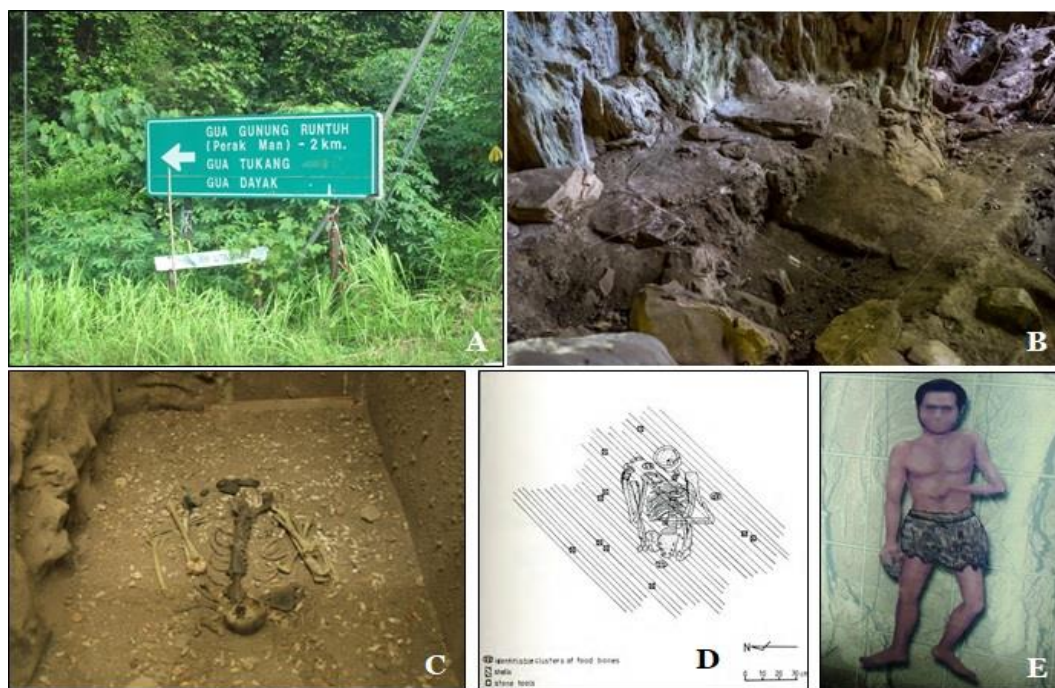


Figure 16. Signage to Gua Gunung Runtu, (B) Excavation location of Perak Man at Gua Gunung Runtu, (C) Preserved original skeleton of Perak Man can be seen in Lenggong Archeological Museum, (D) The burial area of Perak man and the associated mortuary objects, (E) An artist impression of the perak man with congenital deformity. Source: Department of National Heritage (2011)

Two smaller openings to the west and south-east have been blocked by rock falls. Gua Gunung Runtuh is dry and the cave is lit by sunlight coming through the north entrance. Boulders of various sizes and fragments of stalactites and stalagmites lie scattered on the cave floor (Zuraina, 1996; Zuraina et al., 2005). Gua Gunung Runtuh was first excavated in 1990 by a team from USM Malaysia headed by Zuraina Majid. The excavation at Gua Gunung Runtuh suggests that man occupied this cave for habitation and burial purposes, beginning about 13,000 years ago until 2,600 years ago (Zuraina, 1994, 1996; Zuraina et al., 2005). This 1990 excavation significantly placed the prehistory of Malaysia on the world archaeological map with the discovery of Southeast Asia's oldest most complete human skeleton – the Perak Man, radiocarbon dated to $10,120 \pm 110$ BP (Beta-38394). During the 1990 excavation, the first hint of a skeleton as a faint view of its long bone and part of the skull at the 60-70 cm spit in Trench A2 but it was only at the 90-100 cm spit that the rest of the skeleton revealed itself. The almost complete skeleton, missing only some bones such as metatarsals, costa and parts of the face, was found laid down in an east-west orientation, and with its head slightly inclined to the right. The right arm was folded up to the shoulder while the left arm was flexed with the hand placed on the stomach and both legs were folded over the chest (Zuraina, 1994; Zuraina et al., 2005). The skeleton was named Perak Man to honour the state that it was discovered in.

Physical examination of the skeleton was first conducted on-site and later after removal, in the laboratory for analyses. Gender was determined by an examination of the pelvis, sacrum and the skull. The pelvis including the pubic bones is not well preserved and so the sub-pubic angle is not clear. However, the narrow and shallow pre-auricular sulcus and the non-spacious and funnel-shaped pubic basin are all strong male characteristics. Furthermore, by examining the skull, male characteristics can be supported by the large occipital bone, mastoid processes and teeth. The chin of the mandible is square whereas it should be more rounded with a point at the midline if it had belonged to a female. Further support for a male gender comes from the examination of the sacrum. It is curved and in its dimensions, it is longer than it is wide (Department of National Heritage, 2011). Based on laboratory measurement of bone lengths and using a formula developed from Indonesian skeletons, the stature of Perak Man was estimated at about 154 cm. Perak Man has a long head and a narrow face. These and other traits observed not only in the skull but also in other bones such as the humeri, femora and tibiae suggest that the affinity is *Australomelanesoid*, a race occupying the western part of the Indonesia archipelago and continental Southeast Asia at the end of the Pleistocene and early Holocene but now largely confined to east Indonesia, Melanesia and Australia (Department of National Heritage, 2011). Their association with the observed volarly and radially curved phalanges, shorter lower arm bones and compensatory scoliosis of the spine suggest a genetic malformation known as *Brachymesophalangia* type A2, an extremely rare condition even in present human population. The presence of such a deformity in a prehistoric population has not been recorded before. Thus, the Perak Man is the first ever recorded instance of *Brachymesophalangia* type A2, making the Perak Man important for the understanding of human medical history. Current knowledge about prehistoric lifespan suggests that Perak Man lived longer than the average duration of life for his community. He lived in a community where the human lifespan averaged 20-30 years. The Perak Man died at a relatively ripe old age of 40-45 years. Thus, it is interesting to speculate on the possible cause of his death with relevance to his age. At such an old age, he would not have been required to hunt for food or perform heavy-duty jobs for day-to-day living. He would certainly have been an old respected figure in his community probably cared for by all around him because of his status as an elder (or even a shaman), and his

knowledge on survival, hunting, gathering, healing, and other aspects of a Palaeolithic way of life. Faunal remains, shells and stone tools were found together with the skeleton in the grave. A total of 1,261 kg of animal bones and teeth were collected. Their fragmentary nature made it mostly impossible to identify to species level. The few identifiable ones came from the wild pig (*Sus scrofa*), the monitor lizard (*Varanus* sp.), the deer, *Cervus unicolor*, monkeys (*Macaca* sp.), the tortoise and possibly the leopard, gibbon and the kijang species of deer. Most (76.8%) were found at what would have been the bottom of the grave and distributed around the left arm, right shoulder, and feet. Some animal bones were found among the right finger bones. A small portion of the remains (7.7%) bore traces of charring. There were altogether 2,878 shells collected from grave at different depths. Most (82%) were collected from the basal level and immediately above the body. The shells could be separated into small, medium and large animals. Medium shells were the most prevalent (42.7%). The large ones made up 18.5% and were found mostly between and just below the skeleton. The Perak Man skeleton, a key icon in Malaysia archaeology, remained almost intact for more than 11,000 years in GRC. The Perak Man survived for such a long time mainly because he was buried in a naturally controlled cave environment with a relatively cool and constant temperature of 24°C and dry slightly alkaline soil condition that was suited for bone preservation. The dryness of the cave interior has slowed down natural deterioration caused by plant growth and rock slides, and kept the population reduced. The trench from which Perak Man was excavated remains in place and has not been back-filled so as to be a record its original location. In 2008, the Perak Man was inscribed as a National Heritage object in the National Heritage Register (Gazette No. P.U [B] 235), followed by the site of Gua Gunung Runtuh (Gazette No. P.U [B] 494) as a National Heritage Site in 2009. This can be expected to lead to adequate management and conservation. Related activity can be done here is strictly limited to visiting the outside hills and excavation areas only. In terms of complementary facilities, basic facilities such as on-site interpretation boards with good storytelling and canopy walks will be provided in nearer future.

10. Gua Teluk Kelawar

Associated with the GTK 1 burial were stone tools, animal bones and *Brotia* shells that are similar to the mortuary goods of Perak Man and GK 1.



Figure 17. (A) The front view of Gua Teluk Kelawar, (B) The excavation site in Gua Teluk Kelawar, (C) Facilities in Gua Teluk Kelawar, (D) Partially disturbed human burial was uncovered, (E) The skeleton known as GTK 1, was found buried in a tight foetal position. Source: Department of National Heritage (2011)

An associated shell sample from the burial provided a radiocarbon date of $8,400 \pm 40$ BP (Beta-193000). GTK 1 was considered female based on measurement of the femoral and humerus heads, the upper edge of the eye orbit and on the lack of prominence of the supraorbital ridge. From a fibula measurement, she was between 143 and 151 cm tall. She probably died at an age of 45 to 50 years. A palaeoanthropological study showed that GTK 1 was of *Australomelanesoid* stock, just like the Perak Man (Bulbeck and Zuraina, 2007). Visiting for research and educational purposes is the only activity can be done here. Basic facilities such as on-site interpretation panel with good design and contents, enhance existing buildings into a mini interpretation centre and hanging pathways to observe the excavation site will be provided in nearer future.

11. Gua Harimau

Gua Harimau is a massive limestone in core zone area, containing prehistoric cemetery located approximately 12 km from the town of Lenggong. It is situated at latitude $5^{\circ}08'54''$ N and longitude $100^{\circ}58'37''$ E and is about 133 meters above sea level and accessible by four wheel drives as well as walking and climbing for 30 minutes – 1 hour. Gua Harimau is a large cave (Figure 18) with a well-lit entrance located in the south, measuring about 28 m in length and 20 m high (Chia & Zolkurnian, 2005).

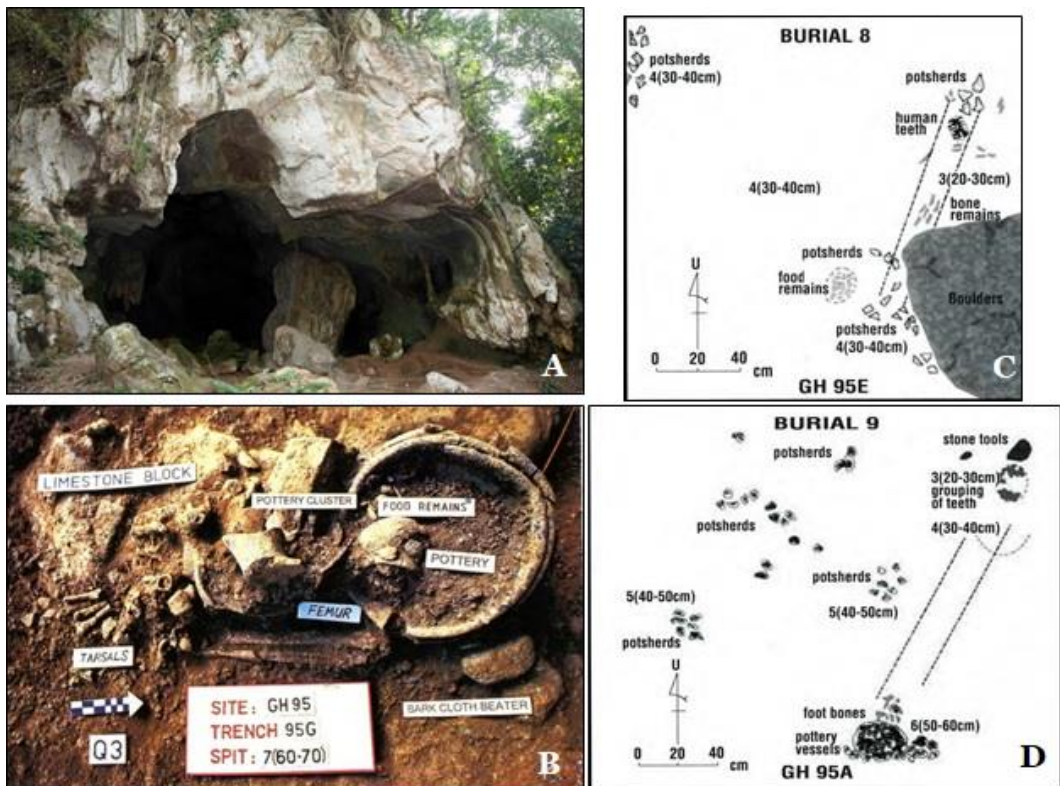


Figure 18. (A) Gua Harimau site, (B) Stacked shallow bowls containing food remains (upper right) found in a burial in Gua Harimau, (C) Burial 8 revealed a cluster of human teeth and bones associated with pottery and food remains, (D) Burial 9 and its associated finds (Source: Department of National Heritage 2011)

The cave floor is hard and covered with chunks of stalactites and the interior portion of the cave had been badly distributed by guano diggers. Gua Harimau was briefly

investigated by Williams-Hunt in 1951 who found skeletal remains of a juvenile associated with a stone adze and pottery that was radiocarbon dated to $3,450 \pm 150$ BP (Williams-Hunt, 1952). Further excavations conducted by the USM during the 1987-88 seasons uncovered seven more human burials (burial 1-7), dated between 4,900 and 700 years ago (Zuraina, 1988; Zolkurnian, 1989). A total of 13 skeletons including one discovered by Williams-Hunt in 1952 and another recently have been excavated from Gua Harimau while there is no evidence of this cave having been used as a habitation site.

In 1995, four more human burials (Burial 8-11), dated between 3,000 and 3,200 years ago were also found (Zolkurnian, 1998). These burials, uncovered over the years 1987-1995 and labelled from 1 to 11 were found incomplete and in very fragile conditions. A variety of burial items such as earthenware vessels, stone tools, stone adze, bark-cloth beater, shells and stone ornaments, food remains, bronze celts and bronze moulds were associated with this burial Zuraina, 1988; Zolkurnian, 1989; Chia and Zolkurnian, 2005). According to the recent find it seems likely that this cave was used mainly as a cemetery from the late Neolithic to the early Metal periods (Department of National Heritage, 2011). Gua Harimau also hold the most representative set of pottery found among the cave sites. Most were cord marked bowls and footed vessels shaped from local clay which were common throughout prehistoric mainland Southeast Asia. The Gua Harimau pottery assemblage comprising footed vessels, craniate bowls and a single globular vessel defines the pottery culture for the Lenggong Valley. These potteries are well-developed and appear to be of late Neolithic design radiocarbon date about 3,000 years ago and have been formed with local clay. The pottery was sand-tempered; hand moulded using the slow wheel and fired at 600–800 degrees Celsius. Similar pottery assemblages have been found in southern Thailand. Analysis of the human remains indicates that they were a Mongoloid group similar to others found in Asia dating from the Neolithic period. The bronze finds are the earliest in the Malay Peninsula, and so far this is the only archaeological site containing evidence of occupation in the Lenggong Valley during the metal period (Department of National Heritage, 2011). Related activity can be done here is limited to visiting for research and educational purposes only.

12. Gua Badak C

Gua Badak C is a small cave located in other massive limestone, approximately 13 km north of the Lenggong town. It is situated at latitude $5^{\circ}09'7''$ N and longitude $100^{\circ}59'101''$ E and is about 126 meter above sea level. There are several small caves in this massive limestone and were given the same name (Gua Badak). The cave is elongated north-south and extends about 50 m with two distinct narrow northeast southwest branches. Its entrance is located 12 m above ground level (Figure 19A). It can be reached via four wheel drives, walking and climbing for 10 minutes. Gua Badak C has preserved a mass of vertebrate fossil in the cave deposits. Ros and Yeap (2000) first documented some of the fossilized teeth and bones of mammals in Gua Badak C. The fossils contain a highly diversify fauna ranging from large carnivores and herbivores to small fossils (Figure 19B, C) like bats (Yasamin et al., 2010). They related the preservation of the large vertebrate fossil bones and teeth to the time when the Tampanian community was thriving on the plains of Lenggong and Kota Tampan. The common opinion is that the preservation of these fossil bones and teeth in the Gua Badak C took place more than 30,000 years ago and probably prior to the blockage to the Sungai Perak basin by several landslides. Aboriginal charcoal drawings were also found in a small cave at Gua Badak (Badak A) that located about 250-300 m northeast of Gua Badak C where vertebrate fossils were found. Evans (1927) – in Adi (1990) noted charcoal drawings in Gua Badak A (Figure 19D). The oldest of these aboriginal paintings found is only about 120 years at Lenggong (Price, 2001). They were

then thought have been destroyed and lost by quarrying. Related activity can be done here is limited to visiting for research and educational purposes only.

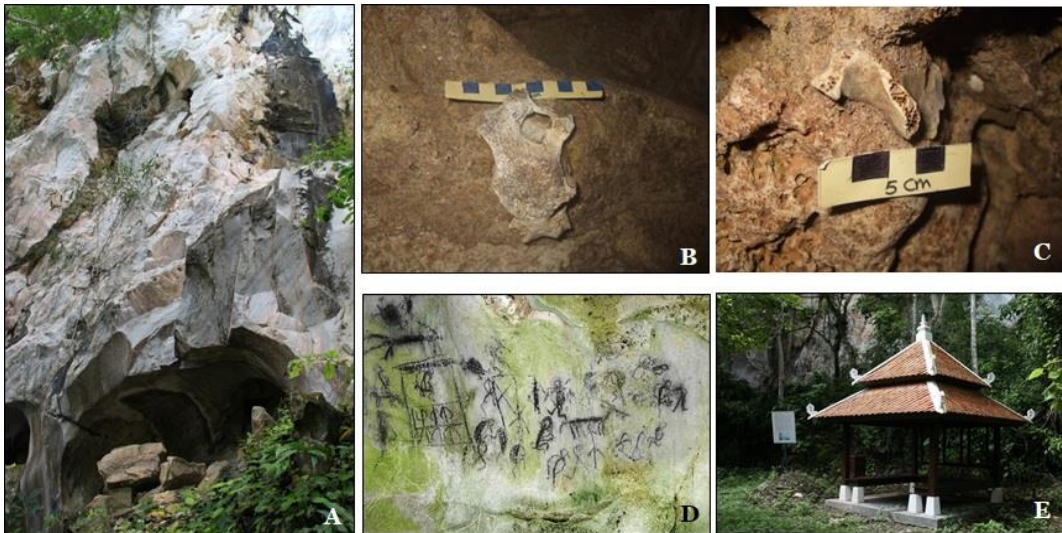


Figure 19. (A) Gua Badak C site, (B, C) Unidentified large mammalian bone fossils in Gua Badak C, (D) Charcoal painting in Gua Badak A by local aborigines bring the Lenggong Valley sequence up to historical times, (E) The site was equipped with gazebo and information board (Source: Yasamin et al. 2010 A, B, C)

DISCUSSION AND CONCLUSION

AHLV is an excellent example of the recognition of an area with a strong geological and archaeological interest. The proposed geological itinerary is mainly developed and designed to present to an audience of non-experts and experts, the geological phenomenon and a journey through the longest hominid histories in a single locality in the world (Palaeolithic-Neolithic-Metal period). The itinerary described in this paper explained about twelve sites of geological and archaeological interest distributed within Lenggong Valley. Scientific interest, accessibility and clear outcrops associated with geological, historical and cultural resources were essential components for the development of this geological itinerary. The proposed itinerary has been established due to a desire to present the uniqueness and possible fragilities of the described geosites. The proposal of this itinerary is also aimed at creating an opportunity to raise awareness of the geological and archaeological features present in the AHLV which need to be protected and promoted. Bukit Bunuh meteorite impact crater, open air sites, limestone massifs and their caves, river gravel, Toba ash deposit, Sungai Perak and waterfalls provide fundamental information on the important of local and regional cultural and natural features of this area.

They form part of the natural features of the landscape and they represent a valuable scientific and educational resource as well as a great tourism potential. Accordingly, the present study required to identify all those sites for which it is possible to define a “geological-cultural interest” and to provide a basis to preserve and safeguard them for future generations. The proposed itinerary from Lenggong Valley may be used for different purposes, targeting a diverse public ranging from non-specialists to academic geologists. It is particularly suitable as a geotouristic trail and for educational field trips at an undergraduate level for two reasons: its location as a protected area (World Heritage Site) and the remarkable scientific and cultural values of this area. The development of the

geological itinerary shows how geological and archaeological knowledge that is established on scientific research can be widely disseminated. The proposed itinerary has been established based not only on the presence of sites of great scientific interest but also on the beauty of the landscape of the whole area. The chosen geosites allow us to tell the story through deep time and will provide tourists with the opportunity to increase their scientific knowledge of the Earth directly in the field. The simplified version of Lenggong Valley geotourism map and itinerary are shown in Figure 20 and Table 2. Consequently, the two-full day is needed to cover all the geosites in Lenggong Valley.

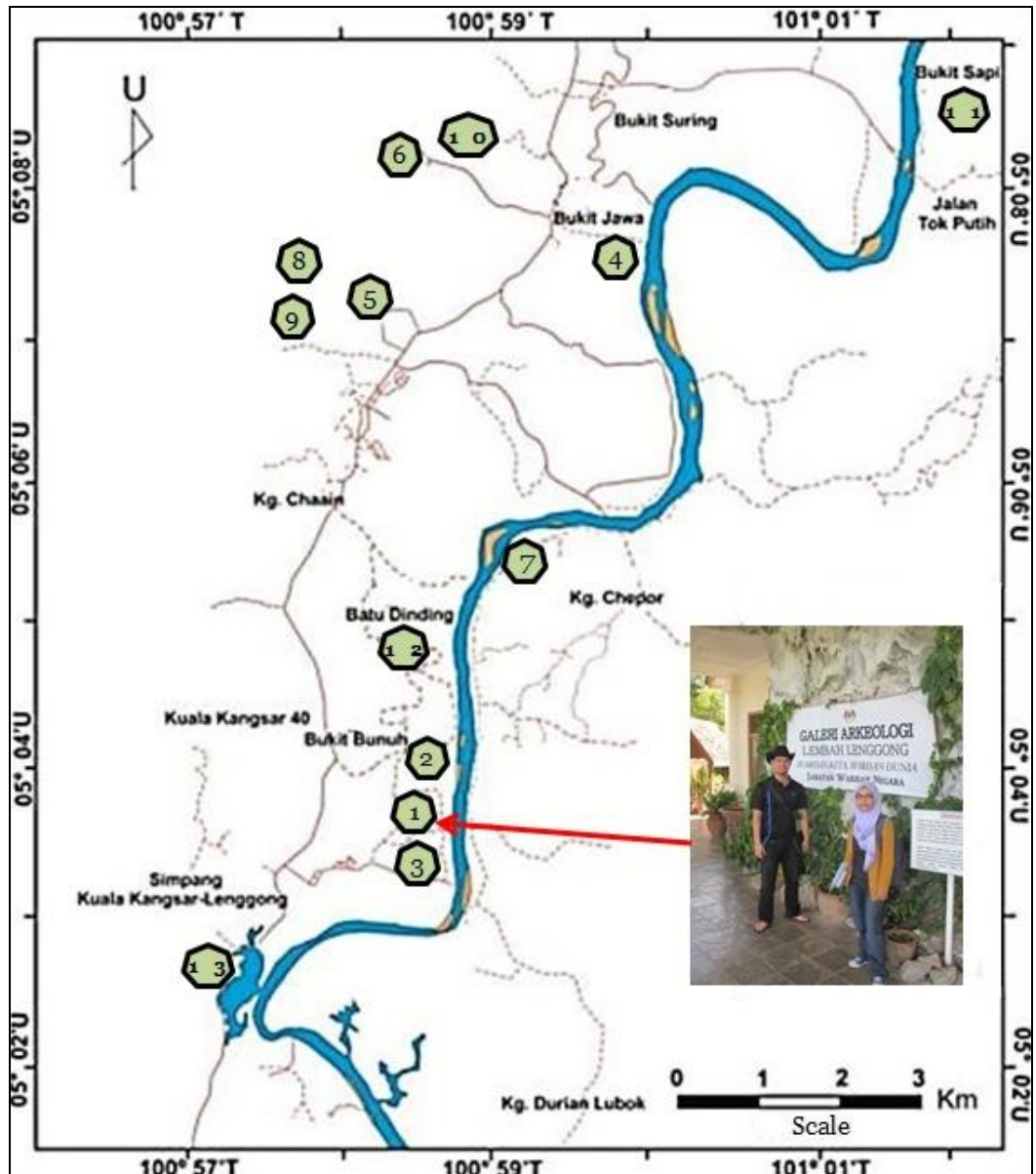


Figure 20. The simplified version of Lenggong Valley geotourism map

Table 2: Tour Itinerary of Geosites in Lenggong Valley (refer to Figure 20)

Lenggong Valley Geotourism Map and Itinerary
<p><u>Day 1:</u></p> <ol style="list-style-type: none"> 1. Visit Lenggong Archaeological gallery to get overview of the AHLV before visits and get entrance pass for site visits. 2. Visit Bukit Bunuh and appreciate geological site and meteorite impacts. 3. Visit and learn about Palaeolithic tools workshop at Kota Tampan 4. Enjoy excavation activities at Bukit Jawa and learn about Palaeolithic tools workshsop. 5. Visit Lenggong Archaeology Research Centre at Gua Kajang to learn and observe archaeological evidences and activities as well as Gua Asar and Gua Puteri. 6. Visit Gua Harimau to observe archaeological artifacts. 7. Enjoy water activities at Sungai Perak.
<p><u>Day 2:</u></p> <ol style="list-style-type: none"> 8. Visit Gua Gunung Runtuh and learn about iconic discovery of Perak Man. 9. Visit Gua Teluk Kelawar to observe archaeological artifacts. 10. Visit Gua Badak to observe aboriginal charcoal drawing. 11. Visit Bukit Sapi to observe exposed outcrop of fresh Toba ash deposition. 12. Visit Batu Berdinding to observe several geological structures such as recumbent folds, overturned folds, asymmetrical folds, shear zones, fault zones and clear poles. 13. Enjoy leisure activities such as swimming and fishing at Lata Kekabu.

As a conclusion, the AVLH is a truly unique locality on Earth when considering the geological and archaeological perspectives that are interacting with one another. The above-described geosites can be used to develop an itinerary suitable for different educational groups such as students of high school level, schoolteachers, geotourists and geopark guides and for university courses. The higher educational program should include a course for first year university students as well as courses of study for advanced undergraduate and graduate students who are specializing in geology and archaeology.

Until now, geoconservation procedures have only partially been established in the Lenggong Valley area. Therefore, it is also believed that the development of the geological itinerary could strongly contribute to promote further geoconservation actions. A more disseminated knowledge of this itinerary will encourage planning authorities to pay more attention and to prepare actions for geoconservation and the development of geotourism (Hose, 2008) and, hence, in a short time, geoconservation procedures for all the described geosites will be set up. It is important to focus on conserving geological heritage because it interrelates scientific and cultural significance and thus encourages sustainable development for touristic opportunities especially in geo-archaeotourism potential within this area.

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