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KEY FACTORS FOR TOURIST AND RECREATIONAL USE OF QUARRY PONDS OF BELARUS AND POLAND

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Abstract: The paper discusses the potential use of quarry ponds in Belarus for tourist and recreational use. As a result of complex limnologic research the key factors for the sustainable function of recreational use of quarry ponds has been determined. These man-made quarry ponds bare a principal resemblance to the natural lakes of the region through macrophytes production, functional organization, and low trophic status. Among the ten quarry ponds that were investigated, Belarus' water and industrial restoration of former chalk pits revealed that there are two trophic types of quarry ponds. The first type are those with macrophytes orientation, which are ecologically sustainable and would thrive under the impacts of recreational use. The second type are those where phytoplankton can be found, which are less sustainable for recreational use. By examining the morphometry of the base of quarry ponds one is able to determine the type of quarry pond. Sustainable function of artificial water systems for tourist and recreational use dependent upon the type of quarry pond and level of trophic status.

Key words: quarry ponds, former chalk pit restoration, artificial water systems, bio productive indicators, macrophytes structure, phytoplankton structure, trophic status, sustainable use

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INTRODUCTION

One of the tasks of environmental protection is the restoration of the natural and industrial potency of lands that have been transformed in the process of open mining for non-metallic minerals. One of the ways restore post-industrial lands is to use them for tourist and recreational purposes. Quarry ponds are genetically related to deposits of nonmetallic ore represented in the quarry ponds of economically efficient and ecologically relevant water restoration of industrial landscapes (Khomitch, 2002; Khomitch et al., 2012, 2013, 2014). The implementation of water restoration of industrial landscapes requires less effort and presents less of an economic challenge. Simultaneously the natural conditions of these postindustrial landscapes allow for the accumulation of water, creating an artificial water system with the potential for multi-purpose use on degraded post-industrial lands. The successful experience of creating quarry ponds that work in tandem with the current system of regional environmental usage has been confirmed by the water accumulation process seen in the Republic of Belarus. Currently in Belarus there are 2,188 pits that are in use, 442 industrial pits and 1,746 domestic pits. According to the data of combined reporting balance of stocks of construction materials among surveyed deposits, 24% of deposits of sand and gravel, 74% of deposits of clays and 87% of deposits of carbon minerals are watered and potentially fit for artificial water systems restoration on the place of these non-metallic mineral deposits, the natural condition for creation of over 130 newly formed artificial water systems (Khomitch, 2001; Khomitch et al., 2015). The most numerous and those that hold the most potential for tourist and recreational purposes in the Republic of Belarus are chalk deposits (Figure 1).



Figure 1. Map of existing and prospective objects suitable for water restoration of chalk quarries in Belarus:1 - existing chalk quarries, that are suitable for water restoration, 2 - proven chalk deposits, 3 - existing quarry ponds in chalk pits

There are numerous examples of the successful repurposing of quarry ponds throughout the world for tourist use (Bacon, 2001; David, 2007; Davis et al., 1982; Gandah et al., 2016; Legwaila et al., 2015; Lintukangas et al., 2012; McCandless et al., 2013; Rzętała, 2008; Dal Sasso et al., 2012; Szabo et al., 2010; Williams, 1998). Newly created landscape forms become an attractive element of the environment (Baczyńska et al., 2018; Iancu et al., 2010; Kaźmierczak et al., 2017; Kherrour et al., 2018; Mossa et al., 2018; Tokarczyk-Dorociak, 2015). In Kent, Great Britain the trade and entertainment center with relevant infrastructure: parks, basins, concert halls, galleries and art-centers is built on the place of former chalk pits. In Sweden, the Dalhalla concert venue was built in a pit once used for limestone mining. In Hungary, the pit in Tokaj is used as a mass events space. On the territory of restored gravel pits in California, USA, the regional recreation zone for beach and environmental tourism was created. In China, 35 km away from Shanghai on the location of a pit at the depth of 90 meters a hotel by the name of The Songjiang Quarry Hotel (aka The Shimao Wonderland Intercontinental) was built. Brownstone Park in Great Britain, is located on a former limestone pit and has become a popular entertainment center and catalyst for development of the area. Butchart Gardens in Vancouver, Canada was created on the territory of limestone pits and is recognized as a national historic park of Canada and attracts over a million visitors a year. Butchart Gardens has helped to develop tourism in the region, created new opportunities for employment, and increased the environmental awareness of the population. Turkusowe Lake, in Wolin National Park in Poland, is considered a major sight for tourists, even though it is a quarry pond (Figure 2). In the Republic of Belarus there are already plans for the spontaneous reclamation of quarry ponds.





The present research aims to examine and study of the necessary prerequisites for sustainable tourist and recreational use of quarry ponds in Belarus. Due to the principal similarities between natural lakes of the region and quarry ponds in the same regions of Belarus it was determined that quarry ponds could be used for tourist and recreational purposes. Quarry ponds are created as the result of excavated chalk pits being filled with water from rainfall, ground water, drainage, and other natural sources. The natural water accumulation in these chalk pits leads to them being considered as natural and industrial systems. They are considered industrial systems while the chalk pits are being excavated and they are then transformed into natural and technogenic systems through water accumulation. As a quarry pond continues to develop they differentiate according to their morphometry that determines if it will be a macrophytes of phytoplankton type. Sustaniable fuctions of quarry ponds is determined by the following conditions: trophic status, recreational impact, and whether it is a quarry pond with macrophytes or phytoplankton. The use of traditional methods of classical limnology is based upon the working assumption of the resemblance of quarry ponds to the natural limnic systems of the region. In accordance with the goal of research, the following objectives are formulated:

- conduct complex limnologic research of quarry ponds of Belarus to evaluate the present condition and perspectives of quarry pond functions in terms of recreational impact;

- to determine the qualities necessary for sustainable quarry pond use: size, trophic conditions of quarry ponds, natural and industrial related features of their water accumulation, the type of productive and functional structures. Through the investigation of the mechanisms of resistance to growth of trophic status and decrease of water quality in relation to recreational impact;

- to conduct comparative analysis of the functional features of the quarry ponds in Belarus without significant recreational impact with the genetically similar quarry ponds in Poland that are successfully involved in regional tourist and recreational activity to determine the necessary factors for tourist and recreational usage of quarry ponds.

For complex limnologic study and comparative characteristic analysis of the modern state of genetically similar quarry ponds in Belarus and Poland the following artificial water systems have been chosen: Kričev, Starik, Chotinovo-1, Chotinovo-2, Goluboi, Lazurnyi, Karpovcy-1, Karpovcy-4 in Belarus and Turkusowe, Szmaragdowe, Czarnogłowy in Poland. The model quarry ponds are formed in previously excavated chalk pits and have similar characteristics to water hollows. The above-mentioned quarry ponds are either currently in use or plan to be used for tourist and recreational purposes. The factual base of research is composed of morphometric, hydro chemical, hydro biological and geomorphological characteristics of the selected quarry ponds

MATERIALS AND METHODS

Study of actual morphometric parameters of quarry ponds, the collection of surface water and their hydro chemical analysis were performed in seven quarry ponds in Belarus: Kričev, Starik, Chotinovo-1, Chotinovo-2, Goluboi, Lazurnyi, Karpovcy-1, Karpovcy-4 and in three quarry ponds in Poland: Turkusowe, Szmaragdowe and Czarnogłowy, situated within West Pomeranian Voivodeship. For the study of the dynamic processes of formation of productive and functional structures of the newly formed artificial water systems, the earlier data of hollows morphometric parameters, the temperature stratification, transparency, the color of the water, pH, presence of dissolved gas, salt content, biogenic elements, organic material in the water, biological mass of immersed macrophytes, primary production of phytoplankton, biological mass of phytoplankton, quantity of species phytoplankton, and species composition of phytoplankton (Khomitch, 2001). Morphometric study of subjects of industrial water

restoration has been conducted based on the data of mensal and batimetric mapping. The calculation of morphometric indicators in hollows was made with the use of common limnology formulas (Yakushko, 1981). The water transparency was measured with the use of Sekki disc (Rumiantsev, 1977). The water samples to determine the hydro chemical indicators have been taken from the deepest depths of the quarry ponds accounting for the stratification of water temperatures and in shore littoral zones accounting for the reclamation by immersed macrophytes. The data of the stratification of temperature distribution was collected by use of electric thermometer GP 41M1. The PH value was determined with the use of a field ionometer I-102 and glass electrode ESL-14. Dissolved oxygen content was determined through the use of Winkler's method, carbon dioxide and carbonates – by method of volume titration (Alekin et al., 1973). The coloring of the water was measured with use of the imitational chrome and cobalt scale. The values of the salt content components have been obtained with the use of the generally accepted method of hydro-chemistry (Arinushkina, 1970). The concentrations of biogenic elements were measured using the colorimetric analysis. For determining the values of common phosphor and mineral phosphor, nitrogen compounds were used (Shilkrot, 1979).

The common phosphor was found in non-filtered water samples, phosphorcontaining organic compositions were destroyed in the presence of Sulphur acid and persulphate upon boiling for 30 minutes (Zukhovitskaya & Generalova, 1991). The concentrations of nitrate and ammonium nitrogen were determined in the first case with use of a-naphtolimine and sulfanilic acids, in the second case – with the use of Nessler's reagent. The determination of nitrate nitrogen has been done by ion-selective method with use of EM-NO3-01 membrane electrode. The mineral nitrogen was calculated as the sum of ammonic, nitrate and nitride ones. The picking of samples for determination of bio mass of immersed macrophytes was done with the use of Bernatovitch dredge.

The abundance and life capacity of higher water plants was measured through the Katanskava method (1981). The intensity of phytoplankton photosynthesis was measured with the Winberg oxygen light-and-dark-bottle method (Vinberg, 1960). To determine the functional features of the Polish guarry ponds in terms of recreational capacity, the data obtained in 1986-2010 was used (Kubiak et al., 2018; Nedzarek et al., 2011; Poleszczuk et al., 2013; Poleszczuk et al., 2014; Tórz, 2010). As of August 2017 through January 2018 the single collection of surface water samples has been performed in each of the investigated quarry pond to determine the actual concentrations of salt components and biogenic elements. During the field work the measurement of key physical and chemical characteristics of water was directly conducted: temperature, pH and electrolyte conductivity with use of pocket conductometer by Elmetron CPC-105. The measuring of salt content components and concentration of biogenic elements in the samples from Polish quarry ponds was performed at West Pomeranian University of Technology in Szczecin. The research included measuring of the concentrations of hydrocarbons, chlorine, sulphates, natrium, kalium, calcium, magnum and biogenic elements, and common water hardness. Investigation of samples taken from the quarry ponds in Belarus were conducted in affiliation with the "Central Lab" of Republican unitary venture "Scientific and production center for Geology". Chemical investigations have been conducted with the use of the generally accepted methods. The data were processed with the Statistica v. 9.0 software (StatSoft, Inc., 2009)

Quarry Ponds in Belarus

The "Chotinovo" group of quarry ponds, located in the Lyuban District of the Minsk Region, consists of two quarry ponds – Chotinovo-1 and Chotinovo-2 – located 200 meters from one another. The restoration of these chalk pits was achieved by the subsequent filling of the chalk pits by ground water. Neither of these quarry ponds have any tributaries. Chotinovo-1 has a narrow stretched trapezoidal form. The coastline of this quarry pond is intended to be constructed on the North-Western territory. On the Southern side of the quarry pond the height of the slopes are between 6-8 meters, whereas the remainder of the slopes are 2 meters high. The littoral zone is narrow with a width of one meter, whereas on the East side of the quarry pond the littoral zone reaches between 4-15 meters. The grade of the sublittoral zone is up to 80°.

Chotinovo-2 is a horseshoe shaped quarry pond with a smooth coastline. The slopes that surround the quarry pond have a significant grade of up to 60-80° that were once the extraction points for chalk. In some places surrounding this quarry pond there is a narrow beach that has been formed by the processes of erosion, abrasion, and denudation. The littoral zone is narrow, with a width of 0.5 -1.5 meters. The grade of the sublittoral zone is characterized with a steep angle that varies between 45-60°.

Goluboi, Lazurnyi, Karpovcy-1, Karpovcy-4 quarry ponds are formed as the result of mining for mineral chalk located at a depth of 10-30 meters (Ross, Kolyadichi, Pogorany deposits), these quarry ponds have a narrow stretched form, with a steep pitch and a mineral bed with a thickness of 10-60 meters. In the resulting territory the ground water is at a depth of up to 10 meters. The distance between the topsoil and the chalk deposits varies from 0.2-0.8 to 23.0 meters. The removal of the topsoil to uncover the chalk deposits results in the creation of the techno genic-mounds that surround the quarry pond. As a result, chalk mining in the Vaŭkavysk District there is a series of compact quarry ponds with a stretched narrow form and with depths varying between 10-25 meters. The techno genic-mounds – of a height of 3-10 meters – are located at the border of the quarry pond. The mounds and high sloped walls have a steep drop off of 50-70°, with terraced layers varying in length from 5-60 meters. The majority of the base of the quarry ponds are shallow and filled with ground water. Goluboi and Lazurnyi quarry ponds were formed in the 1970s. Neither quarry ponds do not have tributaries. Goluboi was formed several years earlier than the Lazurnyi. The surface area of the Goluboi is 5,4 ha more than double the surface area of Lazurnyi and Goluboi also has a greater maximum depth of 14.0 meters compared to Lazurnyi's 5.4 meters. Both quarry ponds feature almost vertical banks that reach a height of 50-60 meters. Both quarry ponds have small surfaces of water collection of 1.67 km2 (Goluboi) and 1.51 km2 (Lazurnyi).

Biological restoration of the water collection territories are composed of planted pine trees and various other plants growing on the mineral rich techno genic- mounds. On the northwestern coast of Goluboi there is a small village. This small village was built on restored lands in 1980 (Khomitch, 2001). Kričev quarry pond was formed 80 years ago, with a surface area of 37.67 ha. This quarry pond is known for being the deepest quarry pond with the deepest point of the pond measuring 23 meters. Kričev quarry pond is located at the right bank of the river Sozh, one kilometer from the river bank with no tributaries. The quarry pond without tributaries are called closed type quarry ponds.

Kričev has a surface area of 0.38 km2, with a water mass volume of 4410 thousands m3, and a water collection surface of 2.73 km2. The water balance of Kričev is influenced by surface water (which contributes about 50% in an average year and 40% in a dry year) and ground water. As demonstrated by water balance calculations, Kričev quarry pond has a poor water exchange condition (conditional water exchange indicator in a dry year is 1,3) (Khomitch, 2002). The Western territory of the quarry pond is affected by natural spring water that is located near the coast. From the North, the concrete sluice, snow melt, and rain water drain from the nearby personal gardens of the village of Kričev and flow into the quarry pond. Drainage of the quarry pond Kričev is achieved by the use of an artificial channel to the quarry pond Starik, situated one kilometer away from Kričev. Starik is significantly smaller than Kričev and also

absorbs the waste water from a nearby cement slate plant. This results in the poor water quality in Starik. The coastal shallow water zones of Kričev are found near the northwestern, western, and southwestern coasts, meanwhile the eastern and southeastern coasts are significantly deeper. The water collection space of Kričev quarry pond is 3.13 km².

Quarry Ponds in Poland

Turkusowe quarry pond was formed by the filling of the chalk pit near the village Wapnica in the 1940's by ground water (Fig. 3). The most notable feature of this quarry pond is that there is not littoral zone. Jezioro Turkusowe is surrounded by high slopes with a height of 30-40 meters, excluding separate parts of the water collection territory located on the northern territory. The depth of the pond is 8-10 meters not far from the shore. The main water sources for filling the quarry pond are surface water –rainfall and snow melt—and ground water. The ground water that drains into the quarry pond is polluted with biogenic materials from the village of Wapnica (Poleszczuk et al., 2014).

Czarnogłowy quarry pond is situated 80 km North of Szczecin at the Szczecin Depression (Figure 2). The artificial water system was created by the restoration of a chalk pit in 1968. The quarry pond has a narrow stretched form, oriented from Northwest to North-east (Kubiak et al., 2010; Kubiak et al., 2018).

Szmaragdowe quarry pond is located within the administrative borders of Szczecin near Puszcza Bukowa nature reserve (Figure 2.). Szmaragdowe quarry pond was created on June 16, 1925 as the result of ground water accumulation in the chalk pit. The water level is 42.2 meters above sea level. The surface area of the quarry pond 2.5 ha with a maximal length of 275 m, a maximal width of 150 m, and a maximal depth of approximately 16 m. The coast is precipitous and only on the Southern part of the quarry pond is it a gentle slope. The water collection territory is forested. Szmaragdowe quarry ponds does not have any tributaries. Recently there has been a decrease in ground water levels. Szmaragdowe has a triangular form, in the Northern part there is a concrete bridge, which is presently used as an observation point (Kubiak et al., 2013).

RESULTS

The specifics of open chalk pit mining and the potential formation of a future quarry pond is determined by the limnologic type of the chalk pit. The following factors were analyzed: size of the quarry pond, form of the quarry ponds, the volume of water mass, the depth of the basin, the size of the littoral zone, the balance of shallow and depths of the quarry pond, and the type of coastline (Table 1). The oxygen regime of quarry ponds is the integral indicator for physical and bio chemical conditions. The intensity of productive processes and trophic status is indicated by data reported regarding water transparency, water color, and bio productive indicators of quarry ponds and accompanied by oxygen regime data. The majority of temperature stratified quarry ponds have positive and hetero grade vertical distribution of dissolved oxygen – the maximum oxygen is revealed in the metalimnion layers. The deepest and most transparent quarry ponds are Kričev and Goluboi. The maximum methalimnal oxygen is determined by the possibility for photo synthesis of phytoplankton at methalimnion due to high transparency of water (Table 2). Prosperous vertical oxygen distribution is only present in the oxygen regimes of Kričev, Goluboi and Lazurnyi quarry ponds during the winter (Table 3). They demonstrate high levels of oxygen saturation in the water in winter and there is no deficit of oxygen near the base layers in the summer (Table 2).

The surface water of these quarry ponds is oversaturated with oxygen in the summer (103-118% in Kričev and 103-107% in Goluboi). The maximum quantity is found at the methalimmion layer of the quarry ponds. In the quarry ponds of Goluboi and Kričev that have flora present in the littoral zone, in summer the oxygen content in

their littoral zones exceeds the pelagic zone respectively at 10.63 and 10.33 mg/l; 11.20 and 10.40 mg/l. The distribution of carbon dioxide in the investigated quarry ponds have an inverse dependence on oxygen. In Kričev the carbon dioxide in summer was not detected at the depths of 7-10 meters, which is well within the range for active photosynthesis of submerged macrophytes, dense tangles of which are common for the littoral part and witness the production of macrophyes functional type.

Absence of carbon dioxide in the vertical profile in summer is also present in Starik quarry pond. This is the result of the usage of Starik as a waste water receptacle for the cement-slate plant. The carbonates concentrations in the quarry ponds are very high and reach 78.10 mg/l at the surface and 522.50 mg/l at the bottom layer.

		1						1								
Quarry pond	Surface of basin [ha]	Surface of water collection Ihal	Volume of water mass [millions of m ³]	Basin length [m]	Maximal basin width [m]	Hyow index S/V	Shadrin index L/H	Average basin width [m]	Length of coastal line [m]	Coefficient of coastal line intentness	Maximal basin depth [m]	Average basin depth [m]	Basin prolateness [m]	Basin capacity	Surface of	shallow zone (up to 2 m)
Kričev	37.67	313	4.412	975.0	725.0	0.08	226.30	386.85	2650.0	1.22	23.0	11.71	1.34	0.51	2.03	5.4
Goluboi	5.40	167	0.456	580.0	164.0	0.12	148.10	93.19	1250.0	1.44	14.0	8.44	3.54	0.60	0.40	7.4
Lazurnyi	4.9	151	0.086	410.0	98.0	0.27	245.33	55.81	920.0	1.72	5.10	3.75	4.18	0.74	2.38	48.7
Chotinovo-1	4.57	150	0.112	470.0	180.0	I	110.0	108.51	1230.0	1.54	18.8	7.7	4.3	0.41	0.83	16.2
Chotinovo-2	2.22	90	0.119	380.0	120.0	1	70.0	65.78	900.0	1.61	19.4	6.7	5.4	0.34	0.39	15.6
Turkusowe	6.74	-	0.513	430.0	246.0	-	-	129.5	1050.0	1.26	21.2	9.2	-	0.43	-	-
Szmaragdowe	2.5	-	0.214	255.2	159.2	-	-	101.8	790.0	1.38	15.8	8.2	-	0.52	-	-
Czarnoglowy	35.7	-	-	1150.0	330.0	-	-	-	2850.0	-	28.8	-	-	-	-	-

Table 1. Morphometric parameters of investigated pit basins, formed in the chalk pits in Belarus and Poland

Notations: (-) - no available data

Table 2. Limits for containment of oxygen and carbon dioxide in quarry ponds in summertime

Quarry pond	Horizon [m]	$O_2 [mg/l]$	$O_2[\%]$	$CO_2 [mg/l]$
Vričov	surface	10.44-10.56	103–118	0
KIICEV	bottom, 22,0	6.97-10.35	55-82	2.85-4.95
Storilz	surface	11.02	132	0
Stallk	bottom, 12,0	0.24	2	0
Coluboi	surface	9.21-10.33	103-107	5.5
Golubol	bottom, 13,0	1.30-3.02	11-24	
T	surface	8.59-11.58	98-120	
Lazuriiyi	bottom, 5,0	7.09-9.55	74-94	1.65

Table 3. Limits for containment of oxygen and carbon dioxide in quarry ponds in wintertime

Quarry pond	Horizon [m]	$O_2 [mg/l]$	$O_2[\%]$	CO ₂ [mg/l]
Kričev	surface	8.18-20.37	56-140	2.20 - 5.72
	bottom, 23,0	4.68–17.28	35-124	2.2-13.2
Coluboi	surface	11.44–16.83	82-117	0 - 1.76
Goluboi	bottom, 11,0	10.18-10.51	72-79	3.6-6.6

The concentration of hydrogen ions is dependent on the oxygen regime. In each of the quarry ponds that were investigated during the summer months alkalization of the surface layers occurs, as a result of the photosynthesis process activated by warm temperatures. For highly transparent quarry ponds of macrophytes orientation, such as Kričev and Goluboi, the most sustainable pH surface level is (7.60-8.21). When pH was measured in the winter of 2017-2018 the pH indicators for the following quarry ponds were lowered: Czarnogłowy (7.3), Szmaragdowe (7.4), Turkusowe (7.42), Kričev (7.88), Starik (8.36). Transparency, measured with a Sekki disc, has a large diapason of fluctuations in quarry ponds: from 0.30 (Starik) to 6.90 m (Kričev), and is similar to the transparency of natural lakes. The highest transparency indicators are reported for deep quarry ponds annually populated by submerged macrophytes: Kričev and Goluboi. The lowest transparency indicators are reported at Starik. Seasonal transparency distribution for all of the investigated quarry ponds increases in winter, due to the reduction of phytoplankton photosynthesis activity. Chromaticity values vary from 3 to 158 degrees on the PlCo scale. Its lowest values are reported for Kričev, created on the place of a chalk pit by low chromatic (up to 3 PlCo scale) ground water. Starik is the recipient of dark yellow waste water. Salt composition components and biogenic elements in the surface water of Belarusian and Polish quarry ponds conducted in 1981-2015 and 2017-2018 (Table 4-6).

Pit basin	NO ₃	NO ₂	NH_4^+	TN	PO43-	TP						
i it basiii		mg/l										
Kričev	0 - 0.48	0.0014-0.0260	0.01-0.083	0.038-1.176	0.0027-0.0050	0.0027-0.0130						
Starik	0.24 - 1.09	0.0580-0.0780	0.12-0.30	0.414-1.466	0.0027-0.0056	0.0050-0.0780						
Lazurnyi	0.02-0.07	0.0006-0.0010	0.02-0.16	0.047-0.183	0.0015-0.0025	0.0023-0.0025						
Goluboi	0.03 - 0.05	0.0002	0.02-0.40	0.074-0.430	0.0023-0.0034	0.0030-0.0040						
Chotinovo-1	0.025	-	-	-	-	-						
Chotinovo-2	0.025	-	-	-	-	-						
Turkusowe	0.01-0.19	0.001-0.094	0.01-0.26	0.23-0.60	0.01-0.83	0.08-1.26						
Szmaragdowe	0.021-0.320	0.007-0.233	0.025-0.464	0.239-3.860	0.051-0.780	0.088-1.123						
Czarnogłowy	0.102-2.732	0.008-0.150	0.015-0.278	0.67-3.413	0.011-2.411	0.055-2.897						

Table 4. Diapasons of biogenic elements containment	
in the waters of quarry ponds of Belarus and Poland (1981-2015))

Notations: TN – total nitrogen; TP – total phosphorus; « - » – no available data

Pit basin	Reaction	Conductivity	SO4 2-	Cl-	HCO ₃ -	Na+	К+	$Mg^{\ _{2^+}}$	Ca 2+	TH		
i it basiii	pН	µS/cm		mg/l								
Kričev	8.22	601.7	128.45	37.46	120.17	15.35	3.96	24.21	60.42	250.25		
Starik	9.0	603.75	144.57	25.94	76.25	25.98	96.25	7.11	16.33	70.07		
Chotinovo-1	6.8	318.6	3.2	10.42	146.45	1	2.9	7.78	35.27			
Chotinovo-2	8.1	178.3	3.7	7.09	61.02	2.7	2.8	2.43	24.05	-		
Goluboi	8.06	312.1	26.27	3.9	131.15	4.12	4.85	5.42	34.43	116.6		
Lazurnyi	8.26	583.2	167.44	5.46	88.45	4.45	12.36	2.11	84.57	214.7		
Turkusowe	7.85	295	53	37	-	-	-	17	70	292.8		
Szmaragdowe	7.88	604.7	168.9	21.7	-	-	-	-	-	-		
Czarnogłowy	-	556.8	42.2	39.6	-	23.4	3.96	11.3	81.1	-		

Table 5. Components of salt composition in thewaters of quarry ponds of Belarus and Poland (1981-2015)

Notations: TH - Total Hardness; (-) - no available data

The hydro-biological features of quarry ponds in Belarus have been thoroughly investigated. The most important factor for determining the development of water flora in both quarry ponds and natural lakes are their morphological features (size, depth, coast intensity, presence of shallow spaces with depth up to 2.5–3.0 m, littoral slopes), optical properties of water masses (transparency and color), dynamic characteristics (swash

action), chemical indicators (containment of mineral and biogenic materials, concentration of hydrogen ions, gas regime), features of bottomsediments (material, mechanical composition, active enrichment by trophic materials), water temperature etc. (Khomitch, 2001). As you can see in table 7, Kričev is characterized by significant quantitative development and a relatively rich variety of species.

Quarry pond	Water temperature	Reaction	Conductivity	SO42-	Cŀ	HCO₃ [.]	Na+	К+	Mg 2+	Ca 2+	TH	PO ₄ 3-	NO ₃ -
	°C	pН	μS/cm			r	ng/l				mgCaCO3/l	m	g/l
Kričev	0.1	7.88	727.5	87.2	59.2	219.6	28	5.9	29.3	61.7	274.5	<0.01	0.8
Starik	0	8.36	824	122.2	60.5	231.8	35	30	28.1	65	277.5	0.05	2
Chotinovo-1	26.3	8.43	269	18.1	7.7	128.1	3.2	2.8	1.9	45.5	121.6	0.15	<0.1
Chotinovo-2	25.6	8.47	204	3.3	4.7	109.8	2	2	1.9	33.8	92.6	0.02	<0.1
Karpovcy-1	24.2	9.03	200	6.2	5.3	109.8	3.6	3.3	3.9	27.5	84.6	0.03	<0.1
Karpovcy-4	23.8	8.58	309	37.9	4.7	134.2	4.4	4.7	7.7	42.3	137.1	<0.1	<0.1
Goluboi	24.2	8.55	308	28.4	7.1	143.4	4.6	5	5.8	45.5	137.6	<0.1	<0.1
Turkusowe	6.2	7.42	409	88.8	24.2	122	5.6	3.4	12.4	26.2	104.5	0.31	0.05
Szmaragdowe	4.6	7.4	688	196.3	14.3	170.8	18.6	4.4	15.6	112.3	346.5	0.14	0.56
Czarnogłowy	4.8	7.3	572.6	41.3	43.2	216.55	16.8	3.6	14.8	96.6	303.2	0.36	36

Table 6. Components of salt composition and biogenic elements

 in the waters of quarry ponds of Belarus and Poland (2017-2018)

Table 7. Species composition, abundance and life capacity of quarry ponds water i	flora
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Quarry ponds	Higher water flora	Abundance	Life capacity
Kričev	Elodea canadensis Rich.	Cop.3	3
	Ceratophyllum demersum L.	Sol	2
	Chara sp.	Cop.2	3
	Phragmites australis (Cav.)	Sol	2
	Polugonium amphibium f. aquaticus Leyss.	Sol	2
	Potamogeton lucens L.	Sp.	3
	Potamogeton pectinatus L.	Sp.	2
	Potamogeton perfoliatus L.	Cop.2	3
	Potamogeton praelongus Wilf.	Cop.	2
	Ranunculus circinnatus Sibth.	Cop.1	3
	Scirpus lacustris L. Trin. ex Steud.	Sol.	2
	Typha latifolia L.	Sol.	2
	Typha latifolia L.	Sol.	2
Starik	Elodea canadensis Rich.	Sol.	1
	Phragmites australis (Cav.) Grin ex Stend.	Sol.	1
	Typha latifolia L.	Sol.	1
Goluboi	Alisma plantago-aquatica L.	Sol.	2
	Chara sp.	Cop.2	3
	Elodea canadensis Rich.	Cop.2	3
	Potamogeton pectinatus L.	Cop.1	2
	Sparganium simplex Huds.	Sp.	2
Lazurnyi	Potamogeton alpinus Balbs.	Sol.	1
-	Potamogeton compressus L.	Sp.	2
	Sparganium erectum L.	Sol.	2

In Kričev submerged macrophytes are commonly found around the entire perimeter. Their absence is only seen on a small portion of the quarry pond in the south-east where until recently solid waste of the cement-slate plant was stored. The density of macrophytes tangles in quarry ponds differs. In the north, the following tangles can be found separated from one another: Potamogeton perfoliatus, Potamogeton lucens, Sagitaria sagittifolia, Polygonum amphibium f. aquaticus and Elodea canadensis. The depth of water flora areal reaches 2-4 m.

At the northwestern, western and southwestern coasts, shallow waters the density of tangles increases significantly. Here Potamogeton perfoliatus and Potamogeton lucens, Potamogeton pectinatus, Potamogeton crispus, and Ranunculus circinatus can be found. Elodea Canadensis and Characae occupy vast spaces. The bio mass of submerged macrophytes in the shallow southwestern part of the basin reaches 85.36 g/m² in accordance with Table 8. Dense tangles of macrophytes in the western and southwestern parts of the basin are common up to the depth of 5.5-7.0 m. At the maximal depth the only flora that can be found is Characeae. Only on the southwestern surface of Kričev flora (Typha angustifolia, Equisetum fluviatile, Phragmites australis) can be found.

In the northern region where the concrete waste water sluice is located as well as where most of the snow melt and rain water run off from the nearby village accumulates there is a significant presence of (Anabaenna sp., Oedogonium sp., Shizomeris sp. и Spirogyra sp.) and blue-green algae (Nostoc sp.). Other aquatoria flamentous algea are rarely noted and when found they exist in small quantities.

Quarry	Place of complex picking	Picking	Species composition of	Bio mass	
pond	Place of samples picking	depth [m]	association	[g/m]	
•>	North-Western part of basin	0.70	Potamogeton Friesii Potamogeton perfoliatus	48.88	
Kričev	Same	0.50	Potamogeton Friesii Potamogeton perfoliatus	44.18	
	Western part of basin	0.70	Elodea canadensis	25.02	
Viničara			Chara sp.		
KILLEV	South-Western part of basin	1.00	Potamogeton perfoliatus	85.36	
			Elodea canadensis		
	Eastern part of basin	0.50	Elodea canadensis	00.00	
Goluboi			Chara sp.	23.93	
	Western part of basin	1.00	Elodea canadensis	17.31	
	Western part of Dashi		Potamogeton pectinatus		

Table 8. Bio mass of submerged macrophytes in quarry ponds

Table 9. Concentration of some chemical elements

 in the tissues of higher water plants (% of absolutely dry material)

Quarry pond	Species of submerged macrophytes	Р	Ν	K	Ca	Mg
Kričev	Potamogeton pectinatus	0.61	1.93	2.37	2.60	0.16
	Potamogeton perfoliatus	0.31– 0.44	3.51– 4.37	1.20– 1.84	0.54– 5.26	0.28– 0.51
	Panunculus cirsinatus	0.27	3.30	1.25	5.63	0.40
	Elodea canadensis	0.46	2.85	2.15	6.00	0.40
	Polygonum amphibium f.aquaticus	0.35	5.91	0.88	1.69	0.39
	Potamogeton lucens	0.44	3.12	0.88	2.94	0.42
	Sagitaria sagittifolia	0.65	4.86	3.51	0.99	0.35
	Chara sp.	0.11	0.50	0.20	16.32	0.21
Goluboi	Elodea canadensis	0.44- 0.96	2.35– 3.12	1.20 - 2.55	1.95– 5.72	0.21- 0.26

In Lazurnyi the flora is limited to single samples of Potamogeton alpinus and Potamogeton compressuss.The accumulation of water flora in quarry ponds is measured by the concentration of P, N, K, Ca, Mg. To examine this, fresh samples of macrophytes tissues of about 10-15cm in length were collected. The tissues of macrophytes contained varied levels of different chemical elements, providing the different capacity of separate species of water flora to absorb chemical elements from environmental chemicals (Table 9). The data obtained from separate samples of submerged macrophytes in Kričev and Goluboi quarry ponds states that the critical level of nitrogen (1.3% of absolutely dry material) and phosphorus (0.3% of absolutely dry material) (Pokrovskaya, 1983). The investigation of the clean production of phytoplankton through photo synthesis is seen in Kričev and Goluboi quarry ponds.

In the deep and highly transparent quarry ponds of Goluboi and Kričev phytoplankton photosynthesis occurs at a depth exceeding double or triple the levels of transparency, and in some cases the maximum of photo synthetic activity falls on the methalimnion layer. The dominating species of phytoplankton in Goluboi is green algea (Table 9), and in Kričev it is green and diatomic algea (Table 10, Table 11).

Species of algeo	Number of	Quantity		Bio mass	
Species of algae	species	mln/l	[%]	[g/m ³]	[%]
Blue-green	2	0.300 000	6.3	0.06	4.1
Green	13	4.457500	93.1	1.11	76.0
Diatomic	1	0.017500	0.3	0.01	0.7
Pyrophyte	3	0.015000	0.3	0.28	19.2
Total	19	4.79000	100	1.46	100

Table 10. Species composition, quantity and bio mass of phyto plankton in Goluboi quarry pond

Species of algae	Number of	Quantity		Bio mass	
species of algae	species	mln/l	[%]	mg/l	[%]
Diatomic	10	0.195417	33.6	0.20	40.8
Green	6	0.200000	34.6	0.05	10.3
Golden	1	0.183333	31.6	0.11	22.4
Pyrophyte	2	0.001666	0.2	0.13	26.5
Total	19	0.580416	100	0.49	100

Table 11. Species composition, quantity and bio mass of phyto plankton in Kričev quarry pond

DISCUSSIONS

Analysis of the listed limnologic characteristics of the investigated quarry ponds as potential objects for tourist and recreational purposes is determined by the following characteristics: type of mineral mined, geological conditions of deposit, mining technology determine the morphological features of hollows and "small water collections" for the basins in chalk pits. Other features that influence whether a quarry pond could be used for tourist and recreational purpose are terrain of the lakebed, composition and size of littoral zone, expressiveness of processes of coastal abrasion, intensity of slope erosion and chemical denudation. Investigation of morphometric parameters of quarry ponds are similar in morphology of newly created artificial water systems and natural limnic systems of the region. The quarry ponds in Belarus and Poland are small in size (2.5-37.5 ha). As a rule they accumulate volumes of water mass (0.09-4.5 mln.m3).

They are smaller in size than the natural lakes of the region. They are characterized by weak inertial properties of small water mass volumes, vulnerable to pollution and eutrophication in early stages of their development in terms of local use for water collection. The volume of water mass determines the features of hydro dynamic, hydro chemical and hydro biological processes of newly formed artificial water systems (Table 12). Specific morphological elements that are common in quarry ponds are complicated topographic bottom terrain, absence in certain cases of littoral shallow waters, and non-formed coasts this is a result of their industrial origin.

In the quarry ponds investigated it is noted that there is a connection between water mass, its thermal and hydro chemical regimes of hollow morphometric parameters. This allows for the preparation of chalk pits for future tourist and recreational purposes and the accumulation of ground water allowing for a quarry pond to begin to form.

Indicators, massurement units	Values intervals			
mulcators, measurement units	Chalk pits of Belarus	Natural lakes of Belarus		
Water-surface area [km ²]	0.02 - 1.25	below 0.1 – over 20.0		
Depth [m]				
maximal	5.10 - 23.0	below 2.5 – over 25.0		
average	3.75 - 11.71	below 2.5 – over 20.0		
Volume of water mass [mln m ³]	0.086 - 4.412	below 1.0 – over 100.0		
Capacity coefficient	0.51 - 0.74	below 0.33 – over 0.66		
Openness indicator	0.61 - 3.22	below 0.1 – over 5.0		
Coefficient of coastal line intentity	1.22 - 1.72	below 1.5 – over 2.5		
Water collection area [km ²]	1.51 - 3.13	below 5.0 – over 80.0		
Conditional water exchange	0.22 - 7.3			
Thermal stratification (gradient at methalimnion layer), °C	2 - 6	1.5 - 4.0		
Mineralization of water mass [mg/l]	193.60 - 601.68	below 50 - over 800		
Active water reaction (summer) [pH]	7.51 - 10.33	below 6 – over 9		
Chromaticness [degrees]	4 - 48	below 10 – over 160.1		
Transparency [m]	0.2 - 8.0	below 1.0 – over 8.0		

Table 12. Comparative characteristic of quarry ponds in chalk pit and natural lake basins of Belarus

The data for vertical temperature distribution in quarry ponds in summer in Kričev, Starik, Goluboi and Lazurnyi shows that there are distinct layers of direct water mass stratification dependent upon the temperature. In the deep type of quarry pond (maximal depth 12.1-23.0 m) with low values of openness coefficients (0.61 to 3.22) basins of Kričev, Starik, Goluboi the stratification is expressed in three layers: epilimnion, methalimnion, and hypolimnion. The thickness of hypolimnion in deep type quarry ponds (depth coefficient 0.16 to 0.22), changes from 4-5 m in Goluboi to 11-12 m in Kričev. In winter, all of the investigated quarry ponds experience reversed thermal stratification, with insignificant increase of temperatures from the surface to the base of the quarry pond. The temperature of surface layers under ice are 0.3-0.5°C, in the base layers it varies as of 1.9 °C in Kričev. The health of the gas regime, neutral values of hydrogen ions concentration of surface layer (pH) characterizes the deepest and highly transparent chalk pit basins of Kričev and Goluboi.

The absence of large fluctuations of active water reaction in conjunction with the data for containment of O2, CO2 μ CO₃²-, indirectly points to the secondary role of phytoplankton production of organic material. The main producers in these basins are submerged macrophytes. Values of pH in open parts of Kričev and Goluboi quarry ponds and coastal littoral spaces points to the existence of constant alkalescence of littoral waters due to phytosynthetic activity of submerged macrophytes. In vertical distribution of pH values from surface to bottom for the majority of quarry ponds the

decrease of water reaction values is reported for both the summer and winter. Differences between surface layers and base layers are most intensively expressed in the highly polluted Starik quarry pond. Despite their short period of existence when compared with natural lakes of the same region (10-100 years), the chalk pits filled by ground water, surface water, rain water and snowmelt have identical chemical compositions, such as hydro carbonate sulphates and calcium, as natural lakes of the same region (Yakushko, 1981). According to the data from P.S. Lopukh (2000) the quarry ponds as well as natural lakes are moderately mineralized.

Mineralization varies from 200-375 mg/l. High mineralization is reported only for quarry ponds that are filled only with ground water. In regards to the salt composition when comparing quarry ponds to natural lakes the containment of chlorum and sulfur ions Na+ and K+ cations is significantly increased in quarry ponds. This increase is related to the recharge and the receiving of polluted waste water, such is the case of Starik (Lopukh, 2000). The chemical composition of the quarry ponds water content is determined by the most prominent water source for filling the quarry ponds i.e. ground water, surface water, rain water and snowmelt. The water source that fills the quarry ponds contributes a variety of salt components (Cl⁻, SO₄²⁻, K⁺, Na⁺).

The main sources of pollutants for quarry ponds in their infancy are the byproducts created by nearby industrial plants (Kričev cement-slate plant). In addition to the cement-slate plant, Cl⁻, SO₄²⁻, Na⁺, K⁺ and other biogenic materials that flow into the quarry ponds as the result of nearby industrial and agricultural plant that are not associated with mining, but rather are located near water collection systems where they dump their waste water. In some cases the source of pollutants is the result of spontaneous and unsanctioned recreational use of the quarry ponds (Kričev, Goluboi, Lazurnvi. Turkusowe. Szmaragdowe, Czarnogłowy), Presently, the chemical composition of the water content of the investigated quarry ponds shows anthropogenic transformations, such as high containment of Cl⁻, SO_4 ²⁻, Na^+ , K⁺ (Figure 3, Figure 4, Figure 5) to 196.3 mg/l). Pollution from Cl compositions is detected in the basins of Kričev (up to 60.5 mg/l) and Starik (up to 59.2 mg/l). High levels of K⁺ can be found in Starik up to 30 mg/l, which is the result of the accumulation of water from industrial water collections. In Kričev and Starik high containment of Na+ was detected, with results of up to 28 mg/l and up to 35 mg/l respectively. In the quarry ponds Szmaragdowe (112.3 mg/l) and Czarnogłowy (96.6 mg/l) one can also find high concentrations of Na⁺. In Czarnogłowy quarry pond a change in the proportion of anions common to zonal type of natural lakes (HCO₃- > SO₄²-> Cl) with a shift towards Cl can be seen (Table 4). A comparison of the data of the salt composition of the water present in quarry ponds from 2017-2018 to that of 1918-2001 indicates significant growth of concentrations of salt in the guarry ponds that were investigated.

In the Starik quarry pond HCO3- increased from 76.25 to 219.6 mg/l. Cl⁻ in Starik increased from 25.94-60.5 mg/l and Kričev from 37.4 to 59.2 mg/l. In Kričev Na⁺ increased from 15.35 to 28.0 mg/l (Khomitch, 2001). In accordance with the chloride content in the surface water of quarry ponds the quarry ponds investigated were divided into three groups: high, medium, and low levels of mineralization. Kričev and Starik at 59.2-60.5 mg/l are members of the high level of mineralization group. Czarnogłowy, Szmaragdowe, and Turkusowe at 14.3-43.2 mg/l are members of the medium level of mineralization. Chotinovo-1, Chotinovo-2, Karpovcy-4, Karpovcy-2, Goluboi and Lazurnyi quarry ponds are members of the low level of mineralization at 4.7-7.1 mg/l (Table 4).

According to the indicator of electrolytic conductivity among the investigated quarry ponds there are three groups: low mineralized, moderately mineralized, and highly mineralized. The low mineralized quarry ponds range from 100 to 300 μ S/cm including

the quarry ponds Chotinovo-1, Chotinovo-2, Karpovcy-1. The moderately mineralized quarry ponds range from 300 to 600 μ S/cm including the quarry ponds Karpovcy-4, Goluboi, Turkusowe. The highly mineralized quarry ponds range from 600 to 900 μ S/cm including the quarry ponds Starik, Kričev, Szmaragdowe, Czarnogłowy). The distribution of phosphorus in the surface water of quarry ponds if lower in summer can correlate with significant increases in the concentration of phosphorous in Winter. This increase in the concentration of phosphorous in Winter. This increase in the concentration and water autotrophs. In low trophic status basins in Kričev, Lazurnyi and Goluboi where there is a relatively high containment of oxygen in the bottom layer and low level of phosphorous bottom sediments the containment of phosphorous is as a rule low and experiences insignificant changes at great depths in both the summer and winter.



Figure 3. Diapasons of changeability of components of the salt composition in quarry ponds of Belarus and Poland



Figure 4. Diapasons of changeability of electrolytic conductivity of sulphates in quarry ponds of Belarus and Poland



Figure 5. Diapasons of changeability of sulphates and chlorides in quarry ponds of Belarus and Poland

Figure 6. Diapasons of biogenic elements changeability in quarry ponds of Belarus and Poland

The containment of phosphates and its accumulation from water collections and seasonable distributions may indicate the intensity of the process of producing phosphates in the form of PO42- is consumed by hydrobionts. The vertical distribution of

phosphates in the majority of the quarry ponds investigated is characterized by the increased presence of phosphates at the surface level and lower levels of phosphates being found near the bottom of quarry ponds. It is important to note the summer growth of PO42- in Starik and Lazurnyi. Kričev and Goluboi were discovered to be macrophyte type quarry ponds due to the presence of phytoplankton and a uniquely stable phosphate distribution are indicators of their type. The distribution of PO42- in Starik is unstable.

Both phosphate content and the nitrogen components of autotrophic hydrobionts play an important role in determining the trophic status of both quarry ponds and natural lakes (Onoshko, 1985). Low concentrations of mineral nitrogen are common for low trophic status quarry ponds of macrophyte type (Goluboi (up to 1.047 mg/l)). The concentration of mineral nitrogen in natural lakes, according to the data by M.P. Onoshko (1985), does not exceed 1.55 mg/l on average (Table 5). Quarry ponds with low containment of mineral nitrogen such as Goluboi and Kričev the vertical distribution of nitrogen is the same throughout. In the quarry ponds that receive waste water that contain nitrogen, it is accumulated in the bottom layer. Accumulation of mineral nitrogen, specifically ammonium, in the bottom layers of these quarry ponds in the presence of an O2 deficit. In the high trophic status and polluted basin of Starik the mineral nitrogen content, in the form of nitrate, is high at the surface level (Khomitch, 2002).

According to the biogenic elements present in quarry ponds three groups were created: mesotrophic, eutrophic, and hyper trophic (Tables 4-5, Figure 6). Mesotrophic quarry ponds are Chotinovo-1, Chotinovo-2, Karpovcy-1, Karpovcy-4, Goluboi. Eutrophic quarry ponds are limited due to the necessity of containing nitrogen compositions or phosphate compositions, these include Turkusowe, Kričev, Lazurnyi. Hyper eutrophic quarry ponds are those where the eutrophic process is no longer limited by the containment of biogenic elements and is only partially hidden by productive macrophyte orientation, these include the quarry ponds Czarnogłowy and Szmaragdowe.

Chemical and biogenic pollution impact different quarry ponds to different extents. The reaction of quarry ponds to the pollution depends on the intensity of the pollution and the biogenic materials that are introduced to the quarry pond through water collection and limnic features of the basins themselves i.e. their productive, functional organization, and trophic status. The highest quality of water of the macrophyte type is seen in Chotinovo-1, Chotinovo-2, Karpovcy-1, Goluboi, and Kričev.

These quarry ponds share the qualities of high water transparency and the absence of an oxygen deficit in both summer and in winter. For Starik, Czarnogłowy, and Szmaragdowe have notably different degradation of physical and chemical indicators that shows that these quarry ponds are incapable of resisting the eutrophic impacts. These degradations are seen in the intensely polluted high trophic phytoplankton basin of Starik. Where there are signs of the oxygen regime worsening, low levels of water transparency, increased accumulation of carbon dioxide in base layers, and base sediments enriched by biogenic compositions. Carbon dioxide content is high in summer at the surface level as well as the concentration of biogenic elements in water being high.

The most sustainable function for the quarry ponds Kričev, Goluboi, and Turkusowe is determined by their morphological features and size of hollows, the availability of littoral zones, and the barrier functions of macrophytes against the process of eutrophication. In process of natural evolution, the macrophyte basins as systems producing organic material, accumulating it with biogenes in base sediments and smoothly eutrophing, are stronger and more sustainable than the phytoplankton types. Despite the process of eutrophication, the water is still highly transparent without mass clusters of phytoplankton. In the process of development, quarry ponds may come to complete eutrophy, with unchanging low levels of phyto-plankton production, which guarantees the high quality of quarry pond waters (Pokrovskaya, 1983). Macrophyte type quarry ponds have the capacity to maintain high levels of water transparency due to the ability of macrophytes to intercept nutritional minerals that accumulate in the quarry pond as the result of the accumulation of drainage water from surrounding areas. Macrophytes when compared with phyto-plankton have a significantly longer life cycle, whereas phytoplankton in the summer die off and being to accumulate in the sediment at the base of the quarry pond. Macrophytes, have the ability to store internal reserves of biogenic elements during opportune nutritional periods, which accumulate in the roots and tissues of the plants.

Concentrations of bio genes, exceed several times the critical accumulation level (1.3% of absolutely dry material for nitrogen and 0.3% for phosphorus), showing the high trophic status of the quarry pond and the inability of submerged macrophytes to compete with phytoplankton in absorption of nutritional elements. Nitrogen and phosphorus levels present in macrophyte type quarry ponds are not at critical levels and have the potential to increase in artificial water systems (Pokrovskaya, 1983).

The hydro chemical and hydro biological regimes of the investigated quarry ponds for multipurpose tourist and recreational use, with the development of programs for active, industrial, excursion, educational, and scientific tourist use. The following macrophyte type quarry ponds are recommended for this type of use: Chotinovo-1, Chotinovo-2, Karpovcy-1, Karpovcy-4, Goluboi Kričev, and Turkusowe.

The morphometric parameters, features of water collection territories, productive status, trophic status, and macrophyte function type of quarry ponds allow us to recommend their usage for tourist and recreational use. The above listed quarry pits are recommended for sustainable tourist and recreational use for the domestic and international tourist markets of the Republic of Belarus and the Republic of Poland.

The phytoplankton type of quarry ponds – Lazurnyi, Czarnogłowy, Szmaragdowe – with high trophic status, imperfect coping mechanisms for the impacts of recreational use, and limited tourist attractions within water collection territories, leads to the recommendation that these quarry ponds be used for local and regional tourist programs for the organization of active and industrial tourism.

The results of complex limnologic study of quarry ponds of the macrophyte and phytoplankton types, evaluation of their trophic status, and resistance to the process of anthropogenic eutrophy may serve as the basis for restoration of territories previously used for industrial purposes. These territories may be successfully restored through the creation of innovational and responsible tourist and recreational use of these resources.

Most important for using quarry ponds for tourist and recreational purposes is finding a way to balance the impact of tourist and recreational use to ensure a smooth transition from a post-industrial territory to a tourist or recreational destination. The introduction of balanced recreational use of quarry ponds and their surrounding ecosystems is essential to ensuring the long term sustainable use of quarry ponds.

CONCLUSION

The restoration of these post-industrial lands by creating quarry-ponds has the largest economic potential. The creation of quarry-ponds for tourist and recreational purposes is the most profitable way to restore post-industrial lands and provides an innovative source of resources. The restoration of post-industrial lands by creating quarry-ponds reduces the need for using technical mining equipment needed to level or fill in the violated surface and apply a fruitful humus layer. Another benefit of artificial water system restoration is that it decreases the cost of foresting a pit and its surrounding areas. A major appeal of artificial water system restoration is that it solves the challenge of the short supply of the top soil that is necessary to restore these post-industrial lands through the process of forestation. Artificial water system restoration over time creates the conditions for the accumulation of ground water and underground water drainage. These newly created artificial water systems are fit for tourist and recreational use.

These quarry ponds are similar to natural lakes of the region making them ideal for tourist and recreational use. Like natural lakes, the quarry ponds have similar morphometric parameters, a slow rate of water exchange, sustainable levels of oxygen, nitrogen and phosphorous, similar levels of salt content, containment of biogenic elements, their thermal gas regimes function and change in the same way, bio productive, and sediment processes. These similarities between natural lakes and quarry ponds allows us to use all of the methods and theoretic visions of limnology upon evaluation of conditions and perspectives for usage of newly formed artificial water systems for tourist and recreational purposes. Resemblance to natural limnic systems does not, however, negate that presence of features in the quarry ponds that are the result of their industrial origin. Over the course of their relatively short period of existence, 10-100 years, the majority of quarry ponds did not form coastal or littoral zones, sustainable productive structure, sustainable functional structure, and sediment processes that are typically expressed in natural lakes of the same region.

If these newly created quarry ponds are excessively used for tourist and recreational purposes rather than used sustainably, there will be a decrease in water quality, increased speed in the anthropogenic eutrophy, and the degradation of the artificial water system as a whole. Due to these specific technogenic differences between quarry ponds and natural lakes it is necessary to limit the tourist and recreational use of quarry ponds. As well as require the geo-ecological supervision of artificial water systems.

Through complex limnologic research of the structural and dynamic characteristics of quarry ponds in Belarus and Poland have presented two types of development of artificial water systems: macrophyte type and phytoplankton type. These types of artificial water systems are different by their level of resistance to external and internal eutrophic factors. Macrophyte type quarry ponds are the most resilient and have the highest capacity for long term maintenance of water mass. This is the result of submerged macrophytes ability to accumulate the excessive quantitates of eutrophic materials – nitrogen and phosphorous – in their tissues. Thus, removing the nutritional properties necessary for phytoplankton to grow. Among the most important conditions for sustainable tourist and recreational use of quarry ponds of the macrophyte type is their low trophic status, which makes them particularly attractive to tourists as well as the presence of basic tourist infrastructure i.e. roads, hotels, restaurants.

Newly formed artificial water systems require well managed restoration and monitored tourist and recreational use as a result of their similarities they share with natural lakes. The water mass parameters of artificial water systems resemble that of natural lakes. The region of these newly formed artificial water systems is technogenic in nature. The restoration and future tourist and recreational use of artificial water systems should be discussed and decided upon before the restoration process begins. This geo-ecological process that occurs before restoration begins because of the potential that these artificial water systems might one day be self-sustaining.

Through this diligent planning process it is possible to ensure the sustainability of tourist and recreational use. The geo-ecological project of using artificial water systems, which are created from post-industrial land where chalk was mined, for tourist and recreational use in Belarus could be considered one way of ecological restoration. The formation of a reliable mechanism to ensure stability of newly formed artificial water systems can be achieve through balancing tourist and recreational us that can be calculated through the creation of a system of accounting for tourist visitors to the artificial water systems. Systematic mastering of this new tourist and recreational resource provides numerous potential benefits to the Republic of Belarus. Through the restoration process there will be the creation of sustainable social and economic development of post-industrial lands, creation of new tourist destinations in the place of landscapes once degraded by open mining. This also allows for the creation of design and promotion of innovational tourist products at the local level as well as the further development of auxiliary tourist infrastructures.

The design of environmentally safe tourist products could allow tour companies and the local tourist market to prosper as a result of using these quarry ponds. This would help satisfy the demand for innovative tourist products in the Republic of Belarus.

Aknowlegments

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PROFILE OF VISITORS TO COASTAL AND MARINE TOURISM LOCATIONS IN CAPE TOWN, SOUTH AFRICA

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Abstract: Cape Town, one of South Africa's key coastal tourism destinations, provides a useful case study to examine visitor profiles in Coastal and Marine Tourism (CMT) sites. Nine hundred and seven visitor surveys were completed in purposively selected CMT locations in Cape Town. The main findings reveal that there is diversity among visitors frequenting CMT sites in Cape Town in terms of type of visitor, gender, population group, age, educational level and economic status. Visitors participated in a range of CMT activities and indicated an interest to participate in future activities. Furthermore, high levels of satisfaction with the CMT activities in Cape Town which needs to be managed. Examining visitor profiles, perceptions, preferences and experiences is important to improve planning and management of these destinations to ensure long-term sustainability.

Key words: Coastal and Marine Tourism (CMT), visitor profiles, perceptions, preferences, experiences, Cape Town

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INTRODUCTION

Bob et al. (2018) argue that Coastal and Marine Tourism (CMT), as part of the oceans economy, offers significant development opportunities that can contribute to job creation and sustainability. The importance of CMT is noted by the United Nations [(UN), 2014] estimates that approximately 350 million jobs worldwide are associated with the oceans, primarily in the fisheries, CMT and research sectors. Furthermore, the United Nations World Tourism Organisation (UNWTO) estimated that of the one billion international tourists recorded in 2012, a third of these tourists visited the seaside (UN, 2014) which reflects that CMT is important in relation to the tourism sector generally and are significant sources of income and foreign exchange earnings in the places and countries in which CMT sites are located. International tourism numbers are further complemented by domestic tourists as well as local visitation to these sites. Rogerson & Rogerson (2019) note the importance of the blue economy in the South African context, articulated as Operation Phakisa. The potential economic value of ocean resources has garnered attention in other developing contexts as well. For example, Islam & Shamsuddoha (2018) highlight the potential for blue growth in the context of Bangladesh and Oladele et al. (2018) highlight the potential for coastal tourism in Nigeria. Rogerson & Rogerson (2019) caution that CMT planning can prioritise attracting investments and economic growth rather than conserving maritime resources. Furthermore, Lithgow et al. (2019) state that the future of coastal tourism is at risk from increasing coastal squeeze as a result of growing demand, environmental degradation and vulnerability to extreme weather events. Similar sentiments are expressed by Rodella et al. (2019) who state that because CMT induces environmental impacts and pressure on the natural resource base; understanding demand and visitor profiles becomes critical for sustainable socio-economic and environmental conservation practices. While there is considerable research that focuses on tourism to seaside or beach destinations generally, few focus on examining the profiles of visitors to CMT locations specifically. Furthermore, research tends to focus on impacts of tourism, focusing primarily on economic considerations (Bob et al., 2018). This study addresses these gaps in the research by examining visitor perceptions of CMT sites that assists to better understand visitor motivations and demands, therefore informing more effective sustainable planning and management of these sites. The next section of the article summarises key issues emanating from a review of selected literature on CMT. This is followed by a brief overview of the case study, Cape Town, which is one of the main coastal tourist destinations in South Africa, Thereafter, the methodological approach adopted is presented. This is followed by a discussion of the key findings in relation to the socio-demographic profiles of the visitors. CMT activities that they participate in and future participation/ interests, and perceptions of CMT locations visited in Cape Town. Finally, concluding remarks are provided.

CMT RESEARCH

Honey & Krantz (2007) assert that CMT dates back to the late nineteenth century when wealthy Americans visited coastal areas and is one of largest and oldest sectors of the tourism industry. Nulty et al. (2007, p. 1) define marine tourism as "the sector of the tourism industry that is based on tourists and visitors taking part in active and passive leisure and holidays pursuits or journeys on (or in) coastal waters, their shorelines and their immediate hinterlands". The Mediterranean Maritime Integrated Projects (2014, p. 1) differentiate between coastal and marine aspects as:

Coastal tourism refers to land-based tourism activities including swimming, surfing, sunbathing and other coastal recreation activities taking place on the coast for which the proximity to the sea is a condition including also their respective services. Maritime tourism refers to sea-based activities such as boating, yachting, cruising, nautical sports as well as their land-based services and infrastructures.

The UN (2014) at the UN Conference on Trade and Development (UNCTAD) held in 2014, identified CMT as one of the main sectors contributing towards the development of the oceans economy (also referred to as the blue economy) which they state offers substantial development opportunities for sectors such as CMT, fisheries and aquaculture, renewable marine energy, marine bio-prospecting and maritime transport given that two-thirds of the planet's surface is water. Brouwer et al. (2017) assert that CMT and leisure activities are viewed to have substantial economic, social and recreational value globally.

The United Nations Environment Programme (UNEP, 2009, p. 10) delineates coastal tourism as being "based on a unique resource combination at the interface of land and sea offering amenities such as water, beaches, scenic beauty, rich terrestrial and marine biodiversity, diversified cultural and historic heritage, healthy food and good infrastructure". On the other hand, marine tourism is deemed to include "a number of different aspects such as marine/ coastal environments, marine protected areas and marine activities which together contribute to its existence" (Seymour, 2012, p. 27). There is a wide variety of coastal and marine related leisure and recreation activities.

The National Department of Tourism [(NDT), 2016] differentiates between coastal tourism and marine tourism activities. Specifically, they note that coastal tourism includes activities such as coastal wildlife tourism which involves land-based viewing of wildlife, sand/ beach activities (shoreline/ beach bathing, sun-bathing, picnicking, fishing on the beach, walking and horse riding along the shoreline, sand sculpting, sand dune surfing, beach volleyball and soccer, etc.), coastal heritage and events (local seafood and cultural tourism), sightseeing (lighthouse tourism, cycling and running along the shore, etc.), educational and scientific excursions including visiting aquariums, spiritual experiences and pure recreational (dining or shopping at beach locations) activities. Marine tourism activities include water-based marine wildlife tourism (seal, dolphin, turtle and whale watching from a boat), boat-based recreational and competitive fishing, scuba diving/ snorkelling, water sports (surfing, yachting/ sailing, water skiing, etc.), ocean experiences (cruise tourism, island tourism, under water archaeology, etc.) and events on water.

The importance of the oceans economy is underscored in the South African context which has a coastline of 3 000 km (Saayman & Saayman, 2017; Seymour, 2012). Lucrezi et al. (2018) state that South Africa's long coastline is dominated by sandy beaches, many of which are valued and exploited for recreation and tourism. Specifically, Lucrezi et al. (2016, p. 1) state that "sandy beaches are invaluable ecosystems, offering services that are critical for the survival of coastal communities, and possessing intrinsic values that need to be protected". The Department of Planning, Monitoring and Evaluation (DPME, 2015, p. 4) articulates Operation Phakisa's vision in the South Africa context: "by 2030 South Africa is the premier experience-based CMT destination in Africa and is renowned as a top CMT destination globally with a unique range of experiences for all visitors". The DPME (2014) further indicates that by the year 2033, South Africa's oceans are capable of generating an estimated R129 177 billion to the Gross Domestic Product (GDP) and the current 250 000 jobs associated with the oceans economy can be upscaled to 1 million through the efforts of Operation Phakisa. Operation Phakisa's six focus areas are similar to those identified by UNCTAD: CMT, aquaculture, maritime transport and manufacturing, offshore oil and gas exploration, small harbours and marine protection services and ocean governance.

Shelembe (2015) states that the CMT component is championed by the NDT whose responsibility is to initiate projects and interventions in CMT spaces to catalyse job creation and the improvement of lives in these areas, especially among historically disadvantaged

groups. Operation Phakisa (2014, p. 6) is aimed at implementing "an overarching, integrated ocean governance framework for sustainable growth of the ocean economy that will maximise socio-economic benefits while ensuring adequate ocean environmental protection". Several challenges are identified in relation to CMT by DPME (2014; 2015), Maritime Cluster (2015) and Shelembe (2015). These include maintaining the quality of the natural resource base; insufficient infrastructure and services in CMT locations; lack of uptake of coastal and marine assets/ resources for tourism purposes; limited CMT products and insufficient tourism products in the right place to make South Africa a CMT destination for local, domestic and foreign tourists; high levels of unemployment and unskilled human resources in CMT locations, especially in rural areas; limited participation of the private sector who are generally hesitant to develop tourism products without certainty of profitability; numerous public sector role players, each with different (sometimes conflicting) mandates in respect of CMT development; and underdeveloped and uncoordinated CMT events and recreational activities.

There is considerable and growing research on the impacts of CMT, with a focus on economic impacts specifically. These economic studies reveal the contribution of CMT to economic development. For example, Onofri & Nunes (2013) model tourists' behaviour using coastal tourism flows (international and domestic coastal arrivals) and tourists' market expenditures from UNWTO datasets. They identified two tourist demand segments: international tourists being influenced strongly by preferences for the cultural and natural environments while domestic tourists chose locations primarily based on beach characteristics. The New Zealand Tourism Research Institute (2009) used a mixed method approach (interviews and online surveys) to examine impacts associated with CMT on visitors, businesses and community. They found that there was a significant daily impact on the local economy with local businesses depending largely on visitors to CMT locations (especially those with interests in diving). They also note the importance of seasonal impacts. Understanding the profile of visitors is also important from an economic perspective since visitor expenditure, especially among tourists, is influenced by satisfaction with and perceptions of a destination which affects revisitation and positive favourable word-of-mouth marketing which is extremely important in the age of social media with visitors sharing their views and concerns globally.

Many CMT studies also tend to focus on specific CMT products/ activities (Bob et al., 2018; Brouwer et al., 2017; Mitra et al., 2019; Myeza et al., 2010; Tkaczynski & Rundle-Thiele, 2018; Trave et al., 2017). For example, Vianna et al. (2012) examined shark diving tourism in Palau, Phillipines. They found that this activity was a major contributor to the economy, making up approximately 8% of the GDP. O'Malley et al. (2013) assessed direct expenditures on manta ray dives in 23 countries, estimating that the direct economic impact of manta ray watching tourism was estimated at US\$140 million annually. Hoyt's (2001) study focused on whale watching and highlighted the commercial as well as the educational, environmental, scientific and socio-economic benefits of this activity and estimated it to be a US\$1 billion industry globally with more than 9 million visitors travelling to 87 countries. Tkaczynski & Rundle-Thiele (2018) investigated whale watching tourist differences using segmentation to understand who has the highest return on investment and who yields the highest dividends.

The importance of examining segmentation of tourist demands at coastal and marine destinations is also noted by Carvache-Franco et al. (2019) in their study in Ecuador. O'Connor et al. (2009) examined boat and land-based whale watching in South Africa, noting a slight increase (of 1.1% per annum) in overall numbers of whale watching tourists from 1998 to 2008. They found, however, that over the same period boat-based

whale watching increased substantially at a rate of 14% per annum. They also indicated that whale watching is a major tourist attraction in Western Cape (including Cape Town which is the study site for this research). Orams & Lück (2014) also focused on whale watching, using Tonga as a case study. They noted the economic benefits to the local economy and that the numbers of visitors are increasing annually, which is a similar trend to that in South Africa. The importance of whale watching is also emphasised by Higham et al. (2016) who indicate that whale watching is one of the fastest growing components of the tourism industry worldwide, gaining considerable support from the international community as a non-consumptive activity of marine species. Other studies in South Africa included Myeza et al.'s (2010) investigation of the socio-economic impacts for local communities of the sardine run along KwaZulu-Natal's coastline. Gallagher & Hammerschlag (2011) examined the socio-economic impacts of shark-ecotourism focusing on Apex Expeditions which is a tour operator in the Western Cape. In the South African context, Statistics South Africa (2015) indicates that in 2015 98.3% of foreign arrivals into the country were for holiday purposes and that the number of domestic tourists in South Africa is increasing annually with 11.2 million domestic travellers recorded in 2011. The main tourist motivations identified by Statistics South Africa (2015) are visiting friends and family as well as leisure/ holiday purposes with a major attraction for visitors being beach destinations. CMT, according to Bob et al. (2018), has become a significant factor in the economy and a great tool for job creation. Research also shows that the economic value of CMT provides an important incentive for the conservation of coastal and marine-based natural resources (Biggs et al., 2015; Orams & Lück, 2014).

Examining the profiles of beach/ seaside visitors is important to understand who visits CMT locations, what their interests are as well as perceptions and experiences to improve planning and management of these destinations to ensure long-term sustainability (Atzori et al., 2018; Chen & Teng, 2016; Han et al., 2018; Martinis et al., 2019). Atzori et al. (2018) reveal that perceptions of beach comfort influence destination choice and future travel preferences. Furthermore, Jarvis et al. (2016) indicate that socio-economic and environmental variables influence trip satisfaction and the prospect of visitors returning. They add that it is not only the destination itself and CMT stakeholders (such as CMT business and tour operators) that influence trip satisfaction but also the service sector generally (such as safety and security as well as water and electricity provision) that should be considered. Chen & Teng (2016) and Han et al. (2018) note the importance understanding perceptions and perspectives of CMT locations which contributes to acceptable, practical sustainable management policies and practice.

They also highlight considering carrying capacity which is particularly relevant in environmentally vulnerable and sensitive beach tourism locations such as Boulders Beach in Cape Town which is home to a penguin colony. Han et al. (2018) specifically state that carrying capacity is also important in urban beach contexts (such as Cape Town) to protect environmental resources and promote green development. Hung & Petrick (2011) indicate that to better understand and manage South Africa's CMT assets, it is crucial to know the market that uses them, the reasons why people travel and what the visitors would like to gain from their trip. Similar sentiments are expressed by Orams & Page (2000) who indicate that examining visitor profiles (especially understanding tourists, who they are and what their attitudes, beliefs and desires are) is an important aspects of tourism research. Lucrezi et al.'s (2018) study of beachgoers in South Africa revealed that the profile and perceptions of beachgoers differed in relation to the level of urbanisation and geographic location of the beaches. They assert that this differentiation needs to be considered when managing recreational activities on sandy beaches. Saayman & Saayman (2017) examine whether the Blue Flag status of beaches attracts a different type of beachgoers in the Western Cape. They found that the most important beach-specific attributes that attract beachgoers were beach cleanliness and infrastructure.

The above discussion reveals the importance of CMT to the tourism sector generally and to economic development. Additionally, the social benefits in relation to promoting leisure activities and entertainment are also evident. Furthermore, environmental benefits associated mainly with educational opportunities and promoting responsible behaviour are underscored. However, overuse and unsustainable practices such as littering, development of infrastructure and services, and degrading or depleting biodiversity (for example, over-fishing or not adhering to regulations about the amount of fish to catch or when to fish) can have detrimental consequences that can ultimately undermine the natural resource base that CMT thrives on. Lui et al. (2019) indicate that the global increase in CMT has resulted in increased development in many major beach locations. Furthermore, Biggs et al. (2015) warn that CMT is being threatened by climate change. Additionally, Joseph (2017) raises concerns that there are considerable pressures on CMT locations and environments given that these areas are home to 50% of the world's population and increasing numbers of beach visitors. This is supported by Lucrezi et al. (2018) who assert that while sandy beaches provide ecosystem services which are increasingly recognised and valued globally, they remain under threat from the overexploitation and degradation of these services, mostly attributable to human pressures. Oh et al. (2010) argue that it is important to balance local and tourist demands and expectations on coastal and marine resources which are increasing. In this context, understanding visitor profiles will assist in improved planning and management of CMT spaces and resources. Furthermore, as indicated by Lucrezi et al. (2018) examining visitor profiles contributes to understanding diversity (from social to environmental) which can result in better management and marketing interventions and strategies.

In the South African context (and this is the case globally as well), there is limited research that focuses on examining CMT visitor profiles. This study specifically has a screening question to ensure that only persons in the selected CMT locations were interviewed who were visiting the area specifically to participate in CMT activities. Thus, this study contributes to better understand CMT visitors specifically.

MATERIALS AND METHODS Cape Town as a case study

Cape Town (and the Western Cape province more generally where Cape Town is the main city) is regarded as South Africa's key international tourist destination and is among the top three in relation to domestic tourism. Frey & George (2010) specifically state that Cape Town is an internationally acclaimed top tourist destination globally. Hattingh & Swart (2016) note Cape Town's rich heritage and cultural diversity as well as unspoiled natural resources including beach and mountain environments. CMT is central for regional economic growth and job creation with major tourism sites such as Table Mountain and Robben Island (both United Nations Educational, Scientific and Cultural Organisation World heritage sites) being associated with CMT related activities. Additionally, Cape Town has several beach and port tourist locations such as the V&A Waterfront, Boulders Beach (where one can swim with penguins), Camps Bay, etc. These destinations are prime areas frequented by both locals and persons from outside the city.

Method employed for data collection

The survey data used for this study was collected as part of a larger study supported by the NDT to develop a framework to assess the economic impacts of CMT in South Africa. Survey-based data using a structured questionnaire from CMT site visitors was collected in Cape Town from purposively selected locations which are known to be key CMT locations including the V&A Waterfront and sandy beaches along its coastline since. as indicated by Lucrezi et al. (2018) and Lucrezi & van der Walt (2016), sandy beaches are the main attractions for visitors or beachgoers in South Africa. A quantitative survey design was used. The survey included questions on the socio-demographic and residential locational profiles of the visitors, the main CMT products/ activities consumed during the visit when the interview was conducted as well as future interest in CMT products/ activities, and perceptions of experiences and CMT locations visited. Face-to-face interviews were conducted with trained fieldworkers in the selected locations. This data is analysed thematically. In the selected CMT locations in Cape Town, 907 face-to-face visitor surveys were completed during September 2018 to January 2019 using a spatiallybased, systematic sampling approach. Research was undertaken in purposively selected CMT sites along Cape Town's coastline. At the selected CMT locations, a spatially-based sampling approach was adopted whereby fieldworkers at the selected locations were trained to complete the surveys at specific places and during specific days. On the selected day and at the specific CMT location, the first person interviewed was purposively selected by the fieldworker. To limit bias in respondent selection, thereafter, adult persons were selected systematically. Specifically, on completion of a survey the 20th person passing by was approached to participate. If the selected person declined to participate or did not meet the requirements as per the screening question that they should be in the location specifically to participate in CMT activities, the next person passing by was approached.

This approach is often used to reduce bias since beachgoers and persons visiting CMT sites (as the targeted population groups) are not known to permit random sampling and this group is constantly mobile. Fieldwork was conducted during peak/ vacation and off-peak periods with a proportionate sampling approach being adopted to ensure that more surveys (650) were completed during peak periods. As indicated earlier, only persons visiting the location to participate in or those who had participated in CMT activities were interviewed. Once data was collected, it was inputted into the Statistical Package for the Social Sciences (SPSS). Frequency Tables were generated and the relevant information in relation to the key themes of this study are discussed.

RESULTS DISCUSSIONS

Socio-demographic profile of CMT site visitors in Cape Town

The average age of the respondents was 39.2 years and ranged from 19 to 78 years. Most respondents were in the age categories of 21-30 (20.1%), 31-40 (28.1%), 41-50 (26.1%) and 51-60 (15.8) years old. These categories made up 90.1% of the persons interviewed.

It was further noted that most respondents (84.8%) travelled in groups that spent money together with an average group size of 1.7, ranging from none to 13 persons. Forty percent of the respondents were accompanied by one other person while 34.6% were accompanied by 2-3 persons. It was observed during the research that the actual group size of persons travelling CMT locations were much larger but individuals spent money either on themselves or immediate family or partners. The results show that younger and middle aged groups frequented the CMT areas were the interviews were conducted. Almost equal proportions of males (51.9%) and females (48.1%) were interviewed. In relation to the educational level of the respondents, the majority of the respondents had some form of post matric qualifications: undergraduate degrees (43.3%), postgraduate degrees (30.2%) and certificates/ diplomas (13%). Additionally, 9.9% of the respondents had completed secondary schooling. The average monthly income of the respondents who provided a response was R32 887.76 and ranged from none to R325 000. Most respondents earned R20 000 to R50 000 (42.3%). A substantial proportion (28.4%) did not disclose their income stating that this information was confidential. Crosstabulations revealed that tourists and day visitors had higher educational and income levels than local residents which are reflective of the profiles of persons who travel. In terms of the historical population group of respondents, the majority were White (21.6%) followed by Africans (20.8%), Coloureds (12.6%) and Indians (1.4%). A substantial proportion of the respondents (44.1%) who were mainly foreigners did not disclose this information.

The results do reflect demographic diversity in relation to who visits CMT locations. However, the disproportionate number of Whites in relation to the demographic profile of Cape Town is evident. Whites earn substantially more than other groups and this may be a reason why CMT locations are frequented by this group. In terms of the socio-demographic profile, the results indicate that CMT sites are visited by diverse groups of persons which affirms Lucrezi et al.'s (2018) findings in relation to beachgoer diversity in South Africa. Table 1 shows that more than half of the respondents (58.5%) were overnight visitors followed by local residents (21.3%) and day-trippers (19.6%). As indicated earlier, there was a screening question to establish whether the respondent participated or will participate in any CMT activity at the location where the interview was being held. The interview continued only if the response was in the affirmative. This was to ensure that the study focused on CMT users/ customers only. A record was kept of the number of persons who responded in the negative, that is, there were in a beach location but did or would not participate in any CMT activity. In this regard, a total of 250 persons were noted. Given that the total number of persons interviewed was 907, this indicates that 72.4% of the visitors to the CMT sites were interested in or visited the area because of CMT products or activities.

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	Frequency	Percentage
Overnight	531	58.5
Day-tripper	178	19.6
Local resident	193	21.3

Table 1. If overnight visitor, day-tripper or local resident (n=907)

Among the respondents who were overnight visitors and day trippers, most were foreigners (55.8%) and 23% were South Africans. This affirms Frey & George's (2010) claim that Cape Town is a key international tourist destination. In terms of the foreign visitors, most were from the United States of America as well as different countries in Europe (especially Germany, France, Italy, the Netherlands, Spain and United Kingdom) and Africa (especially South Africa's neighbouring countries). These countries are South Africa's (and Cape Town's) key international tourist markets. Domestic visitors were primarily from Gauteng (6.2%), the Western Cape (6.4%) and KwaZulu-Natal (5.3%). Gauteng is the main domestic tourism market in South Africa for beach tourism. The results indicate that CMT activities and environments are key attractions in Cape Town as articulated by Hattingh & Swart (2016), Hung & Petrick (2011), Lucrezi et al. (2018) and O'Connor et al. (2009). In the context of Cape Town, the results reveal that key consumers of CMT products and locations were overnight or day-trippers which reinforce Frey & George's (2010) assertion that Cape Town is a key tourism destination which reveals CMT's contribution to local economic development and tourism destination branding and marketing.

CMT activities participated in and future interest

Respondents indicated that they participated in several CMT activities during their visit to the beach location where the interview was undertaken. The main activities
shown in Table 2 that respondents participated or planned to participate in were sand/ beach recreational activities (69.9% participated in and 56.4% planned to participate). sightseeing (42.8% participated in and 35.4% planned to participate), water sports (26% participated in and 24.7% planned to participate), coastal heritage activities (22.5% participated in and 26.8% planned to participate) and pure recreational activities (18.6% participated in and 15.5% planned to participate). Other key activities respondents participated in that had less than ten percent responses were educational and scientific excursions, events, spiritual experiences, wildlife tourism, recreational fishing, ocean experiences, wildlife tourism and scuba diving/ snorkelling. Most respondents identified more than one activity that they participated in which suggests that CMT activities tend to complement each other. Furthermore, in terms of coastal tourism and marine tourism activities designated by NDT (2016), there is clearly a prominence of coastal rather than marine tourism activities that visitors participated in. This could be as a result of the interviews being conducted on beaches or CMT sites such as the V&A Waterfront, However, most coastal activities do not require additional payments unlike marine tourism activities where payments are required to participate in these.

Table 2. Types of CMT activities have or will respondent be participating in during visit to beach location (including activities participated in on day of interview) as well as other types of CMT activities interested in participating in in the future (n=907, in % - yes responses only): Multiple responses

	THIS VISIT		FUTURE
	Did	Will do	Future interest
Wildlife tourism (e.g. whale watching, turtle tours, seals, dolphins)	1.8	1.9	14.1
Recreational fishing (e.g. boat-based fishing, spear fishing, fishing competitions)	5.2	11.8	30.6
Scuba diving/snorkelling (e.g. shark cage diving)	1.1	.8	10.9
Water sports (e.g. big wave surfing, kite surfing, stand up paddle boarding (SUP), yachting, water skiing, water surfing)	26.0	24.7	53.3
Ocean experience (e.g. cruise tourism, marinas, island tourism, shipwreck diving)	2.6	3.6	25.0
Events (e.g. marine festivals and marine competitions such as yacht races or regattas, fishing competitions)	5.7	5.2	33.0
Sand/beach recreational activities (e.g. swimming, walking or running, kite-flying, beach combing, sand dune surfing)	69.9	56.4	78.2
Coastal heritage activities (e.g. local seafood and cultural tourism, cultural history)	22.5	26.8	46.0
Sightseeing (e.g. light house tourism, cycling, marathons)	42.8	35.4	59.5
Educational and scientific excursions (e.g. aquariums)	7.8	9.6	36.6
Spiritual experiences	5.7	7.7	32.5
Pure recreational (e,g., dining out, shopping)	18.6	13.5	34.6

The average number of times that respondents previously participated in CMT activity/ activities in South Africa was 6 times and ranged from none to 365 times. Slightly more than a third of the respondents (36.3%) indicated none. These were mainly tourists. Among the rest, most of the respondents (48.5%) indicated between 1-5 times and for 16.5% this was the first time they participated in a CMT activity in South Africa. The results indicate that CMT locations in Cape Town attract repeat visitors as well as new visitors. Almost all the respondents (98.9%) indicated that they would participate in similar CMT activities again in South Africa. This suggests high levels of satisfaction among visitors with CMT activities and experiences in Cape Town. High levels of

satisfaction were also established in relation to responses regarding whether respondents would advise friends, relatives or colleagues to participate in CMT activities in Cape Town. Eighty nine percent of the respondents indicated that they would advise friends, relatives or colleagues to participate and a further 8.3% stated that they would possibly advise friends, relatives or colleagues. Only 1.2% stated that they would not and 0.3% did not respond. Among the 10 respondents who indicated that they would not participate in CMT activities again in South Africa, the main reasons forwarded were unfriendly staff, overcrowding, issues pertaining to safety and security, and locations not being well maintained (specifically dirt and litter were noted). A few respondents did have negative experiences that influence future visitation which is similar to the assertions made by Atzori et al. (2018), Chen & Teng (2016), Han et al. (2018) and Martinis et al. (2019).

It is interesting to note that substantially more respondents for all activities listed also stated that they would be interested in participating in these CMT activities although they did not participate in the activities during the visit when the interview was held (Table 2). The future interest is also in higher for marine activities.

The survey did not probe why respondents did not participate in a CMT activity during the visit to the location when the interview was held. Future research should examine this aspect to establish reasons (such as the location visited not having the specific CMT activity, costs of participation, inadequate time during visit and lack of knowledge about the CMT activity which they were exposed to during the visit). The results reveal high levels of past, current and future interest in CMT products/ activities which denotes an increase in demand. This needs to be effectively managed as outlined by Atzori et al. (2018), Chen & Teng (2016), Han et al. (2018) and Martinis et al. (2019) to ensure long-term sustainability. The Table 3 below shows the main activities respondents participated or planned to participate in during their visit to the location other than CMT activities as indicated in the Table 2 above. A range of activities were identified with the main ones being adventure (63%), food and wine (37.9%), culture/ heritage tourism (30.5%), business (22.8%), shopping (19.8%), social/visiting friends and relatives (16%) and sport (12.1%). The results closely correlate with known activities and attractions in Cape Town. To make a CMT destination more attractive it is important to cater for broader interests than activities that are directly linked to coastal and marine resources.

The results reveal a wide range of interests among CMT visitors. However, it is important that developments to accommodate these demands do not undermine the integrity and quality of the CMT resource base as underscored by Biggs et al. (2015), Chen & Teng (2016), Han et al. (2018), Lucrezi et al. (2018) and Lui et al. (2019). The majority of the respondents stated that their primary reason for visiting the CMT location where the interview was held as shown in Table 4 was participation in the CMT activity in the beach/ coastal location (40.4%) or holidays (29.2%). Respondents also identified business (15.9%) and visiting friends and relatives (10.5%) as the primary reason for visiting the location.

Three respondents stated shopping. A few (3.7%) provided other responses which included educational, cultural and spiritual reasons. The prominence of recreational and leisure activities (which CMT contributes to) is evident in the responses presented in Table 4. This suggests that these are the main reasons why people visit CMT locations and that these environments need to be protected and maintained for future use.

Perceptions and experiences

Respondents were asked to rate their experience with various elements of the CMT location where they were interviewed as depicted in Table 5. The responses resonate with the satisfaction with the CMT experiences as noted earlier. A substantial majority of the respondents agreed or strongly agreed with all statements.

Table 3. Main activities respondent intends participating in/ have participated in during visit to location other than coastal and marine activities (n=907 - yes responses only): Multiple responses

	Frequency	Percentage
Shopping	180	19.8
Business	207	22.8
Adventure	571	63.0
Medical/ health	7	.8
Nightlife	80	8.8
Sport	110	12.1
Visited a casino	32	3.5
Social (visiting friends and relatives)	145	16.0
Food and wine	344	37.9
Theme parks	54	6.0
Cultural/heritage	277	30.5
Conference	28	3.1
Shows performances	7	.8
Visiting natural attractions/ wildlife that were not coastal/ marine	48	5.3

Table 4. Primary/ main reason for visiting location where the coastal or marine activity respondent is participating in is taking place (n=907)

	Frequency	Percentage
Participation in CMT activity in this beach/ coastal location	366	40.4
Holiday	265	29.2
Business	144	15.9
Visiting friends and relatives	95	10.5
Shopping	3	.3
Other (including educational, cultural and spiritual)	34	3.7

Table 5. Level of agreement with specific statements about coastal and marine location (not town/ city as a whole) (n=907, in % - yes responses only)

STATEMENT	NR	1	2	3	4	5	Average
Well maintained location	-	1.7	2.1	7.9	34.0	54.4	4.4
Parking is adequate	.1	9.3	6.2	13.7	42.2	28.6	3.8
Sufficient facilities and amenities (e.g. toilets)	-	5.9	4.1	15.8	31.4	42.9	4
Good refreshment areas/ food variety	-	4.0	3.7	12.5	39.7	40.2	4.1
This is a green location that encourages responsible environmental practices (e.g. recycling)	.1	1.4	3.9	21.6	36.4	36.5	4
Signage to location was clear	-	1.1	4.1	14.4	39.4	41.0	4.2
Safe location	.1	2.1	2.3	15.1	36.4	43.9	4.2
Entertainment opportunities available in the location	-	4.3	8.4	14.8	32.3	40.2	4

The highest agreement was for the location is well maintained (88.4% with an average rating of 4.4) which was followed by signage to the location was clear (80.4% with an average rating of 4.2) and safe location (80.3% with an average rating of 4.2). Good refreshment areas/ food variety (79.9% with an average rating of 4.1) was rated next followed by sufficient facilities and amenities (74.3% with an average rating of 4) and this is a green location that encourages responsible environmental practices (72.9% with an average rating of 4). Entertainment opportunities available in the location (72.5% with an average rating of 3.8) had the lowest ratings. The results reveal high levels of satisfaction with CMT locations among visitors. This bodes well for CMT in Cape Town since it reveals that there is demand for

CMT activities which can contribute to economic growth. It also reinforces assertions by Frey & George (2010) and Hattingh & Swart (2016) that Cape Twon is one of South Africa's key CMT destinations. The positive perceptions also are likely to encourage repeat visitation and word of mouth marketing as noted by Atzori et al. (2018) and Martinis et al. (2019).

CONCLUSION

Increasingly research indicates the importance of CMT for socio-economic development and environmental conservation. This study examined CMT visitor profiles, preferences, perceptions and experiences in Cape Town which is important for improved destination planning and management. Better understanding of visitor profiles will also contribute to enhanced segmentation and marketing of CMT products as indicated by Carvache-Franco et al. (2019) since visitor experiences will influence repeat visitation and provide information on target markets. This study specifically underscores the importance of understanding visitor profiles, perceptions and experiences which is a neglected areas of research since CMT research tends to be focused on specific segments and economic impacts as highlighted. Improved understanding of visitor motivations, demands, experiences and perceptions will inform more effective sustainable planning and management of these sites. The results specifically reveal the value that visitors attach to natural resources and experiences in CMT locations which foregrounds the importance of ensuring that the environmental integrity of these sites are maintained.

Thus, economic aspects of CMT cannot be examined in isolation of environmental aspects. In terms of visitor profiles, diversity in relation to a range of aspects are noted which reveal the importance of differing planning, management and marketing strategies to ensure the maintenance and sustainability of CMT resources and locations in Cape Town. Cape Town's CMT locations attract persons and groups of different ages, genders, educational levels and income groups. It is notable that most visitors interviewed were foreigners and day-trippers, illustrating that Cape Town is an important tourist destination as indicated in the literature. The prominence of foreigners and day-trippers correlated with higher income and educational levels among visitors which is aligned to the profiles of travellers to tourism destinations generally. While population groups reflect the different races in South Africa, the disproportionate prominence of Whites is evident and again reflects the socio-economic status of visitors to CMT locations in Cape Town. The respondents in this study participated in a range of CMT activities and indicated an interest to participate in future activities. This suggests that there is a growing demand for CMT activities in Cape Town which needs to be managed. There is also high levels of satisfaction with CMT locations and experiences. This is reflected in the high levels of future interest to participate in CMT activities; the majority of the respondents stating that they would advise friends, relatives or colleagues to participate in CMT activities in Cape Town; and high positive ratings of perceptions of the CMT locations in relation to maintenance, signage, safety, facilities and infrastructure, entertainment opportunities and the promotion of responsible environmental practices.

It is important to undertake empirically-based assessments of CMT visitor profiles, preferences, perceptions and experiences in different locations in South Africa and globally. These studies will permit a comparative analysis in relation to different locations as well as over time to assess changes in trends and patterns. Additionally, more indepth analyses should assess how socio-demographic variables (such as gender, population group and income levels) influence preferences, perceptions and experiences. Furthermore, as indicated earlier, future research should unpack why CMT site visitors are interested in CMT activities but do not participate in these during specific visits to CMT locations.

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HALAL-FRIENDLY TOURISM BUSINESS PROCESS: TOURISM OPERATORS IN INDONESIA

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Abstract: The aim of the research is to recognize the tourism industry in *halal* tourism concept, business process, and dilemma. Authors determine the strategies to resolve the dilemmas based on the situation of the tourism business operators. The study engaged with the situations of *halal* business operators. The data were collected through in-depth interview with four tourism operators in Indonesia who won the best *halal* category award by The World *Halal* Travel Award in Dubai. The results of this study found that all participants choose to be Muslim-friendly business instead of pure *sharia* business. This business process transformation helps to expand their market segment to Muslim tourists at tolerable cost. The existing dilemmas by tourism industry are no formal standard of *halal* criteria, high-cost business transactions, lack of *sharia*-competent human resources, and lack of tourism promotions. Niche market-based premium price could be a solution to compensate the additional high cost and potential lost that may occur in case of transforming conventional business into *halal* business platform.

Key words: Halal Tourism, Best Practices, Constraints, Strategy

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INTRODUCTION

Nowadays, *halal* is the lifestyle of global consumers (Boediman, 2017). *Halal* is not only for food products but also non-food products such as cosmetics, pharmaceuticals, leather crafts, and fragrances. It is included services such as banking, entertainment, tourism and logistics (Rahim et al., 2013). According to Harahsheh (2019), tourism is widely influenced by religious beliefs which generate the appearance of *halal* tourism.

The rapid growth of the *halal* tourism industry is determined by awareness of Muslims on *halal* tourism as well as the rise of the Muslim population (Rahim et al., 2013). CresentRating.com finds that Muslim tourists contribute 12.3% to the world's total tourist expenses (Osman et al., 2015). However, there are limitations for *halal*-based tourism operators. First, there is no formal standard of *halal* in the management of *sharia*-compliant tourism business. Although Indonesia is the most populous Muslim country in the world, some *halal* tourism operators refused the Minister of Tourism and Creative Economy Regulation Number 2 of 2014 on the Guidelines for the Implementation of *Sharia* Hotel Business. It is related to the revocation of the regulation. This refusal shows that there is different perception in *sharia* tourism among tourism operators. In addition, the *fatwa* of DSN-MUI (National *Sharia* Board of The Indonesian Council of Ulama) Number 108/DSN-MUI/X/2016 on Guidelines for Implementing *Sharia*-Compliant Tourism (DSN-MUI, 2016) does not specifically require this matter technically because it merely contains normative rules by *sharia* tourism providers.

This ironic phenomenon is not only happened in Indonesia, but it is also happened in other Muslim countries. Egypt and some Middle East countries are facing lack of references and standards about the implementation of sharia-compliant tourism. The implementation of *sharia* principles in Egypt is even often contrary to state regulations in the completeness of international hotel facilities for the 4 and 5 star hotel category (Saad et al., 2014). It is the reason of international hotels to refuse the implementation of *sharia* in hotels (Razalli et al., 2012). Furthermore, the *halal* tourism's point of view criteria in each country also vary. Zamani and Musa (2012) state that even in Muslim countries, their opinions on the sharia implementation are heterogeneous due to different interpretation of Islam and local culture, the degree of liberalism and state intervention. In this case, Egypt, Morocco, the United Arab Emirates and Malaysia are more flexible in implementing sharia in their tourism industry, while Iran, Saudi Arabia and Brunei Darussalam are considered more rigid (Kovjanic, 2014). There are a lot of studies about the challenges and strategies of *halal* tourism industry. However, these studies did not involve tourism business operators who won the world's best prize in the implementation of *sharia* business. Their best practice is highly required to comprehend tourism business nowadays. The majority of stakeholders are already familiar with conventional tourism business practice. Thus, the aim of the research is to recognize the tourism industry in halal tourism concept, business process, and dilemma based on the best practices of the winning halal tourism operators. Authors determine the strategies to resolve the dilemmas based on the situation of the tourism business operators.

LITERATURE REVIEW

Tourism theory is important to comprehend the tourism issues (Stergiou & Airey, 2018). Tourism will never be an autonomous field of science, because practically it will involve many disciplines such as socio-cultural (Wyllie, 2011). The term of "tourism" is firstly developed from the habits of wealthy people in England who sent their young men to study throughout Europe (Leiper, 1979). Currently, the term has involved almost all aspects of human life (Ma & Law, 2009). The notion of tourism is a popular term in outside of the zone of these issues for a period of time and outside the regular activity to

learn and make an experience with new places to relaxation (Chadwick, 1987; Firdaus et al., 2019). Although Graf & Ossig (2002) claim that travel does not correlate with tourist's motivation, but other studies reveal that the recognition of socio-cultural of the travel can be a motivation for tourists e.g. Rinschede, 1992 (Wyllie, 2011). Culturally, the tourist was influenced by the other people to make a desirable and worthy travel. Therefore, tourism marketers must be able to recognize tourist's intention. Understanding consumers' intention is the key to success in the tourism industry (Goeldner & Ritchie, 2009). Moreover, tourism is a global phenomenon with various different types, environments, cultures, and tourist types (Firdaus, 2018; Goeldner & Ritchie, 2009). Some of them even lead to a very specific Niche Tourism Market (special interest) targeting to a particular segment. One of the most dynamic is *halal* tourism. The concept of religious travel is identified by religious reasons (Rinschede, 1992). Religious travel might be the oldest form of tourism (Sigaux, 1996; Vukonic, 1996). Dogan (2011) proposes different concepts that Islamic tourism is activities by Muslims in tourist destinations for relaxation and entertainment purposes. It is presented by hospitality companies in Islamic principles.

These principles include the implementation of *halal* concepts in travel agency or known as *halal* or travel tourism. Battour et al. (2010) explains that *sharia* travel refers to a set of religious values and rules by human life. It is the interaction of human with all human beings in the world. The form of the tourism can be *hijj*. It is a trip to Mecca and Medina. It can be *zejara* that refers to Muslim holy places. It can be *rihla* that refers to travel for other reasons such as education, commerce and etc. Tourism in Islam consists of five purposes: (a) to worship, such as *hajj* and *umrah*, (b) to gain knowledge and experience, (c) to seek scientific truth in Al qur'an, (d) to talk to the man elsewhere, (e) to express gratitude and awe of Allah's creation while enjoying the beauty of place (Jaelani, 2017).

Islam strongly encourage to travel as written in Al qur'an and *hadith* (Musa et al., 2016). Therefore, there are provisions about Islamic tourism such as *mustabahah*. It is a travel to do *dakwah* (talk) and to contemplate the signs of nature's greatness. *Mubah* (acceptable) is a travel for enjoyment and pleasure but without making any immorality manner. *Makruh* is avoided travel although it is not immoral (Alim et al., 2015). Thus, the travel is for merely entertainment value. It is not for religious purpose or *haram* (prohibited). This kind of travel is for immoral entertainment to disobey the rights of God and to participate in religious rituals of other religions.

The concept of *halal* in the context of tourism is evidence of Islamic in every aspect of a Muslim since Islam is a comprehensive religion (Samori et al., 2014). Islam has a holistic and comprehensive concept as the fundamental beliefs of Muslims. It provides solutions to problems and needs of Muslims through the implementation of various values (Battour et al., 2010). *Halal* terminology has a range of implementations such as human relations, dress and behavior ethics, social and business transactions, trades, services and investments and other aspects (Samori et al., 2014). It is included the desires to travel in Islam regulation. According to Henderson (2010), *halal* in Arabic terminology refers to "acceptable" or "allowed". This concept is not only for food, but it is also for cosmetics, vaccines and tourism. In addition, halal can be categorized as legal food and things in Islam (Samori et al., 2014), because the concept of *halal* refers to the ways to produce goods and services in Islamic ways (Bohari et al., 2013).

The emphasis of *halal* tourism is on the proper movement of an element of spiritual travel in service to God. *Sharia* determines the acceptable (*halal*) and unacceptable (*haram*) in everyday life and during the travel (Kovjanic, 2014). In Islam, human can not act arbitrarily in the world. Human must live and interact in the world through the *sharia* way. Human must realize that their action will be counted (Battour et al., 2010). Thus, Islamic terminology for this term is *hisab*.

Tourism industry progressively starts to abandon the concept of mass marketing to be more segmented by targeting more specific consumer groups (El-Gohary, 2016). The development of a knowledge-based community allows tourists to have a high awareness and knowledge of a particular issue (Goeldner & Ritchie, 2009). One of the main keys is the people awareness. They have better understanding of religious values in their life such as tourism activities. They are increasingly more wealth (economically), smarter (as more and more sources of information are available), and more religious (Yuswohady, 2015).

Nowadays, Muslim consumers do not only look for functional and emotional value of a product or service but it also focus on spiritual values of products or services. In the context of Muslim consumers, the main principal in the spiritual value is about the product or service to fulfill the daily needs in the Islamic's rules (Yuswohady, 2015). Moreover, religion is one of the highly influences factors in person's attitude, value and behavior and a social community (El-Gohary, 2016). Thus, religion has been one of the reasons to do travelling (Wall & Mathieson, 2006).

METHODS

This research uses exploratory study to find out the best practice and assess of the most ideal strategy of halal-tourism operation. Data, mainly findings from observations and in-depth interviews, were discussed in qualitative approach (Creswell, 2014). Semistructured interview was designed to open more possibility in generating information. The interview took approximately one hour. All conversations were recorded, transcribed and finally analyzed using the content analysis which is a technique for replicable. It is valid inferences from texts in order to discover the text (Sekaran & Bougie, 2013). The interview is interpreted and analyzed by triangulation method to check and recheck with other sources such as books, research results, and official reports to validate the informations (Sugivono, 2015). The participants are successful halal tourism operators in Indonesia. Participants have the award from World Halal Travel Award in Dubai - as the best of halal tourism assessment categories such as: (1) Sofvan Hotel in Jakarta was awarded as The World's Best Family Friendly Hotel in 2015; (2) The Radhana Hotel in Kuta – Bali won the World Best Family Friendly Hotel in 2016; 3) Novotel Lombok Resort and Villas in Lombok - West Nusa Tenggara won the World Best Halal Beach Resort in 2016; (4) Sembalun Village Region, Lombok in West Nusa Tenggara achieved the World Best Halal Honeymoon Destination in 2016. The participants are contacted by email to set the meeting on site.

RESULTS DISCUSSIONS

Obligations and Restriction in Halal Tourism

For Muslim tourists, the need to obey the requirements of tourism services is very different from other types of international tourism. Requirements of Muslim tourists often can not be fulfilled by the international tourism industry in the conventional concept (Widayati & Setiyorini, 2014). The most important rule in the concept of *halal* tourism is based on the the values of the needs of Muslim tourists. They are the comfort and peacefulness in a travel without breaking Islamic principles (Alim et al., 2015). Then, it is natural that Muslim tourists insist certain requirements. It must not be ignored by tourism operators (Battour et al., 2010). There are *sharia* restrictions on tourism components, which are commonly found in conventional tourism practices, such as: alcohol, night entertainments, the mix of unauthorized women and men, etc.

Best Practice of World Halal Tourism Award Winners

Product Aspects

This study produced participants' interviews about the best practices by the award winners of *halal* tourism. They attempt the fundamental aspects of the formal standard of

halal criteria for Muslim tourists such as the provision of halal food certified by the Indonesian Council of Ulama. It is also discussed *shalat* facilities in quantity and quality. *Halal* certification is not only for the tourism operators, but it is also about suppliers of the tourism operators. The most important product or service in the implementation of *sharia* tourism is the provision of *halal* food and beverages (COMCEC, 2016).

	Obligation	Restriction		
Items	Sources [*]	Items	Sources [*]	
1. Hygiene	Idris and Wahab, 2015; Qaddhat et al., 2016; El-Gohary, 2016	1. Gambling	Battour et al., 2010; Idris and Wahab, 2015; El-Gohary, 2016	
2. Ethics of dressing	Idris and Wahab, 2015; Qaddhat et al., 2016; El-Gohary, 2016	2. Entertainments that against the principles of <i>sharia</i>	Qaddhat et al., 2016; Kovjanic, 2014; El-Gohary, 2016	
3. Gender separation	Widawati and Setiyorini, 2014; (Rosenberg & Choufany, 2009)	3. Adultery	Kovjanic, 2014	
4. Shalat service	Widawati and Setiyorini, 2014; Battour et al.,2010	4. Alcohol & drugs	Idris and Wahab, 2015; Qaddhat et al., 2016	
5. Paying zakat	El-Gohary, 2016; Karim et al., 2017	5. Sculpture and images in the form of living creatures	Sahida, Rahman, Awang, & Man, 2011; Karim et al., 2017	
6. <i>Halal</i> food guarantee	Widawati and Setiyorini, 2014; Battour et al., 2010; Razalli et al., 2012	6. Usury or <i>riba</i>	Karim et al., 2017; Idris and Wahab, 2015	

Table 1.	. Obligation and Restriction in Halal Tourism Business P	rocess
	(Data Source: Data Processing Results, 2018)	

* All sources are generated from Al Qur'an and hadith of prophet of Muhammad

This is confirmed by the Standing Committee for Economic and Comercial Cooperation of the Organization of Islamic Cooperation (COMCEC) in 2016. They make classification of the formal standard of *halal* criteria into *halal* food and prayer facilities; a bathroom with clean and sufficient water; services and facilities in the fasting month, and; non-*halal* activities as well as recreational facilities and services. Thus, the two most important elements of the implementation of *sharia* principles which are *halal* food and *shalat* facilities have been completely fulfilled by the participants. Certification is necessary to guarantee the *halal* food because it is recommended by an official institution. It is an official recognition that a product is approved in Islamic law. This certificate will help consumers gain guarantee without any suspicion or doubt in consuming products and services (Eddahar, 2018), especially to ensure that food does not contain non-*halal* essence. It is also to make sure that the animals served are slaughtered with the *Sharia* law (Battour et al., 2010). Since *shalat* is a major obligation of Muslims, therefore the fulfillment of prayer facilities is in the top priority. Thus, they need clean and hygienic *shalat* room, sufficient water, *shalat* equipment and Al- Qur'an (Battour et al., 2010; Idris & Wahab, 2015).

Aspects of Service (Management)

The implementation of management is clearly arranged in the Standard Operational Procedure (SOP). Preparation and supervision of the SOP is regularly discussed with the National *Sharia* Council – Indonesia Council of Ulama (MUI). The SOP is based on the principles of *sharia* in each of the category. The SOP is consistently implemented with high commitment. This is the synthesis of all interviews with respondents in *halal* operation. The management process shows products and services to users (Asnawi & Fanani, 2017). In the end, the winners use *halal* principles in certain

services consistently and firmly. Even though in Bali as non-Muslims population majority, if *halal* principles are consistently implemented, *halal* tourism will run successfully. In the beginning, it may be difficult to conduct *halal* business in Bali. On the contrary, if *halal* business is run in a predominantly Muslim region, the level of difficulty might be lower. The operators of *halal* tourism should be aware that *halal* has become the lifestyle of the world's consumers (Rahim et al., 2013). It is not only for Muslim consumers but also for non-Muslims. The non-Muslim consumers do not only demand *halal* products and services for the sake of religion, but it is also for health and security. In addition, Muslim tourists are more critical with the guarantee of *halal* as Muslim tourists have better awareness of the importance of *halal* tourism (Zulkifli et al., 2011). The implementation of a SOP due to work process must obey the certain *halal* requirements. The formulation of SOP should be standardized that it can be understood and implemented by all stakeholders. In short, SOP is not only for tourism operators but also for the tourists. In the context of tourism, standardization is an effort to improve facilities, procedures, and actions in a certain way to ensure the quality of services (Widayati & Setiyorini, 2014).

Aspects of Human Resource

This study synthesized the character building and competence of tourism operators to provide *halal*-based services. It is based on the interviews with all participants in human resource management. They implement it by providing special training about the practice of *halal* service. It is also rebuilt through religious speech (*tausuah*) on *halal* products and services regularly. Even if the employees are not Muslim, they must follow SOPs in providing *sharia*-compliant business services such as hygiene, separation between *halal* (allowed) and *haram* (forbidden). Thus, it is highly obliged in Islamic ways. King and Grace (2005) state that employees contribute a lot to business organization and marketing chain. In Islam, marketing affairs should use a good, clear and consistent in model of human resource behavior. The aim is to create long-term customer satisfaction, loyalty and trust (Asnawi & Fanani, 2017). Ideally, human resources in *halal* tourism should be dominated by Muslim employees (El-Gohary, 2016; Idris & Wahab, 2015). This issue is related to the character of employees in religious tourism to keep specific-religious-related knowledge (Kartal et al., 2015). The goal is for the ease of service because Muslim employees already have basic understanding of what is allowed and not allowed in Islam. Nevertheless, in practice, some problems might appear in the process. For instance, it is happended in Bali as the majority of non-Muslim human resources. To deal with this problem, SOP and trainings are highly required in order to understand the fundamentals of services in the principles of Islamic, especially hygiene issues, *halal* materials and the separation of *halal* and *haram*.

Aspects of Finance

Based on the result of the research, some *sharia* tourism operators have already used *sharia* accounts for all transactions and business finance. Meanwhile, some others still do it partially and even some have not used *sharia* accounts yet. This condition is influenced by various internal and external situations encountered by the tourism operators in their business. The process in business cannot be separated from the financial aspects. It is not only about how the business is financed but it is also related to the cash flows through various transactions in the transaction of business. A *sharia* tourism business is based on the *fatwa* of DSN-MUI.108/DSN-MUI/X/2016 on Guidance on Implementing of *Sharia*-Compliant Tourism. It maintains the obligation to apply *sharia* financial institutions in providing services with the principles of Islam. The concepts of conventional transactions are generally against the Islamic rules. Some of the case studies are attentiveness practices (loaning or *riba*) and insecurity (*gharar*) (Asnawi & Fanani, 2017). These things differentiate *sharia* from conventional practices.

The awareness phenomenon to *halal* business is generated by the growth of Islamic population in the *sharia* finance industry. The rise of the Islamic financing institutions is also related to the growth of hotels and other *sharia* businesses, as some *sharia* financial and non financial institutions demand that businesses finance or management transactions must be in the principles of *sharia* (Razalli et al., 2012). In fact, the practices of *sharia* compliant tourism business are also fluctuating. Some operators do it totally, but some others do it partially by using both *sharia* and conventional accounts, or even some do not use the *sharia* at all. In the criteria of the interest of *halal* tourism business by (COMCEC, 2016), basically *sharia* financial system in the management of *sharia* tourism is explicitly stated. However, "nice to have" aspect could be a prohibition of non-*halal* business activities. It would certainly be better if this aspect could be implemented since it is essential of *sharia*-compliant business. The business funding shall be based on *sharia*-based contracts and the owner is obliged to give contributions (Idris & Wahab, 2015).

Constraints and Alternative Solutions

Since *halal* tourism is specific, some certain requirements shall be fulfilled in its implementation. In addition, several of the requirements may be constraints for tourism operators. The capability to manage constraints in business process is limited by the availability of organizational resources, such as financial, human resource, technology, etc (Paltavian et al., 2017). The synthesis of interviews from the participants reveals that there is a similar answer about improved cost and reduced potential revenues. They are the constraints to implement sharia principles in halal business process. Thus, all of halal tourism business operators have decided to implement a half of sharia business model in their process since it would be very costly. Transformation to halal tourism business process certainly must be managed cautiously. Many business process are fail, It causes overruns for the organization (Jurisch et al., 2016). In fact, this phenomenon takes place either in Indonesia or other countries. Some international hotel managements refuse the implementation of Islamic principles at their hotels because they do not want to lose potential profits from the sale of alcohol (Razalli et al., 2012) and the potential loss of guests (Henderson, 2010). Moreover, high cost capacity management is required to separate men and women to interact (*ikhtilath*) due to immediate relative relationship (Battour et al., 2010; Henderson, 2010; Razalli et al., 2012). That would be the reason of some *halal* tourism operators to remove the *sharia* principles totally in their business processes. They prefer to adopt a more compromising method of Muslim-friendly business patterns (El-Gohary, 2016). The implementation of the pattern can save the cost and satisfy the demand of Muslim tourists who are not strictly to Islam. Some of people are moderately practicing Islam, and few of them are even non-practicing Islam in their life other than just for doing mandatory orders such as *shalat* and not consuming *haram* food (COMCEC, 2016).

Cost is one of business structural attractiveness (Rahman, 2003) and it also could be dilemma for some business. High cost and loss of potential income are the biggest dilemma in *halal* tourism operators. Different approach can be the solution to solve these problems (Dalgic & Leeuw, 1994). It treats the tourism market as niche-specific market. *Halal* tourism operators should prioritize the quality more than quantities such as achieving the certain target of the number of tourists. Although the quantity is small, but the niche-specific consumer groups have high purchasing power (Dalgic & Leeuw, 1994). They are willing to pay at premium price as long as the services is good (Sert, 2017). Price is determined by the costs. Price for marketer is cost for consumers (Asnawi & Fanani, 2017). It is a simple formula. It is natural that the cost of tourism in *sharia* practices is compensated at the end into different price. The price may be more expensive than conventional services because *halal* tourism operators are obliged to provide a number of requirements of *halal*-based tourism (Eddahar, 2018). *Halal* tourism operators should be aware that niche marketing practices enable them to impose more expensive price because they are required consumers needs (Toften & Hammervoll, 2013).

It will be good condition for Muslim tourists who belong to segment A. They are a group of tourists who strictly practicing Islam. They are very obedient to their religious principles (COMCEC, 2016). The religious tourists are eager to pay at a premium price to manage the additional costs by operators due to the implementation of the concept of Islamic tourism business (Razalli et al., 2012). Some hotels can impose an expensive price to compensate losses for not selling liquor (Saad et al., 2014). The key is that the price shall be clearly informed to consumers. *Halal* tourism operators should consider the price. It is not too expensive and no fraud in the business because it is strictly prohibited in Islam (Asnawi & Fanani, 2017). Clear and fair information is needed to elevate knowledge and awareness to the customer (Akbar et al., 2015). That is the main basic different of the concept of *halal* to the conventional ones. The differentiation takes consequences to the emergence of different price to conventional business process.

CONCLUSIONS AND IMPLICATIONS

Halal tourism has tremendous potentials to be developed due to Muslim consumer awareness of *sharia* even in tourism activities. Islam is not only set worshiping God but also directing the relationship between human beings (*muamalah*). The concept of *halal* tourism is a concept of tourism in certain needs. Both findings of interview and literature review reveal that there are extra costs in order to fulfill the needs to *sharia*-compliant tourism. The additional cost is a limitation for tourism business operators to change their business process from the conventional to the *halal* concept. Thus, it is a problematic issue to run a *halal* tourism business from the very beginning.

This research proposed solution to impose a premium pricing practice in *halal* tourism services. Psychological pricing practice is no longer based on functional and rational benefits which are commonly used in conventional marketing practices, but it is based on emotional and spiritual reasons instead. Therefore, promotion and education to foster awareness of maintaining the values of the *sharia* in tourism business are required. Customer's awareness is the best solution to inform customers about the different concept of *halal* tourism business and the conventional tourism business. Thus, the price of *halal* business products is more expensive. If it is consistent, *halal* business operators will be no longer worried about potential of loss. Business operators will not loss the customers as *halal* tourism products and services. If this is applicable, *halal* tourism operators will not be in a dilemma. It is now on the consumers' hand whether they still want to pay cheaply for tourism products and services. It has no *halal* guarantee or customers pay a bit more money to consume *halal*-guaranteed tourism product or services.

LIMITATION AND FURTHER RESEARCH

The perspectives of this study are mostly based on the best practices by the participants which are the world best halal operators. However, this research did not measure tourist's perspective about halal-related products, management, human resource and finance. Further study may be conducted to find out Muslim's satisfaction in halal-business.

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ENTREPRENEURS IN CRAFT BEER AND TOURISM: PERSPECTIVES FROM SOUTH AFRICA

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Abstract: Beer tourism attracts a growing international scholarship. As a result of the craft beer revolution a marked shift in beer tourism research is noticeable. The major focus is on the producers of specifically *craft* beer, of visits to *craft* beer micro-breweries and the evolution of *craft* beer trails. Existing scholarship on beer tourism and craft beer entrepreneurship is concentrated mainly in the global North. This article examines the appearance, motivations and challenges of entrepreneurs in craft beer in South Africa, a destination strongly associated with wine tourism but one that is increasingly developing an economy of craft beer tourism. The appearance of craft beer production is positioned within theoretical debates about resource-partitioning and craft beer entrepreneurship emphasizing the importance of passion as motivation. The results of qualitative responses from 53 craft brewery micro-entrepreneurs in South Africa show distinct parallels with research findings reported from the global North about the passion that drives the growth of the entrepreneurs building the craft beer industry.

Key words: beer tourism; craft beer; beer entrepreneurs; business motivations and challenges; South Africa

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INTRODUCTION

Over the past two decades a close relationship has consolidated between the international growth of beer tourism and of the development of entrepreneurship in the production of craft beer. The niche of beer tourism represents an extension of gastronomic or culinary tourism (Niester, 2008; Bujdoso & Szucs, 2012a; Murray & Kline, 2015). It is a form of tourism in which participants' motivations centre on the experience of drinking different types of beer, the typical environment of brewpubs and restaurants, or learning

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about brewing history and of beer production (Jablonska et al., 2013). According to Bujdoso & Szucs (2012b: 105) "beer tourism has become a new and popular form of alternative tourism" as well as "a growing industry as more and more companies offer tours to beer brewing regions". Brewery-based tourism is a means for destinations to attract tourists either as the main attraction or as a supplementary tourism product (Howlett, 2013). Global scholarship on beer tourism encompasses several different issues such as the characteristics of beer tourists; the organization of beer tourism through visits to breweries, beer museums and exhibits; the development of beer festivals and ale trails; and, the local development impacts of beer tourism for destinations (see e.g. Lyons & Sharples, 2008; Pechlaner et al., 2009; Alonso, 2011; Bujdoso & Szucs, 2012a, 2012b; Kraftchick et al., 2014; Murray & Kline, 2015; Rogerson & Collins, 2015a, 2015b, 2015c; Csapo & Wetzl, 2016).

Overall, what is observed most notably about the recent trajectory of beer tourism research across Australasia, much of Europe and especially of North America is a concentrated focus upon the producers of specifically *craft* beer, of visits to *craft* beer micro-breweries and the evolution of *craft* beer trails (Plummer et al., 2005; Francioni, 2012; Slocum, 2016; Alonso & Sakellarios, 2017; Alonso et al., 2017; Kline et al., 2017; Argent, 2018; Slocum et al., 2018; McMullin et al., 2019). As Garavaglia & Swinnen (2017a: 1) aver "craft brewers and their customers have transformed global beer markets over the past two decades, ending a century of consolidation that resulted in the domination of a few global multinationals and the homogenization of beer". Internationally, the growing domination of increasingly standardized lager and light beers, which were manufactured by progressively fewer brewing enterprises, precipitated a counter movement against consolidation and the lack of beer variety (Poelmans & Swinnen, 2011). Mass production caused standardization of beer to the point where consumers often could not discern taste differences between the more generic mass market pale lagers (Campbell & Goldstein, 2010). The result has been the international 'craft beer revolution' as an increasing cohort of beer consumers began to show renewed interest in drinking 'older' styles such as pale ales, porter, and stout (Patterson & Hoalst-Pullen, 2014). By contrast to the homogeneous character of lager brews produced by multinationals and macrobrewers "the output of the craft segment more closely resembles the product differentiation and fragmentation in the wine industry" (Elzinga et al., 2015: 242).

The international diffusion of this beer revolution has been uneven geographically. For the USA Elzinga et al. (2015) identify 1965 as the starting point. In the United Kingdom it is associated with the emergence during the 1970s of the Campaign for Real Ale (Maye, 2012; Danson et al., 2015; Garavaglia & Swinnen, 2017b). Murray & O'Neill (2012: 899) state that craft beers "have been steadily gaining market share from the large national and international beer breweries". The gradual advance of craft beer production has been a global trend and is accompanied by the growth in the number of micro- and craft breweries (Patterson & Hoalst-Pullen, 2014; Cabras & Higgins, 2016; Garavaglia & Swinnen, 2017b). Toro-Gonzalez (2015: 1) identifies current market conditions in Latin America as favourable for the significant growth of the region's brewing industry and "particularly for craft and speciality beers". Indeed, across much of the world the beer industry has undergone a radical 'makeover' in terms of both landscapes of production and consumption. For example, in the USA demand for craft brews has (re) invented beer as a serious consumption good to be paired with food, rather than simply as a liquid that quenched thirst on a hot day or offered an inexpensive buzz (Elzinga et al., 2015: 248).

Chapman (2015: 102) asserts that the formerly monolithic world of beer has been transformed by a new beer culture distinguished by "variety, diversity, ingenuity, creativity and unbridled excitement". It is observed that the culture, economy and landscape of beer has been "turned upside down in a fruitful quest for new beer paradigms" (Chapman, 2015: 102). In terms of the changing focus of beer tourism the appearance of craft breweries forged new opportunities for tourists "to visit small breweries to learn about, sample and buy craft beer and meet the brewers" (Dunn & Kregor, 2014: 190). Craft beer is viewed an 'experience-based' and symbolic product with its consumption motivated variously by the desire to move away from mainstream homogenous beer consumption, a search for new taste experiences and for new knowledge about beer (Kraftchick et al., 2014; Gomez-Corona et al., 2016; Kline et al., 2017). Moreover, in common with other premium niche culinary tourism sectors such as wine or whisky, Dunn & Wickham (2016: 140) note that "craft breweries have the ability to offer premium quality experiential services as part of their product offering".

Existing scholarship on beer tourism and entrepreneurship in craft beer mostly is concentrated upon the global North (Kline et al., 2017; Slocum et al., 2018). Against this backcloth, the aim in this paper is to examine the appearance, characteristics and challenges of craft beer entrepreneurs in South Africa, a destination strongly associated with wine tourism but one that is increasingly developing an economy of craft beer tourism (Rogerson & Collins, 2015a, 2015b; Rogerson, 2016). Within sub-Saharan Africa South Africa is the most advanced country in terms of the growth of a craft beer industry and of the emergence of craft beer tourism. The analysis of craft beer entrepreneurship in South Africa unfolds through two further sections of discussion. The next section situates the appearance of craft beer production within international theoretical currents about resource-partitioning theory and around craft beer entrepreneurship. Attention then moves to the South African case and the results of an investigation concerning the nature, motivations and challenges of the community of craft beer entrepreneurs.

THEORETICAL CONTEXT

Several explanations are offered to account for the growth of craft brewing in an era of globalization and mass production. At the most basic level explanations for the rise of craft beer in the United States often focus on the agency and pioneering activities of successful brewers or the efforts of several home-brewers turned entrepreneurs (Chapman, 2015). Other observers centre more on themes of industry structure in brewing and of how high levels of concentration and the dominance of a small number of firms resulted in an unmet need that craft beer was able to fulfil (Tremblay et al., 2005; Garavaglia & Swinnen, 2017a, 2017b). Further debate surrounds the structure of organizations in the brewing industry and suggests that larger firms are less well equipped than smaller micro-breweries to address changing consumer preferences and cultural tastes (Chapman, 2015; Garavaglia & Swinnen, 2015; Garavaglia & Swinnen, 2015; Garavaglia & Swinnen, 2015; Garavaglia & Swinnen, 2017a, 2017b). The overall argument, as summarised by Herrera (2016: 16), is that in a highly price competitive industry such as beer production 'generalist firms' once aimed to capture the largest amount of consumers which "opened the door for small, craft firms to enter the marketplace and target narrow segments of the consumer base through a variety of highly specialized products".

Resource partitioning theory is at the heart of vibrant theoretical debates (Carroll et al., 2002; Liu & Wezel, 2015). Esposti et al. (2017: 504) assert that scholarship around resource-partitioning "is one of the major contributions explaining the emergence of multiple segments within a maturing industry". For the brewing industry the seminal work is that by Carroll & Swaminathan (2000). According to the logic of many theories of organization, the dominance of large firms in an industry should constrain the emergence and operations of small specialist enterprises (Carroll et al., 2002). Resource partitioning theory challenges this notion by showing the existence of several maturing industries in modern economies that exhibit simultaneous trends of increased concentration and specialist proliferation. These dual trends are viewed interdependent as the theory holds

that under certain organizational and market conditions the increased dominance of large firms in an industry enhances the opportunities for specialist organisations (Carroll et al., 2002). When industries become highly centralised in monopolistic or oligopolistic arrangements large industry players are regarded as 'generalists' and open up opportunities for small firms to enter the market as 'specialists'. As argued by Carroll & Swaminathan (2000: 717) a resource partitioning model "explains the rise of late-stage specialist segments within an industry as an (unexpected) outcome of the consolidation occurring among large generalist organisations as they compete for the largest consumer resource bases of the mass market". Adoption of a massification strategy by generalist organisations thus increases the opportunities for specialist organisations and "small specialist producers exploit the opportunities for more specialised products" (Garavaglia, 2015: 11).

As applied to the brewing sector by Carroll & Swaminathan (2000) the above analysis has come under critical scrutiny and elaboration. Indeed, for Garavaglia (2015: 11) "this explanation is too simplistic". That said, Carroll & Swaminathan (2000) identify also the role of cultural factors. It is argued that "anti-mass production feelings, which follow concerns about scale, lead consumers to seek out specialist producers, wherein they make assumptions about quality and authenticity, even when the objective quality of generalist-produced products might be higher, or at least more consistent" (Pozner et al., 2015: 8). Accordingly, by choosing specialist rather than mainstream goods such consumers "may be enacting a symbolic protest against mass-produced society and corporate organizations" (Pozner et al., 2015: 8). In the case of Italy Garavaglia (2015) places greater emphasis upon demand-side issues. Factors discussed are consumer attitudes and changes in terms of demand which is becoming more sophisticated, refined and inclined to greater variety. In turn this shift of consumer behaviour opens up spaces for new businesses and organisational forms in brewing such as for craft beer micro-breweries. New cultural meanings also are attributed to consumption choices such that, as post-modern writers emphasise, "consumers were no longer just consumers"; rather "consumption was not only for utility but also for experience" (Garavaglia, 2015: 15). Indeed, as a whole, small producers are more likely than larger homogeneous 'generalist' organisations to customise their offerings to the particular needs of customer niches and of emerging micro-segments (Pozner et al., 2015: 9).

In terms of specific in-depth research on micro-entrepreneurs of craft beer the international literature contains only a relatively small number of contributions. Existing studies have focussed on entrepreneurs and micro-breweries in the United Kingdom (Danson et al., 2015; Ellis & Bosworth, 2015), USA (Alonso, 2011), Italy (Cannatelli et al., 2019), Sweden (Frisk & Johansson, 2018) and Australia (Watne et al., 2012; Watne & Hakala, 2013; Alonso & Alexander, 2017). Home brewing, the production of fermented beverages for (mostly) non-commercial purposes, is a hobby which is viewed as a seedbed or generator of business start-up intentions for craft breweries and microbreweries (Biraglia & Kadile, 2017). Researchers have disclosed the multi-faceted nature of home brewing as combining tangible elements such as the manufacture of craft beer, and the intangible such as the significance of sharing and socialising (Alonso et al., 2018). Explorations of home brewer motivational factors reveal that they engage and continue to participate in the activity "primarily because of intrinsic motivational factors of fun, excitement and enjoyment, and to a lesser degree by extrinsic motivational factors of learning opportunities and non-monetary savings" (Olson et al., 2014: 228). In a landmark examination of a nascent community of micro-brewing entrepreneurs in the US state of Alabama Alonso (2011) isolated several reasons for them opting to brew craft beer commercially. Among different motives were those of the discovery of business opportunities in terms of the niche market of craft beer, a change of professional focus in

terms of a career change to the brewing of craft beer and a "desire to provide local consumers with a different yet more personalised beer product" (Alonso, 2011: 422).

In several investigations the transition of a hobby into a business is explained by the entrepreneurs' desire to share their passion for craft beer (Watne et al., 2012; Watne & Hakala, 2013; Alonso & Alexander, 2017; Frisk & Johannsson, 2018). The concept of 'entrepreneurial passion' is defined by Cardon et al. (2009: 515) as "consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful for the self-identity of the entrepreneur". In Alabama Alonso (2011: 422) reported that all entrepreneur respondents "were in agreement that passion was the driving force behind their decision to open a micro-brewery". Frisk & Johansson (2018: 40) explore the motivations for business start-up of craft brewers in Sweden and stress "it was their passion for the craft and the product that motivated them to start their companies". In another study conducted in Australia once again passion for the industry and hobby of craft brewing emerged as a driving force for new start-ups (Alonso & Alexander, 2017). The multiple challenges of entrepreneurship in micro-brewing are highlighted in the UK context both by Danson et al. (2015) and Ellis & Bosworth (2015).

Passion for the product can mobilize the needed energy for prospective entrepreneurs to overcome challenging situations by dealing with any uncertainties and setbacks in the gathering of financial, human and social resources (Biraglia & Kadile, 2017; Cannatelli et al., 2019). Often entrepreneurial passion is associated also with 'creativity' as an important personal factor which is linked to the identification of opportunities that result in the establishment of new firms, including in the craft beer sector (Biraglia & Kadile, 2017; Reid & Gattrell, 2017). In Victoria, Australia Watne et al. (2012) identify how the region's craft brewing entrepreneurs were driven by some form of entrepreneurial passion and of how different forms of passion influence the business models that certain craft brewers choose to operate. Finally, from Sweden there is evidence that whilst the primary objective for why craft entrepreneurs started and maintained their microbreweries was because of passion it was observed that they perceived the achievement of profits as a necessity that would enable them the obtain their primary objective (Frisk & Johansson, 2018).

CRAFT BEER ENTREPRENEURS IN SOUTH AFRICA

The South African material is organised in terms of three uneven sub-sections of material. These relate respectively to (1) study methods and sources; (2) industry development and geography; (3) a profile of craft beer entrepreneurs, their business motivations and start-up challenges.

MATERIALS AND METHODS

The empirical work on South Africa draws from a national audit of producers which derived from an examination of the local industry press (especially the journal *On Tap*) as well as an internet search of craft beer websites. Primary data on craft beer production and entrepreneurs was gathered by a combination of face-to-face surveys, telephonic interviews, an online survey and visits to craft breweries. In total interview responses were obtained from 53 craft breweries which for year 2016 represents nearly 28 percent of all licensed microbreweries in South Africa. Prior to the collection of data interview questions were tested to determine the validity, accuracy and time needed to complete the face-to-face and telephonic interviews. In addition to these interviews further semi-structured interviews were undertaken with non-licensed microbrewers (essentially homebrewers) by attendance at the monthly meetings of 'Wart hogs', a homebrewers club in Johannesburg. In the presentation of qualitative material for ethical reasons only the names of craft breweries rather than of individual craft brew entrepreneurs are provided.

RESULTS AND DISCUSSION Industry Development and Geography

South Africa's first craft micro-brewery – Mitchell's Brewery at Knysna - launched operations in 1983 (Sidubi, 2017). Looking at the international historical spread of the craft beer revolution the beginnings of craft beer production in South Africa are similar to Australia (1980) and The Netherlands (1981) and preceded that of Italy's first brewpub in 1988 (Garavaglia & Swinnen, 2017a). As happened in other countries, however, the momentum of subsequent growth was slow. Notwithstanding the dominance of the South African beer industry by the products of South African Breweries Ltd (SAB) only a trickle of new craft beer establishments occurred in the 1990s and following South Africa's democratic transition in 1994. By 2003 a total of nine micro-breweries were in business. Acceleration in new brewery openings occurred post-2008 and especially during the period 2013 to 2016 which is the peak growth recorded for new start-ups of micro-breweries in South Africa (Rogerson, 2016). By 2016 a national audit discloses a population of 187 (licensed) craft micro-breweries which are the foundation for the country's expanding contemporary economy of craft beer tourism (Rogerson & Collins, 2015a).



Figure 1. The Geographical Distribution of Craft Breweries in South Africa by Provinces

Figure 1 shows the broad geographical distribution of craft breweries across the country as disaggregated on a provincial basis (2013). It reveals a widespread growth of micro-breweries across the country. The largest numbers of craft breweries have been initiated by entrepreneurs in the Western Cape, Gauteng and KwaZulu-Natal which contain the country's large population centres. Of significance, however, is the strong

clustering which occurs of craft breweries in some of South Africa's major tourism destinations such as Cape Town and Stellenbosch in the Winelands of Western Cape province. This result underscores the close relationship between entrepreneurship in craft brewing in South Africa and the country's growing tourism economy. Several craft breweries are situated in important small-town tourism destinations such as Clarens in Free State or Hermanus in Western Cape province (Rogerson, 2016; Rogerson & Rogerson, 2019). The responses from craft beer entrepreneurs in Stellenbosch show the nexus of craft beer and the area's expanding tourism economy as a whole and with culinary tourism in particular: *"From a tourism perspective we are located on one of the busiest roads between Paarl and Stellenbosch and it gives us access to the very popular 'Cape Spice Route' which has begun attracting many tourists to the region"* (Interview, Sir Thomas Brewery). Another response from a Stellenbosch interviewee confirms the link between tourism and craft brewing entrepreneurship:

"The original vision for operating the microbrewery out of Stellenbosch is because it already has a big tourism market and we wanted to try draw upon some of the beer travellers which as you know globally - beer tourism is much bigger outside of South Africa... Stellenbosch has a big culinary following and association – I mean currently at the moment four out of the top ten restaurants in South Africa are found here and people love wining and dining which is great because it creates a trend and people become more open to new types of tastes, especially for example food and craft beer pairing" (Interview, Stellenbrau Brewery).

Craft Beer Entrepreneurs – Profile, Motivations and Start-Up Challenges

This section provides a descriptive overview of the key findings from the 53 interviews which were undertaken with microbrewing entrepreneurs. In terms of the population of beer entrepreneurs the results reveal a majority dominance of males who represented 92 percent of the sample. The age range of entrepreneurs operating microbreweries was between 26 and 73 years, albeit the largest group were in the range of 41 to 50 years. Two-thirds of entrepreneurs in the sample were over forty years old with average age of the sample being 44 years. A significant finding relates to the high level of education of these craft beer entrepreneurs. Of those respondents who provided information 81 percent had a university or technikon degree and almost 50 percent (n=26) had obtained a post-graduate qualification.

The majority of the microbreweries would be categorised as family businesses. In total 64 percent of the respondents indicated that family members were involved in the running and operations of the microbrewery. Beyond family members, however, these craft micro-breweries are generating employment opportunities for an increasing number of people. Across the 53 survey enterprises the number of employees ranged from one to a maximum of 26 workers; the average across the sample was 4.8 employees. In total 73.6 percent of the sample engage five or less employees. The small-scale nature of these microbrewery operations is further evidenced by the production size of these microbreweries. Among the sample of respondents it was disclosed that the smallest production capacity was 10 000 litres annually; the largest was just over five million litres. As a whole, half of the interview sample operated microbreweries which produced less than 50 000 litres per annum. In terms of source of start-up capital the findings on Figure 2 confirm that microbrewery entrepreneurs use entrepreneurs' own savings or capital from their family as the core foundation for initiating the development of these microbreweries. In only a relative small number of cases was the business start-up funding sourced from external investors or through bank loans.

The group of interviewees was dominated by entrepreneurs for whom the production of craft beer represented full-time work. Prior to establishing a microbrewery this group of well-educated entrepreneurs was involved in a variety of different forms of work. This included as professional chef, restaurateur, chemist, engineer, informational technology consultant, marketing, finance, advertising, education and farming.



Figure 2. Source of Start-Up Capital Used by Craft Beer Entrepreneurs in South Africa

In several cases it must be noted there was a direct previous link to the established liquor industry. For example, one respondent was a former brand manager for SAB, another was an established winemaker, and a third had been involved in the distribution of craft beer from other existing micro-breweries. The differing routes into craft beer entrepreneurship in South Africa are illustrated by the following interview responses:

"Was setting up Paulaner Brauhaus Breweries around the world and then settled here in South Africa. But, overall 16 years Master brewer at Paulaner Brauhaus" (Interview, Cape Brewing Company).

"I'm a restaurateur and basically saw the hype surrounding craft beer" (Interview, That Brewing Company).

"I was employed as a winemaker" (Interview, Long Beach Brewery).

"I was running the chef school and still do but the microbrewery forms part of the chef school now" (Interview, Porcupine Quill Brewery).

"One of the partners worked and lived in San Francisco, and obviously being 'Beer Central' decided he wanted to start something when he returned to South Africa.... One of the other partners was already in winemaking and decided to come on board and give beer brewing a shot" (Interview, Devils Peak Brewery).

Of the sample of 53 respondents 83 percent stated that the brewery was a full-time business. The remainder indicated that work on the brewery was supplemented by other income-earning opportunities including 'consultancy work'. In three cases the microbrewery was regarded as a 'sideline' to running an existing winery.

One respondent elaborated as follows: "We were running an existing winery [Remhoogte Wine Estate] which is our primary business focus. We just started making beer for fun and then started selling a bit of it in our existing tasting room and it sort of snowballed from there on" (Interview, Wild Beast Brewery). In terms of the establishment of the microbrewery industry, the overwhelming emphasis in the interviews was that entrepreneurs started beer production as a hobbyist pursuit in terms of homebrewing then subsequently expanded it from a hobby by the recognition of a business opportunity. Overall, more than two-thirds of the respondents made it clear the microbrewery industry initially grew out of what was essentially a hobby, a finding that mirrors craft beer research in the USA (Alonso, 2011; Biraglia & Kadile, 2017). The remainder of the sample were cases of the direct entry of entrepreneurs into the microbrewery industry because of a perceived business opportunity. The following interview responses exemplify these reasons for the establishment of microbreweries.

"A hobby which got out of hand a bit" (Interview, De Garve Brewery).

"A transition from a hobby – it had nothing financial to do with it; it was purely for the love and passion for brewing excellent beer" (Interview, Cape Brewing Company).

"Initially it was a hobby, then people really started enjoying our beer that we were making. We saw a good business opportunity from that stage to make a craft brewery in the heart of Durban North where none exists" (Interview, Odyssey Craft Brewery).

"Was initially a lifetime hobby of my father, and he decided to make a business out of it" (Interview, Black Horse Brewery).

"It was presented to us by a good friend and I have seen it as a business opportunity - farming is very hard these days" (Interview, Brauhaus am Damm).

"I think initially it started as a hobby, but the scale that we are at now we never planned or thought it would get so big so quickly, but obviously capital is a limiting factor. So, when we had enough capital to go bigger and to expand it we did it because we saw the demand and the growth in the sector" (Interview, Devils Peak Brewery).

"It was from a hobby, but it was not so much as me chasing it for a business opportunity – it was more me trying to get out of industry. You may have heard this story before but you go out and study after school you pick a career or a profession. You go into that and after a few years you get a bit disillusioned by the whole thing. It is more paper work and time consuming then it actually is thinking and designing stuff, so I wanted out. I looked at other opportunities and I loved my beer brewing – so I thought oh well, let's give it a shot and see if it works or not" (Interview, Basset Breweries).

In common with international research findings about the 'passionate' nature of entrepreneurs about microbrewing the overwhelming response from the sample of interviewees was the decision to enter commercial craft beer production linked to the entrepreneur's passion for beer. In only a small number of cases was there a recorded response that indicated that the entrepreneur was purely opportunistic. The following responses from the interviewees emphasize further the passion and lifestyle considerations that are directly linked to the production of craft beer in South Africa. Beyond simply lifestyle considerations many entrepreneurs recognized that their passion for producing craft beer could translate into a long-term business activity.

"Passion for beer and brewing. Wanting an alternative offering than mass commercial offerings for ourselves. Finding fans of our beers in friends and family alike also not wanting mass commercial beers" (Interview, Clarens Brewery).

"It seemed like something interesting to do! Why must we be forced to drink the same beer over and over again? I also don't like the idea of working for others and much prefer to be my own boss and fortunate enough right now that is a reality" (Interview, Odyssey Craft Brewery). "It's a lifestyle and passion choice. It was also strongly driven by our drive to become entrepreneurs and independent" and "Passion for the industry, and determination to own our own business" (Interview, Red Sky Brew).

"Love of beer and brewing, helping people see there is more to beer than just [SAB] Castle Lite" (Interview, Three Skulls Brew Works).

As a whole, these findings from South Africa align closely to those reported from other investigations particularly those in Australia, Sweden and the USA concerning business start-up and entrepreneurial motivations (cf. Alonso, 2011; Watne et al., 2012; Alonso & Alexander, 2017; Frisk & Johansson, 2018). Arguably, the craft beer economy of South Africa has been entered by a mass of entrepreneurs with a passion for the product, for the industry and to take up opportunities to untap a niche market. In many cases also professional/career and/or lifestyle change was another significant driver for craft beer business start-up. Further responses stressed the desire to launch a new business venture as well as the significance of identifying business opportunities in a local beer market landscape which was dominated by the products of large enterprises and especially of the homogeneous offerings of South African Breweries.

Respondents were queried as to the major challenges that they faced as start-up craft beer entrepreneurs. Several different themes emerged from the survey as well as the thematic analysis of the qualitative interviews. The two core issues related first to legislation and licensing considerations and second to establishing a market for their product. The question of the regulatory environment was an important focus in the interviews with craft beer entrepreneurs. From the responses of interviewees regarding the question 'What regulations they had to comply with in running a microbrewery and whether they may have encountered any issues with liquor licensing and/or zoning restrictions', the respondents raised a number of challenging issues about the regulation and licensing of start-up micro-breweries. These problems are evidenced in the following select comments from survey respondents.

"Three liquor licenses were needed, and yes it was a massive effort needed to get brewing license, the rest were health inspections for setting up of a kitchen" (Interview, Chameleon Brewhouse).

"There is a massive problem in Gauteng with obtaining licences" (Interview, Aces Brew Worx).

"As we are on a farm, we had to rezone the buildings. This took 4 years. Had to get a number of reports drafted for various government organizations - Water Affairs, Environmental Affairs, Roads Management, etc. The provisional liquor license took 1 year to come through" (Interview, Honingklip Brewery, Bot River).

"The Liquor Licence was a long road we basically waited a year for it, so each province has its own Liquor Board but the Natal one I think is just a little backwards. Otherwise zoning not a problem" (Interview, That Brewing Company).

"Oh yeah, the liquor licence was the main thing that held us back – unfortunately our government is not the quickest when it comes to these types of applications and our experience was absolutely horrible and we basically waited a year and six months for ours to be finally processed" (Interview, Sir Thomas Brewery).

A minority of respondents pointed out, however, that the issues relating to zoning and licensing were not major challenges in certain locations.

"No, our location for the microbrewery was originally zoned as an industrial area – and we planned accordingly prior to our launch so we never really encountered any major setbacks..." (Interview, Stellenbrau Brewery).

"For me there were no obstructions, but I do know of a number of brewers who have encountered serious problems, whereby it took some of them two years to receive their licence..." (Interview, Triggerfish Brewery).

The establishment of a market for their craft beer production was a second obvious critical challenge for the successful establishment of these enterprises. The expansion of these microbrewery businesses is driven by internal processes for strategic marketing and selling of craft beer products. Across the sample of 53 craft breweries different methods for selling their craft beer product are observed (Figure 3). The findings reinforce the link between craft beer entrepreneurship and tourism. It is observed that the most important methods of sale were direct sales at the brewery which was used by 81 percent of the sample and participation at the increasing number of beer festivals which have proliferated across South Africa (Rogerson & Collins, 2015b, 2015c). Other important sales were made through local brew pubs and restaurants as well as retail outlets.



Figure 3. Different Microbrewery Sales Channels

The role of craft beer festivals was identified as especially important for marketing purposes. In total 83 percent of the sample rated craft beer festivals as either "important" or "very important" for business development. Indeed, the interviews revealed that craft beer festivals were a significant base for showcasing the craft beer products, for networking and provided a platform to interact with clients by allowing them to taste as well as to increase the awareness of the microbrewery in terms of its location and product offerings. Questioned as to how the microbrewery entrepreneurs market their beer, the role of craft beer festivals alongside that of social media was identified by 73.5 percent of the sample respondents. Equally of note was the significance of the internet and websites for marketing, which was used by more than two-thirds of the sample 64 percent. By contrast, traditional marketing channels of print magazines and newspapers were used by only 41 percent of the sample.

For small enterprises such as these microbreweries, of critical importance for business growth is the development of co-operative business relationships. In Canada Plummer et al. (2005) recognised that craft breweries tend to benefit from partnering and collaborating with one another. Similar results emerge from South Africa.

It was made clear that majority of microbreweries (85 percent) are involved in a variety of business relationships with other breweries in a manner that they co-operate together in order to increase their competitiveness. Important forms of co-operation relate to knowledge transfer, sharing of brewing ideas and collaboration in terms of technical support. In addition, of importance was the development of co-operative relationships regarding bulk buying of raw materials which reduces costs.

Further co-operation exists in terms of the distribution of products as well as cooperative marketing. The collective response from interviewees indicated that these microbrewery enterprises are expanding at a rapid rate due to changing market demands in South Africa. The reasons given for the expansion of these microbreweries were various and related to good branding, participation at craft beer festivals and the high quality as well as range of their beer product offerings.

"Absolutely, I put my growth down to good marketing and national visibility by going to every festival around the country" (Interview, Three Skulls Brew Works).

"I would say the main thing is that people want to try something new, they are tired of being forced to only drink SAB products as that is all that has been available. There is a massive interest in the brewing process and when the public comes to a microbrewery they get to speak to the brewer, speak in depth about the beer. It isn't just one massive way to make beer; it's almost as if craft beer has its own unique beer drinking culture. People want to try something new, something different, and in central Durban nothing has existed like this before" (Interview, Odyssey Craft Brewery).

"Beer festivals are the main source of business. Festivals with food, like Taste of Joburg have been instrumental in making people aware of the craft beer market" (Interview, The Dog and Fig Brewery).

"More people are becoming aware of the distinctiveness of the craft beer we make" (Interview, Honingklip Brewery).

"The main contributing factors is definitely the increased interest in boutique beers from people who would usually be considered as 'SAB Loyalists' their whole life but are now willing to pay a little extra for a much better tasting beer... We are also focusing a lot of our marketing towards the local community of Stellenbosch and creating truly local beers which give recognition to the town and give us a good homegrown following" (Interview, Stellenbrau Brewery).

"Yes, the main influencing factors would be the growth of craft beer in general as a whole – so basically this whole new/big phenomenon that people want something different. They desire more flavour from their beer and they also don't want the watered down; commercially made beer anymore. I mean look everybody does still drink the stuff but I think people want something more - More options not just basic 'Lagers' (Interview, CBC Brewery).

In reviewing these above qualitative responses within a comparative international context it is significant to observe similar issues are raised about business challenges at the start-up of craft breweries as reported from research conducted in the United Kingdom, USA and Australia. In particular, the role of the legal framework in the control of the production and selling of craft beverages is stressed especially in research in the USA (Williams, 2017; Kline et al., 2017). For the nascent craft beer entrepreneurs of the

state of Alabama Alonso (2011: 426) records that in establishing their craft beer facilities among the main challenges "it was not surprising to notice that the hindrance of the current laws was once again underlined among participants".

CONCLUSION

Beer tourism is expanding in international popularity as a niche form of food and drink tourism (Bujdoso & Szucs, 2012a; Hall & Gossling, 2016). Arguably, the most rapid current developments around beer tourism concern craft beer and visits to craft beer micro-breweries, brew pubs or beer festivals (Dunn & Wickham, 2016; Kline et al., 2017). Small-scale craft beer entrepreneurs are the foundation and anchor for the recent emergence of craft beer tourism in South Africa. These entrepreneurs in South Africa are part of the ongoing international craft beer revolution triggered by consumer reaction against the homogeneous offerings from large macro-brewers.

In a theoretical context their appearance can be aligned with debates around resource partitioning in mature industries. The most striking finding about the beer entrepreneurs in South Africa is around the passion they express both towards the authenticity of their product and the new industry that they are currently shaping. The growth of tourism practices such as brewery tours, tasting bars and craft beer festivals is part of the emergence of this craft beer sector in South Africa. Further research investigations are merited concerning the unfolding of craft beer entrepreneurs and tourism in South Africa as well as other parts of the global South.

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MOTIVATIONS, INTENTIONS TO RETURN AND TO RECOMMEND PROTECTED AREAS: A STUDY IN COSTA RICA

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Abstract: In recent years, there has been a growing interest among tourists for the enjoyment of the natural environment. This study was designed to analyze the motivations tourists exhibit to doing ecotourism and their influence on the intentions to return and recommend a protected area. The empirical analysis was carried out in the Arenal National Park and the Caño Negro National Wildlife Refuge in Costa Rica. The sample population consisted of 213 respondents, who were obtained in situ. A factor analysis and the multiple regression method were performed to analyze the data obtained. The results show that there are several motivational dimensions related to ecotourism, such as "self-development", "interpersonal relationships and ego-defensive function", "nature", "building personal relationships", "reward" and "escape". There is a relationship between the motivations and the intentions of returning and recommending the site. This research will serve public institutions and private companies to develop more efficient marketing plans.

Keywords: motivation, satisfaction, recommendation, return, ecotourism

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INTRODUCTION

Ecotourism has an annual growth of 5% worldwide, and it grows three times faster than tourism in general (Hultman et al., 2015). Its importance increases because it has become one of the fastest-growing sectors in the tourism industry (Das & Chatterjee, 2015). The tourism influences the socio-cultural, economic, and environmental livelihood of the community (Atanga, 2019). Tourists seek meaningful experiences, such as getting in touch with local communities, learning about an ecosystem, and participating in the conservation of natural resources (Balmford et al., 2009). Ecotourism areas have become crucial destinations due to their efficiency in environmental protection, education, recreation, and job creation (Tao & Wall, 2009). At the same time, tourists are more environmentally aware and have stronger motivations to attend attractions and activities due to environmentally-related content (Luo & Deng, 2008). Motivation has become a fundamental concept in traveling behavior analysis, and it determines different aspects of tourism, in regards to the reasons for traveling, the specific destination and general satisfaction with the trip (Castaño et al., 2003). In this sense, each visitor can have different motivations and preferences for different destinations (Kozak, 2002).

On the other hand, attracting new visitors is more expensive than attracting those who have already visited the destination (Shoemaker & Lewis, 1999). So, it is essential to analyze the motivations tourists have and their influence on their intentions to return and recommend a tourist site. However, several studies analyze these variables in ecotourism.

Costa Rica is a Central American country where visitors seek experiences, mainly, in the field of ecotourism. The Arenal National Park and the Caño Negro National Wildlife Refuge are two examples of such type of visiting areas. The Arenal National Park houses the Arenal Volcano, an icon of Costa Rican nature which began its activity in 1968, after 500 years of being in a dormant status. This protected area is a living laboratory, because of its geological and geomorphological richness and its complexity in the development of biological processes, as it houses a wide range of greenery, from pioneer vegetation to primary forests. The Caño Negro National Wildlife Refuge is a wetland concentrating a large number of endangered species. Visitors can find migratory birds, many mammals, and some endemic freshwater fish. There are also swamps and lagoons throughout the reserve. This article presents an analysis of the motivations to do ecotourism and their influence on the intentions to recommend and return to the Arenal National Park and the Caño Negro National Wildlife Refuge. Thus, providing information to tourism marketers which will help them plan efficient marketing strategies. To meet this objective, this article is organized in several sections, beginning with the introduction, followed by the second section where the relevant literature is reviewed, the third section describes the area of study, while the fourth one looks at the research methodology, the following section covers the results, to end up with the discussion of results, the conclusions reached, as well as the limitations of the study and what it is believed to be possible future lines of research.

THEORETICAL FRAMEWORK Motivations in ecotourism

Motivation is defined as the psychological needs and desires that provoke, direct, and integrate behavior and activity (Pearce, 2013). Also, motivational factors are defined as psychological needs that play an important role in making a person feel a psychological imbalance that can be corrected through a traveling experience (Crompton, 1979; Kim et al., 2000). Furthermore, Meng et al. (2008), explain that motivations are the set of needs which influence a person to participate in a tourist activity. It is the central factor in the decision-making process (Yolal et al., 2015). The study of motivations allows us to

understand the choice, preferences, and needs of a traveler (Bansal & Eiselt, 2004). Also several authors ascertain that motivation determines the intention to visit the destination and some of them establish a relationship between satisfaction and the intention to return to the destination (Huang & Hsu, 2009; Jang & Feng, 2007; Rittichainuwat et al., 2008; Yoon & Uysal, 2005; Lee et al., 2014). In addition, Yoon and Uysal (2005) mention that it is essential to understand the motivations of tourists and their relationship during the visit. Tourists have different reasons to visit different attractions and destinations which are related to nature (Chikuta et al., 2017). Relaxation in a natural environment was described as an essential need for ecotourists.

In ecotourism, several motivations drive tourists to a coastal national park (Carvache-Franco et al., 2019a). In this sense, Holden and Sparrowhawk (2002) point out that the main intrinsic motivations for ecotourists are to learn about nature, be physically active, and meet people with a similar interest. Page and Dowling (2002) mention that some ecotourists travel to meet their recreational and pleasure needs, as well as to learn about specific areas. Lee et al. (2014) analyzed tourists visiting restored ecological parks in South Korea, finding seven factors related to their motivations. Namely, they identified self-development, interpersonal relationships, rewards, development of personal relationships, escape, ego-defensive function, and appreciation of nature as the primary motivations. Going further, Panin and Mbrica (2014), found in the Republic of Serbia the most important motivations for ecotourists, to be social activities, sports and health activities, motivation for nature and culture and educational activities. They argue that the motivations related to sports and recreational activities, the positive impact on health, walking through the forest, seeing and enjoying nature, are the main motivations in ecotourism. Regarding the characteristics of ecotourists, Cheng, Gurzoy, and Del Chiappa (2016) consider that ecotourists would positively influence the intention, interest, and willingness to pay a higher price for ecotourism products and services. In this sense, Nickerson, Jorgenson, and Boley (2016) have concluded that sustainable tourists are willing to spend more money, which can increase the income of sustainable tourism destinations.

STUDY AREA

The Arenal National Park is located in the North Region of Costa Rica, in the Guanacaste Volcanic Mountain Range, north of the Sierra de Tilarán and part of the San Carlos plains. It has an extension of 12.124 hectares. The land's surface is irregular, from deep valleys with significant slopes, cut by large rivers, to flat and undulating forms. It is considered an aquifer recharge area, whose waters drain to the Arenal Reservoir for their use in the production of hydroelectric power and agricultural projects, like in the Irrigation District of Moracia. The Chiquito, Peñas Blancas, and Río Frío rivers are born here. The Park protects essential species of flora and fauna which are characteristic of the premontane rain forest and the cloud forest and of great scientific and tourist value. Among the most outstanding wildlife species we have: pacas, tapirs, deer, jaguars, peccaries, white-nosed coatis, and monkeys. A great diversity of snakes, as well as birds of various varieties among which stand out: praises, sergeants, brown magpies, parakeets, hummingbirds, bell birds, among others. The Caño Negro National Wildlife Refuge is located in the lower part of the Frio river basin, in the Northern Plains, 21 km south-west of the community of Los Chiles and 36 km southeast of the community of Upala, in the cantons of the same name in the province of Alajuela. Visitors have to go through the reservation by canoe or boat, depending on the weather conditions, and it has an area of 10,171 hectares. The refuge conserves one of the most important samples of humid areas of the Costa Rican territory, considered of international importance for serving as a large number of migratory, endangered and environmentally important species (Figure 1).

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Arenal Volcano National Park and Caño Negro Mixed National Wildlife Refuge (Costa Rica)

METHODOLOGY

The sample population was obtained from national and foreign tourists who were, at the time of doing the study, visiting the Arenal National Park with 106,461 visitors in 2017 (Costarrican Institute of Tourism, 2017) and the Caño Negro National Wildlife Refuge. Surveys were applied, during March and April of the year 2019, to visitors of the aforementioned protected areas. The measurement tools developed for this study were based on several previous studies on motivations in tourism (Crompton, 1979; Fodness, 1994; Weaver & Lawton, 2002; Galley & Clifton, 2004; Lau & McKercher, 2004; McGehee & Kim, 2004; Jang & Wu, 2006; Lee et al., 2014). Using the SPSS Statistical System, the Cronbach Alpha index reached the value of 0.94, indicating a meritorious index on the scale. The questionnaire for this study was divided into two parts. The first part of the questionnaire measured the sociodemographic and visiting characteristics of the respondents. The second part of the questionnaire consisted of questions based on a fivepoint Likert scale, where 1 was little and 5 a lot. This section measured the motivations, satisfaction, and intentions of returning and recommending the site.

The data were analyzed in two stages. First, a factor analysis, which has been widely used in visitor segmentation research (Formica & Uysal, 1998; Kastenholz et al., 1999; Johns & Gyimothy, 2002), was carried out which helped identify the constructs that underlie the variables, providing a global view of the most important motivations using those constructs. Varimax rotation was used to facilitate the interpretation of the data. The Kaiser criterion was used to find the number of factors, where only factors with eigenvalues greater than one were used. The KMO index (Kaiser-Meyer-Olkin) and Bartlett's Sphericity test were used to determine if it was appropriate perform the factor analysis. In the second stage, the step-by-step multiple regression method was implemented to assess the intentions of returning and recommending the ecotourism destinations. The population variability was estimated at 50% (p = q = 0.5). The sample size, considering a margin of error of +/- 6.7% and a confidence level of 95%, came out at 213, which was the number of surveys applied. The data collected was organized, tabulated, and statistically analyzed using the SPSS 22.0 program.

Demographics	Categories	n	Percentage
Nationality	National	57	26.8
Nationality	Foreign	156	73.2
	North America	46	21.6
	Europe	90	42.3
Origin	South America	7	3.3
_	Asia	8	3.8
	Rest of the world	62	29.1
Candan	Male	102	47.9
Gender	Female	111	52.1
	<20 years of age	17	8.0
	21-30 years of age	86	40.4
4.50	31 - 40 years of age	38	17.8
Age	41 - 50 years of age	32	15.0
	51 - 60 years of age	32	15.0
	>60 years of age	8	3.8
	Single	97	45.5
Marital status	Married	86	40.4
	Other	30	14.1
	Primary	9	4.2
Lovel of advantion	Secondary	37	17.4
Level of education	University	102	47.9
	Postgraduate (Master/PhD.)	65	30.0
	Student	32	15.0
	Researcher / scientist	5	2.3
	Businessperson	38	17.8
Duofoggional activity	Private Employee	58	27.2
riolessional activity	Public Employee	40	18.8
	Retired	7	3.3
	Unemployed	6	2.8
	Other	26	12.2
	Alone	8	3.8
	With family	77	36.2
Who you visit with	With friends	57	26.8
	With a partner	64	30.0
	Other	7	3.3
	< \$30	37	17.4
	\$30.01 - \$60	71	33.3
Average daily expenditure	60.01 - \$90	44	20.7
Average uany expenditure	\$90.01 - \$120	27	12.7
	\$120.01 - \$150	20	9.4
	\$150	14	6.6

Table 1. Sociodemographic characteristics of the visitors
RESULTS

The sociodemographic and visiting traits of the respondents are presented in Table 1. From the total number of respondents, 26.8% of them were national visitors, while 73.2% of the sample were foreign tourists. When asked about their countries of origin, 42.3% disclosed coming from European countries. Whilst, 47.9% of visitors were men and the remaining 52.1% disclosed their sex to be, female. 44.5% of the travelers surveyed reported to be single and 40.4% were married. The majority of the vacationers consulted ranged the age of 21-30 (40.4%) and the 31–40 age range came to 17.8%. They acknowledged having a university education, 47.9% of them, while 30.0% had postgraduate education. Regarding occupation, 27.2% were private employees and 18.8% were public employees. At the moment of asking for the average amount of money they spent at the destination, 20.7% replied that it had been between 60 to 90 dollars a day. Finally, approximately 36.2% of the visitors traveled to the destination accompanied by other family members and 26.8% were enjoying the destination with their friends.

Factorial analysis

A factor analysis was carried out, allowing the extraction of six motivational dimensions. The principal component analysis was adopted as a technique performed for data reduction. The Varimax rotation method was applied to obtain a more precise interpretation of the factors so that each one had very high or low factor loads. For the number of factors used in the Kaiser criteria, factors having their eigenvalues greater than 1.00 were taken into account. Six factors were part of the solution and represented 69.85% of the total variance. The KMO index (Kaiser-Meyer-Olkin) is 0.91, so it is excellent for factor analysis. In addition, Barlett's sphericity test is significant <0.05, so a factor analysis should be applied. Results are shown in Table 2.

According to the results presented on Table 2, the first factor identified was called "self-development" and is the factor with the greatest explanatory capacity (36.01%) of the total variance. This first dimension was related to the motivations knowing what I am capable of, having a sense of self-confidence, getting a new perspective on life, feeling harmony and inner peace, being independent, understanding more about myself, thinking about the good times I've had in the past, and have the opportunity to know myself better. The second factor was entitled "Interpersonal relationships and ego-defensive function" which met 14.27% of the total variance.

This second dimension was related to, remembering the times of parents, contacting family and friends who live in other places, strengthen the relationship with my family, reflecting on memories of the past, feeling that I belong, following current events and joining the social discussion. The third factor was called "nature" and comprises 6.06% of the total variance. This third dimension was related to visitors motivated by observing flora and fauna, being close to nature, observing landscapes and learning about nature. The fourth factor was called "Building personal relationships" and includes 5.06% of the total variance.

This fourth dimension is related to visitors motivated to meet new people, meeting people with similar interests, meeting locals and being with others if I need it. The fifth factor is called "Rewards" and comprises 4.72% of the total variance. This fifth dimension is related to visitors motivated to obtain good memories, explore the unknown, develop my personal interests, experience new things and have fun. The sixth factor was called "escape" and comprises 3.72% of the total variance. This sixth dimension is related to visitors motivated to be away from daily stress, to escape from routine, to avoid interpersonal stress and to be away from crowds. These results are similar to those of (Lee et al., 2014) that obtained seven motivating factors in their

study, namely self -development, interpersonal relationships, rewards, development of personal relationships, escape, defensive ego function, and appreciation of nature.

Wardahara	Componen			Factors			
variables		2	3	4	5	6	
To know what I am capable of	0.786						
To gain a sense of self-confidence							
To think about the good times, I have had in the past							
To feel inner harmony/peace	0.717						Self-
To understand more about myself	0.705						development
To be independent	0.686						_
To gain a new perspective on life	0.674						
To have a chance to get to know me better	0.66						
To reminisce about parents' times		0.805					
To contact with family/friends who live elsewhere		0.784					
To feel that I belong		0.743					Interpersonal
To strengthen the relationship with my family		0.742					relationships
To reflect on memories		0.726					and ego -
To follow current events		0.678					function
To join the social discussion		0.673					Tunction
To join people's interest		0.548					
For observation of flora and fauna			0.79				
To be close to nature			0.774				Nature
For the appeal of nature To attain a better appreciation of nature			0.767				
			0.748				
To observe its landscapes			0.721				
To learn about nature			0.717				
To meet new people				0.799			D 11
To meet people with similar interests				0.787			Building
To meet the locals				0.754			personal
To be with others if I need them				0.687			relationships
To have fond memories					0.78		
To have fun					0.739		
To explore the unknown					0.719		Rewards
To develop my interests					0.716		
To experience new things					0.655		
To be away from daily stress						0.826	
To escape from routine						0.819	Escape
To be away from the crowds of people						0.651	1
Auto values	12.24	4.85	2.06	1.72	1.61	1.27	
% of variance explained	36.01	14.27	6.06	5.06	4.72	3.72	
KMO			0.	91			
Bartlett's sphericity test	Chi s	quared	l = 53	70.498	$3 \operatorname{sig}=0$	0.000	
Extraction method: Principal component analysis.	Rotatio	n metho	od: Vari	max wi	th Kaise	er	

 Table 2. Factorial analysis

The motivations and intentions to revisit these protected areas

The step-by-step multiple regression method was used to analyze the motivational dimensions that influence tourists to re-visit protected areas. The results are shown in Table 3. Among the three functions of significant motivation (Table 3), it was found that the nature dimension was the most significant predictor of respondents' intentions to revisit the protected area (Beta = 0.208, p <0.01). This means that people

could believe that their motivations to visit the protected area kept them committed to nature. This finding is in line with the results of the research carried out by Kang et al., (2012), who studied the behavior of Ollegil's eco-tourists and found that 33.8% of the study participants had visited the site to appreciate nature. The second most significant element was the "rewards" (Beta = 0.193, p < 0.01). While the third element was "self-development" (Beta = 0.180, p < 0.01).

Tuble 3. Motivations and intentions to retain (Mattiple regression method)						
Motivational dimensions	Beta	t	Sig.			
Nature	0.208	3.180	.002			
Rewards	0.193	2.946	.004			
Self-development	0.180	2.750	.006			
(Constant)		45.248	.000			

Table 3. Motivations and intentions to return (Multiple regression method)

The motivations and intentions to recommend protected areas

The step-by-step multiple regression method was used to analyze the motivational dimensions that influence tourists to recommend protected areas. The results are shown in Table 4. Among the five significant motivational functions (Table 4), it was found that the nature dimension was the most significant predictor of the intentions to recommend the protected area (Beta = 0.329, p < 0.01). Meaning that people could believe that their intentions to recommend the protected area kept them committed to nature. The second most significant element was the "rewards" (Beta = 0.317, p < 0.01). While the third most significant element was the "escape" (Beta = 0.159, p < 0.01).

Motivational dimensions	Beta	t	Sig.
Nature	0.329	5.536	0.000
Rewards	0.317	5.334	0.000
Escape	0.159	2.679	0.008
Building personal relationships	0.136	2.283	0.023
Interpersonal relationships and ego-defensive function	0.131	2.205	0.029
(Constant)		73.909	0.000

Table 4. Motivations and intentions to recommend protected areas (Multiple regression method)

Satisfaction at the destination

To analyze the satisfaction attained at the destination, a 5-point Likert scale was used, where 1 was strongly dissatisfied and 5 was strongly satisfied (Table 5). According to table 5, 51.2% of tourists were completely satisfied with their visit at the destination, so the potential of the destination for ecotourism is confirmed. Also, the average level of tourist satisfaction was 4.35, being a high level of satisfaction.

Variable	Completely dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Completely satisfied		
Satisfaction (percentage)	1.4%	2.3%	7.5%	37.6%	51.2%		
Satisfaction (average)			4.35				

Table 5. Satisfaction at the destination

Satisfaction and intentions to return and recommend

To analyze the relationship between satisfaction and the intentions of returning and recommend the destination the Spearman Coefficient was used (Table 6). According to table 6, there was a significant and positive correlation between the intentions of returning and recommending the destination, and the satisfaction, so the intentions of returning and recommending the ecotourism destination were influenced by the satisfaction experienced by tourists.

Table 6. Intentions to return,	recommend and satisf	faction (Spearman'	s coefficient)
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Variables	Coefficient
Intentions to return to this ecotourism destination	0.582**
Intentions to recommend this ecotourism destination	0.770**
** The correlation is significant at the 0.01 level	•

** The correlation is significant at the 0.01 level

DISCUSSION AND CONCLUSIONS

After the study, it was concluded that the gender, age, and education of ecotourists in this study are consistent with eco-tourists from previous studies (Galley & Clifton, 2004; Juric et al., 2002; Kwan et al., 2008; Weaver & Lawton, 2002). In ecotourism, there are several motivational dimensions. The leading motivational dimension is "selfdevelopment," which is related to gaining self-confidence and being independent. Selfdevelopment has also been understood and defined as the search for personal growth and the desire to learn and interact with a host culture and its community (Crompton, 1979; Calantone & Johar, 1984; Dann, 1981; Etzel & Woodside, 1982; Woodside & Jacobs, 1985). The second dimension is "Interpersonal relationships and defensive ego function", related to visitors motivated by the strengthening of relations with family members and the monitoring of current events. The third dimension is "nature", related to a visitor's motivation to appreciate nature. It has often been found that appreciation of the natural environment is the predominant motivation of ecotourists (Weaver & Lawton, 2002; Wurzinger & Johansson, 2006). The fourth dimension is "Building personal relationships", related to a visitor motivated to meet new people. People tend to behave according to socially desired issues (McGehee & Kim, 2004). The fifth dimension is "Rewards", which relates to a visitor motivated by having fun and experiencing new things. Therefore, tourists travel to reward themselves when taking a break (Broad & Jenkins, 2008). The sixth dimension is "Escape", related to a visitor motivated by escaping from their daily routine (Crompton, 1979; Lounsbury & Hoopes, 1985; Woodside & Jacobs, 1985). These findings are similar to those of (Lee et al., 2014), who found seven motivational dimensions in ecotourism (self-development, interpersonal relationships, rewards, development of personal relationships, escape, ego-defensive function, and appreciation of nature as the primary motivations. In addition, the findings above support other previous research related to the dimensions which motivate ecotourists (McGehee & Kim, 2004; Weaver & Lawton, 2002; Zeppel, 2008; Carvache-Franco et al., 2019b).

Also, the nature dimension is the most significant predictor of the respondents' intentions to revisit the protected area; this finding is in line with the results obtained by Kang et al. (2012). Furthermore, rewarding and self-development are also significant predictors of the intention to revisit the protected area. While, the nature dimension was the most significant predictor of intentions to recommend the protected area, followed by reward and escape. The satisfaction tourists had experienced at the destination influence their intentions of returning and recommending the destination. Therefore, if satisfaction is improved at the destination, the intentions of returning and recommended that the service be improved in companies and institutions that interact with tourists, in addition to improving the service in natural parks and protected areas related to ecotourism. Among the practical implications, it is worth mentioning that operators and companies linked to the tourism sector can plan strategies according to the motivations in ecotourism and thus increase

the tourists' intentions to visit and recommend these protected areas. Finally, among the limitations, the temporality with which the study was carried out can be mentioned. In regards to the future research lines, investigation the segmentation of demand in ecotourism, using motivations as a segmentation criterion, is proposed.

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RECONSIDERING PARTICIPATION FOR LOCAL COMMUNITY WELL-BEING IN ECOTOURISM IN GHANA

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Abstract: This study focused on enhancing participation in ecotourism development for local community well-being. A mixed methodological approach was employed in the data collection and analysis. Semi-structured questionnaires were used to target 327 locals. In addition, in-depth interviews were conducted with relevant key informants. The study revealed that the community was not boosted by any tangible infrastructure as a result of the development of ecotourism based on the Sanctuary. The study further revealed that the majority of the local members had relatively little education and entrepreneurial training to enable them to benefit from ecotourism business. The study recommends improved engagement between the locals and the management to enhance their involvement in the Sanctuary's sustainability. Additionally, the members of the local community should be engaged in entrepreneurial capacity-building programmes to introduce them to tourism and alternative livelihood options towards enhancing their well-being.

Key words: ecotourism, sustainability, local well-being, community participation, Ghana

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INTRODUCTION

The World Travel and Tourism Council (WTTC), which represents the global private sector of travel and tourism, estimates that travel and tourism in 2018 contributed \$8.8 trillion to the global economy. The industry grew faster than did the global economy for the eighth successive year (3.9% for travel and tourism versus 3.2% for the global GDP). It also generated 10.4% of all global economic activity and contributed 10.0% that is 319 million jobs globally (WTTC, 2019). Consequently, in view of its socio-economic implications, many countries desire to expand their tourism and hospitality industry. However, the literature attests that tourism activities have the potential to disrupt, disturb and damage natural habitats, as well as to erode the socio-economic viability of

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the local communities (Carter et al., 2015). Especially in the rural areas, tourism development can trigger a cascade of social, ecological, cultural, and economic changes that are not easily manageable by the local residents (Rogerson & Visser, 2004).

Such changes have led to advocacy for a more culturally and environmentally friendly form of tourism (Fennell, 2014; Lawton & Weaver, 2015; Kimbu & Tichaawa, 2018; Yasu et al., 2018). In recent years, the above has increased the amount of attention paid to tourism, which has led to the emergence of sustainable forms of tourism with a 'green' objective – to help preserve an ecosystem that also serves as a destination for tourists (Kiss, 2004; Honey, 2008). Broadly known as 'ecotourism', many forms of the above have flourished globally (Scheyvens & Momsen, 2008; Lawton & Weaver, 2015). For instance, Nicaragua has positioned ecotourism as an integral part of its economy, and, since 2001, the sector has overtaken coffee, meat and other traditional product exports in terms of economic performance (Zapata et al., 2011). Countries like Kenya, South Africa, Costa Rica and Ecuador have, in addition, positioned themselves as leading ecotourism destinations (Akama et al., 2011; Eshun et al., 2016).

The International Ecotourism Society (2005) defines ecotourism as "responsible travel to natural areas, which conserves the environment and sustains the well-being of the local people". Overtly clear in the definition are the two key tenets of the concept, namely biodiversity conservation and local well-being. Ecotourism promotes what Brechin et al. (2002, p. 53) refer to as the "pragmatic middle ground", namely the mandate for concurrent achievement of biodiversity conservation and community well-being. As a consequence of the above, a distinguishing premise of ecotourism is the facilitation and support that it receives from a dense network of local elites, governmental and quasi-governmental agencies, and Non-Governmental Organisations (NGOs) towards achieving what Eshun (2014) refers to as a 'dual mandate', namely the concurrent objective to achieve biodiversity conservation and local well-being. However, the research that has been conducted into ecotourism since the 1980s has been overly silent on positioning well-being as a concept requiring direct exploration and critique (Kiss, 2004; Eshun, 2011; Eshun & Tonto, 2014; Eshun et al., 2015).

The lack of direct reference to such a cardinal tenet of ecotourism demands that research into ecotourism contribute to addressing the overt lacuna. Eshun et al. (2015) revealed, through their research conducted into the Owabi Wildlife Sanctuary in Ghana, that ecotourism at the site is excessively concerned with biodiversity conservation, at the expense of local well-being. Although Ghana is not the market leader in ecotourism in Africa, the country ranks among the top 25% of African countries with the greatest diversity of wildlife (Eshun, 2011). In 1992, the country endorsed the Convention on Biodiversity, and, through Legislative Instrument 282, established 15 wildlife protected areas, which currently cover 38 000 km², being 16% of the country's land area, while, outside the protected areas, an estimated 4 000km² of forests still exist (Eshun & Tagoe-Darko, 2015). Currently, three types of ecotourism development exist in Ghana, namely state-led ecotourism, community-based ecotourism and privately-owned ecotourism (Eshun, 2011, 2014). Kiss (2004) states that 32 out of the 55 World Bank-financed projects that supported conservation efforts in Africa between 1988 and 2003 included community-based ecotourism. However, a cursory observation of the ecotourism scholarship landscape in Africa shows that the state-led ecotourism sites continue to receive more research attention, at the expense of lesser known ecotourism attractions (Attuquayefio & Gyampoh, 2010; Eshun, 2011). Some popular examples ecotourism projects in Africa include the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) in Zimbabwe; the Okavango Delta CBNRM project in Botswana; the Makuleke Contract Reserve in South Africa; the Luangwa Integrated Rural Development Project and the Administrative Management Design (ADMADE) for game management areas, both in Zambia; the Living in a Finite Environment programme in Namibia; the Tchuma Tchato 'Our Wealth' in Mozambique; the Conservation of Biodiversity Resource Areas programme (COBRA) in Kenya; and the Ujirani Mwena 'Good Neighbourliness' programme in Tanzania (Honey, 2008; Akama et al., 2011; Mensah & Adofo, 2013; Eshun, 2014). Consequently, the current study aims to depict how the Kubease community benefits from the Bobiri Forest Reserve and Butterfly Sanctuary (BFRBS) in Ghana, through their participation in ecotourism. The study sought to achieve the above by focusing on the different effective ways in which the local people have been, and can continue to, participate in ecotourism development towards their own well-being.

LITERATURE REVIEW

According to Coria and Calfucura (2012), ecotourism is often located in destinations that are marginalised and that are characterised by a lack of monetary resources. local skills and mechanisms to ensure the fair distribution of benefits, in addition to their poor commercial links and their relative inexperience in planning, finance and product development. Increasingly, the research currency has improved in relation to community issues to do with ecotourism (Hellmann, 2011; Eshun & Tonto, 2014; Dumbe et al., 2018). Eshun (2014) argues that the concept of 'community' in ecotourism is, therefore, still overtly tenuous in terms of concept, with it being tortuous in practice. Such a situation fosters debate on the use of the term 'local residents' as against the term 'community', since the former term positions discourses on stakeholders as including all the individuals residing around eco-destinations, regardless of whether or not they are natives of the area. Eshun et al. (2015, p. 4) define community well-being as consisting of "the totality of efforts towards social resilience of local residents around ecotourism destinations through minimal external control and provision of alternative livelihood strategies". Additionally, in terms of the triple bottom line concept of ecotourism, the sense of community wellbeing results from the economic and sociocultural impacts of such tourism (Honey, 2008; Fennell, 2014). Although many authors do not define the idea of community well-being in terms of their tourism scholarship, many position participation as being the most central tenet under the all-embracing term, which, alongside biodiversity conservation, contributes towards the achieving of sustainable development (Chan & Bhatta, 2003; Schevvens & Momsen, 2008). Nkemngu (2015) argues that issues of community well-being fall under the ambit of the social exchange theory, which posits that people, or communities, tend to trade their support for projects in exchange for the benefits that they stand to gain, for example from ecotourism development. Sustained global attention has been paid to participation in ecotourism development and sustainability (Simpson, 2008; Hellmann, 2011; Zapata et al., 2011; Eshun & Tonto, 2014; Zinda et al., 2014; Schmidt & Uriely, 2018). Indeed, a copious amount of research posits trenchantly the need for sustained research into participation in ecotourism in Africa, towards addressing the development needs of the local communities (Akama et al., 2011; Mensah & Adofo, 2013; Harilal & Tichaawa, 2018). Community participation has become a cardinal consideration in terms of ecotourism development (Tosun, 2000; Ramón-Hidalgo et al., 2018).

The concept has been invariably defined as implying how, and to what extent, the locals are able to share their views, participate in an activity, make decisions, and share profits, as well as perform other actions related to the tourism development process (Kiss, 2004; Attuquayefio & Gyampoh, 2010). Community participation is important to accomplishing successful ecotourism development, because communities should take the lead in natural resource management, since they often bear the brunt of resource utilisation (Akama et al., 2011; Eshun, 2011). For instance, with regard to the CAMPFIRE

projects conducted around Mahenye and Chipise in Zimbabwe, the local communities maintain that the financial rewards that are generated from the projects are insufficient to compensate for the costs exacted in the form of crop and livestock raiding by the wildlife and in the form of the prohibitions that are imposed on such use of the natural resources as hunting, fishing and pole collection (Chuitsi et al., 2011; Tichaawa & Mhlanga, 2015). The local stakeholders at the ecotourism destinations include mainly the residents, the local business owners, the local unions and the local non-governmental organisations. The stakeholders, who have both similar and divergent interests, are expected to participate in the tourism trade, as well as in the planning and decision-making for successful ecotourism development (Lacher & Nepal, 2010).

A myriad reasons are presented by the proponents of participatory governance in relation to ecotourism development. Increasingly, the involvement of the locals in decision-making is seen as a means of: accommodating community-relevant values and interests; protecting and promoting cultural diversity and human rights; and promoting viable solutions that balance conservation and competing pressures arising from socioeconomic development (Tosun, 2000; Honey, 2008; Buckley, 2009; Ramón-Hidalgo et al., 2018). The local communities expect to gain both direct and indirect economic benefits from the ecotourism development that occurs around the protected areas (Akama et al., 2011; Eshun, 2011; Eshun & Tagoe-Darko, 2015; Dumbe et al., 2018). Considering that community aspirations and involvement are cardinal considerations for sustainable ecotourism development (Eshun & Tonto, 2014), community participation in ecotourism can lead to the development of such facilities as roads, parks, recreational activities and cultural attractions; also, community participation increases the environmental awareness of other people (Rogerson & Visser, 2004; Scheyvens & Momsen, 2008; Simpson, 2008; Shehab, 2011; Amoah & Wiafe, 2012). Local communities know the nature and characteristics of their ecotourism products more intimately than do any outsiders, as the related products and activities are frequently associated with the maintenance of traditions, the holding of local ecological knowledge, and the encouragement of cultural values (Dumbe et al., 2018; Yasu et al., 2018).

Local communities, which are key stakeholders in every aspect of ecotourism development, are crucial to the success of sustainable ecotourism development (Buckley, 2009). To address the marginalisation of the local communities, the need exists to involve them in the planning and decision-making process regarding the management and future development of ecotourism in their areas (Fennell, 2014). Also, the premise has been mooted that local involvement enhances the sustainability of ecotourism (Hellmann, 2011; Boley & McGehee, 2014). The benefits received by the local community motivate them to participate in ecotourism, in the capacity of, for example, local guides, homestay hosts, and the sellers of local products and services (Amoah & Wiafe, 2012; Zinda et al., 2014).

Tosun (2000) classifies local participation into three types: spontaneous; coercive; and induced. Spontaneous participation represents the perfect mode of local participation, as it imbues the host community with full managerial authority. Thus, such participation corresponds to citizen power in terms of Arnstein's typology. Induced participation lessens the full involvement of the local people, despite them still being allowed to have their say in tourism development, with it seeking to reduce the number of socio-political risks that are associated with tourism development. For instance, Belsky (1999) points out that, at Gales Point Manatee, Belize, the views of the locals were misrepresented to suit the plans of the developers. Coercive participation, which is top-down, has a higher propensity to reduce the concomitant benefits for the locals (Eshun & Tonto, 2014). In such a case, the extra-powerful actors, like the governmental and quasi-governmental agencies, the multinational corporations, and

the worldwide tour operators, make the necessary decisions regarding, and manage, the ecotourism involved (Honey, 2008). Discourses on participation still remain sparse as to how the locals can actually become the managers of resources in their own domains (Eshun, 2011). The increasing ascendency of community-based ecotourism is one such move that has been made towards the locals achieving spontaneous participation (Kiss, 2004). The milieu of community-based ecotourism encompasses the mandate to empower the local people and to improve their standard of living, such as through increasing their amount of disposable income (Eshun, 2014; Eshun & Tagoe-Darko, 2015; Ilies et al., 2017). Besides the economic benefit of ecotourism, is the psychological empowerment of the local people through ecotourism, which is cardinal in enhancing the locals' sense of self-esteem, and in cultivating their sense of pride in relation to their cultural and natural heritage (Honey, 2008; Mbaiwa, 2008; Ramón-Hidalgo et al., 2018; Schmidt & Uriely, 2018). Eshun et al. (2015) caution that the local communities must not naïvely embrace ecotourism as a panacea for all their ills, since other competing interests might result in few benefits accruing to themselves. The above, therefore, fosters debate on how issues of community participation should move beyond the indigenousness of residents toward teasing out the mosaic of power underpinning the global, national and local dynamics of ecotourism development (Figure 1).



Figure 1. The nexus of ecotourism and participation

Carter et al. (2015) also argue cogently that popular participation in tourism can be used by the existing power structures as a hegemonic device for securing control. Many authors posit local participation in ecotourism as serving as a motivating force behind the locals becoming engaged in ecotourism activities (Kiss, 2004). The motivation of the locals varies from encouraging them to engage in the selling of crafts, to gain direct employment, to interact with the visitors, and to project the image of their communities through tourism development (Rogerson & Visser, 2004; Eshun & Tagoe-Darko, 2015).

Thus, local participatory challenges in ecotourism continue to receive research attention, since they tend to derail its sustainability (Ashley & Jones, 2001; Amoah & Wiafe, 2012; Eshun & Tonto, 2014). Such challenges limit the locals' participation, so

that they are not able to maximise the full potential of the ecotourism activities occurring in their community (Akama et al., 2011).

MATERIALS AND METHODS

The BFRBS was created in 1939, when it was still an unexploited primary forest. The Sanctuary, which falls within the tropical moist semi-deciduous Forest Zone, lies between latitudes. The complex was awarded for being an outstanding Tourist Support in 1999, and for being the Tourists Attraction of the Year in 2001, by the Regional Tourist Board (Eshun et al., 2016). The total area of the Reserve is 54.6 km² in diameter. Named after the river that passes through the middle of the Reserve, it was created as a result of the increased demand for logs during World War II. The Reserve, which is endowed with a variety of flora and fauna, also supports a rich array of fauna, with the most prolific being butterflies and birds. About 400 butterfly species have been recorded in the Reserve, as well as Mona, white-nosed, green, and black-and-white monkeys (Eshun et al., 2016). The Reserve hosts the Bobiri Forest Arboretum, with about 100 indigenous species on 1.7ha of land (see a map of the Sanctuary in Figure 2). The Sanctuary contains 340 butterfly species and about 120 bird species (Dumbe et al., 2018).



Figure 2. Map of the BFRBS, showing the study area concerned (Source: Ghana open data)

In terms of the rarity of faunal species and its unique selling proposition, the Sanctuary is the only butterfly sanctuary in West Africa, with it boasting of, arguably, one of the biggest butterfly species in West Africa (*Papilio antimachus*), as well as of the reed frog (*Hyperolius bobirensis*). The reed frog, which is endemic to the site, is listed on the

IUCN Red List of threatened species (Wagner et al., 2008). The appeal of ecotourism is predominantly based on how it markets the rarity and richness of faunal and floral species at destinations (Honey, 2008; Eshun, 2014; Fennell, 2014). Also, other ecotourism services at the Sanctuary include: adventure travel; outdoor recreational activities; and educational tours, including a chance to discover new cultures and locations, and promotion of the desire to undertake epistemological studies on nature.

The Reserve, which is administered by the Forest Research Institute of Ghana, has been identified as being the largest preserved parcel of land, with lush greenery and a mystifying atmosphere. It is one of the most beautiful and magnificent forest reserves in West Africa, harbouring tall and imposing ancient trees. Ecologically, the Bobiri Forest Reserve falls within the tropical moist semi-deciduous forest zone, with it having an annual mean rainfall of between 1200mm and 1750mm. The annual temperature ranges between 20°C (August) and 32°C (March). The distribution of rainfall patterns and temperature enhances the growth of flora and fauna in the area. The Bobiri Forest Reserve hosts the Bobiri Arboretum and the Butterfly Sanctuary (Eshun et al., 2016).

In terms of the tourist market, the Sanctuary is located 20km from the Kumasi and Accra highway and 30km from Kumasi, which increases its accessibility. The study employed a mixture of both quantitative and qualitative methods to collect the required data for addressing the objectives of the study. Applied researchers in tourism have encouraged adopting mixed-method approaches, combining ethnographic with quantitative methodologies, to reach an understanding of current tourism-related challenges and to facilitate the undertaking of collaborative, culturally sensitive research (Ramón-Hidalgo et al., 2018). Questionnaire and interview guides were the data collection instruments. The research, which used cross-sectional design, included the collection of data from more than one case and at a single time, through the use of semistructured questionnaires and interviews. The purposive sampling method was used in selecting Kubease as the study community, because of its closeness to the Sanctuary.

The study used the simple random sampling method in selecting the required respondents from the community. To help provide in-depth data on the study objectives, the study also purposively selected and interviewed the management of the Sanctuary, including four of its workers, and five opinion leaders from the Kubease community. The quantitative data were analysed using descriptive and inferential statistics, whereas the qualitative data were analysed using thematic analysis.

RESULTS DISCUSSIONS

Sociodemographic characteristics of the respondents

The current section is intended to describe the demographic variables of the sample, so as to achieve the objective of the study, entailing the reconsideration of the local participation, with the intention of enhancing its well-being. The demographic variables obtained from the participants included their sex, age, educational level, occupation, marital status, monthly income, and length of stay in Kubease.

The percentage of men and women was relatively well-distributed. In all, the proportion of women, however, slightly exceeded (1.6%) that of the men. The ages of the respondents were categorised into four, with 126 (38.5%) of the respondents being aged between 18 and 28 years old, with 82 (25.1%) being aged between 29 and 39 years old, and with 61 (18.7%) being aged between 40 and 49 years old. The age ranges resembled the national statistics, in terms of which those who were younger than 25 years old were found to form over 50.0% of the population of Ghana (Ghana Statistical Service, 2012). However, 58 (17.7%) of the respondents were older than 50 years. Considering the level of education of the respondents, 64 (19.6%) had only an informal education, 168 (51.4%)

had a basic education, and 95 (29.0%) had a secondary education. None of the respondents from the local community had a tertiary education. The above figures could suggest that most of the human capital available in the community are likely to fall in the lower and middle employment categories. Eshun (2011) argues that, generally, the educational level of the communities around the ecotourism sites in Ghana is low, which conforms to that of most rural communities in the country. The existing research outputs confirm that the employment opportunities for the local communities are mainly available at a low level, due to the provision of inadequate education and training (Lacher & Nepal, 2010; Amoah & Wiafe, 2012; Eshun, 2014). Similarly, in research about the Okavango Delta in Botswana, the majority of the local residents were found to work in unskilled positions, while expatriates tended to be employed in management positions, earning much more than did the local residents (Mbaiwa, 2008).

Sociodemographic characteristics	Variables	Frequency (N)	Percentage (%)
	Male	161	49.2
Sex	Female	166	50.8
	Total	327	100
	18-28	126	38.5
	29-39	82	25.1
Age (in years)	40-49	61	18.7
	Over 50	58	17.7
	Total	327	100
	Informal	64	19.6
	Basic	168	51.6
Education	Secondary	95	29.0
	Tertiary	0	0
	Total	327	100
	Single	111	33.9
	Married	173	52.9
Marital status	Divorced	20	6.1
	Widowed	23	7.1
	Total	327	100
	Farmer	72	22
	Trader	145	7.1
	Student	7	2.1
Occupation	Driver	36	11.1
Occupation	Security	59	18.1
	Unemployed	7	2.1
	Teacher	1	0.3
	Total	327	100
	Below 50	69	21.1
	50-200	92	28.1
	201-351	50	15.3
Monthly in some (z)	352-501	67	20.5
Montiny income (¢)	502-652	18	5.5
	Above 652	20	6.1
	None	11	3.4
	Total	327	100

Table 1 . Sociodemographic characteristics of the respondents	
(Data source: Fieldwork, 2019)	

Of the total number of respondents, 111 (33.9%) were single and 173 (52.9%) were married, whereas 20 (6.1%) were divorced. However, 23 (7.1%) were widowed. Considering their occupation, 72 (22%) were farmers, 145 (44.3%) were traders, 36 (11.1%) were drivers, 59 (18.1%) were security personnel, 7 (2.1%) were students, and 1

(0.3%) was a teacher. However, 7 (2.1%) of the respondents were unemployed. With trading being the most-often followed occupation, the number of visitors to the Sanctuary and the frequency of sales made at the toll booth in the community had definitely influenced their occupational choice. The shift from farming to trading around the ecotourism sites in Ghana is generally due to globalisation, the reduced amount of available farming land and the low return on subsistence farming produce (Eshun, 2011). Of the total number of respondents, 69 (21.1%) had a monthly income of less than 50 Cedis, with 92 (28.1%) having a monthly income of between 50 and 200 Cedis.

Of the remainder of the respondents, 50 (15.3%) had a monthly income of between 201 and 351 Cedis, with 67 (20.5%) having a monthly income of between 352 and 501 Cedis, with 18 (5.5%) earning between 502 and 652 Cedis per month, and 20 (6.1%) having a monthly income of above 652 Cedis. However, 11 (3.4%) of the respondents received no monthly income at all. The prevailing low-income brackets could have prevented the locals from engaging and investing in tourism.

Limitations of the locals regarding ecotourism development

In the first place, the locals were asked to state whether there were limitations to engaging in activities in, and around, the Sanctuary. The findings revealed that 87 (26.6%) of the respondents (i.e. the locals) clearly stated that there were limitations to engaging in activities in, and around, the Sanctuary, whereas 240 (73.4%) of the respondents stated otherwise. A respondent noted:

"We are limited because of the regulations governing the Sanctuary. Also, we accuse the management of being hegemonic by prohibiting us from entering the forest to retrieve resources, such as cutting trees for pestles, picking snails, collecting mushrooms and herbs, and felling of trees for timber." (Interview, a farmer in Kubease, 2019).

At the time of the current study, the majority of the locals did not participate in ecotourism, due to the centralisation of management. Earlier, Tosun (2000), in relation to induced participation, implied that the locals could be authorised to have a say in tourism development, but that their views were often sidelined by the more powerful actors concerned. The above notwithstanding, some of the community members added that the restrictions helped in protecting the Sanctuary, because allowing every member of the community access to the area and its resources will create 'tragedy of the commons'. Such has been the posture of the Ghanaian government, with the locals' attempts to become key stakeholders in managing the national parks being curtailed, due to the presence of ample evidence of their antithetical behaviour towards biodiversity conservation (Eshun, 2011, 2014; Amoah & Wiafe, 2012). Tosun (2000) classified the barriers to community participation as falling into three distinct areas, namely operational, structural and cultural limitations. Similarly, toward improving the local participation in the tourism development and management at the Sanctuary, the present study summarised the major limitations under the same three broad categorisations.

Currently, at the cultural level, was the issue of chieftaincy disputes, which was due to the issue of power struggle among the indigenes, which stalled development in the community. Limitations at the operational level consisted of the centralisation of public management, the lack of coordination, and the shortage of information. Structural limitations included: the attitudes of specialists; the lack of information; the elitism; the high level of favouritism and nepotism; the high level of clashes among the supporters of different ideologies or tribes; the lack of trained human resources, particularly the high cost of local participation; and the absence of financial sources. In Bobiri, the management of ecotourism activities was solely in the hands of the FORIG (Table 2). In examining the human assets of the respondents, ecotourism at the Sanctuary was found to have contributed little opportunity, so far, to the training and education of the locals. During the emergence of ecotourism in Ghana, several efforts were made to create alternative local livelihood options and environmental education opportunities, but they waned over the years, especially at the government-controlled ecotourism sites (Eshun, 2011).

Cultural limitation	Operational limitation	Structural limitation
1. Chieftaincy disputes	1. Lack of requisite skills	1. Perception of their irrelevance in decision-making
2. Low level of ecotourism awareness in the community	2. Lack of knowledge in tourism business	2. Low standard of living
3. Lack of education	3. Restrictions from management	3. Inadequate welfare services for the community
4. Poor living conditions	4. Lack of financial resources	4. Low disposable income
5. Marginalisation of the locals	5. Insufficient access to tourists by the locals	5. High unemployment rate
6. Different communities with a stake in the Sanctuary		6. Cases of favouritism and nepotism
		7. Restrictions by the Sanctuary's management

Table 2. Tosun's concept of community limitation in terms of evaluating the Kubease community (Data source: Fieldwork)

Rating local participation in ecotourism development at the Sanctuary

Regarding the local participation in ecotourism at the Sanctuary, of the 327 respondents, only 3 (0.9%) mentioned that it was very good, with 52 (18.0%) stating that it was good. Of the total number of the respondents, the majority, consisting of 144 (44.0%) who said that the locals participated averagely in the Sanctuary and 131 (37.0%) who mentioned that the locals participated poorly in ecotourism at the BFRBS, noted otherwise. The management noted that the locals participated in ecotourism development by selling their wares to tourists at the Sanctuary on holidays and other occasions.

When the locals were asked whether they were involved in decision-making about the Sanctuary, the results revealed that 64 (19.6%) of the respondents took part in decision-making regarding the Sanctuary (Figure 3). However, as many as 263 (80.4%) of the respondents indicated otherwise. Earlier research undertaken into ecotourism sites in the developing countries attests similarly to the locals having been relatively little engaged in decision-making and revenue-sharing (Simpson, 2008; Akama et al., 2011; Eshun, 2011; Eshetu, 2014; Eshun, 2014; Eshun & Tonto, 2014; Nkemngu, 2015; Schmidt & Uriely, 2018). The current study showed, further, that 91 (27.8%) of the respondents lacked the requisite knowledge and ideas required for participating in the decisionmaking taking place occurring the Sanctuary. In addition, 44 (6.7%) of the respondents noted that they were not involved in the decision-making because of the chieftaincy disputes, with 93 (35.4%) stating that they did not participate in the Sanctuary, because the management saw them as lacking the requisite knowledge. Earlier research revealed that the management often saw the locals as lacking the requisite knowledge to be able to contribute to ecotourism sustainability (Attuquayefio & Gyampoh, 2010; Mensah & Adofo, 2013; Eshun et al., 2015). At the time of the current study, most of the locals stated that they felt that the management did not allow them to become involved in decision-making about the Sanctuary, which negatively affected their willingness to participate in research regarding the Sanctuary. Indeed, they claimed that the research that had been undertaken so far had not helped them to become fully involved in the management of the Sanctuary. Eshun and Tonto (2014) show a similar situation to have occurred at the Boabeng-Fiema Monkey Sanctuary in Ghana, where the locals demanded gifts from the researchers in exchange for their participation in the research, for similar reasons to the aforementioned.



Figure 3. Involvement of the locals in decision-making about the Sanctuary (Source: Fieldwork, 2019)

Increasingly, the proponents of community participation in ecotourism development posit trenchantly that engaging the host communities in ecotourism development and management contributes to effective and equitable benefit-sharing, promotes entrepreneurship (e.g. the sale of handicrafts, and the provision of service at the local restaurants), and generates employment, as well as promoting social cohesion in the communities concerned (Kiss, 2004; Simpson, 2008; Eshun, 2011; Eshetu, 2014; Nkemngu, 2015; Schmidt & Uriely, 2018).

Linear regression model of the relationship between decision-making and training

The relationship between the various stakeholders in the Sanctuary made some of the locals feel irrelevant in terms of the decision-making process.

between decision-making and training (Data source: Fieldwork)							
Model	R	R square	Adjusted R square	Std error of the estimate			
1 .064 ^a .004 .001 .12283							
Dradiator	Dradictory (Constant) Involvement in decision making						

Table 3. A linear regression model of the relationship between decision-making and training (Data source: Fieldwork

Predictors: (Constant) Involvement in decision-making

Some also stated that they felt that they lacked the needed or requisite knowledge to be involved in effective decision-making. Their involvement in decision-making was used to predict the nature of the training that the locals received from the Sanctuary. Based on the results obtained, no significant value was found between involvement in decision- making and training, with the help of regression, since the ρ value (0.005) is less than the significance value (0.248) in the regression model. Consequently, 0.1% of the variance in involvement in decision-making is explained by the training of the locals.

Generally, when the locals gain the requisite skills through appropriate training, their upskilling increases their chances of being able to participate in the relevant ecotourism development and management (Ashley & Jones, 2001; Zinda et al., 2014; Nkemngu, 2015; Schmidt & Uriely, 2018). In addition, the chi-square value of interaction and education

is 10.939, at a significance of 0.090, which depicts the relationship between the interaction with tourists and the educational level of the respondents from the Kubease community. As a consequence, the higher the educational level of a respondent, the greater was their likelihood of interacting with the tourists in the study community.

Table 4. A linear regression model of the relationship

 between decision-making and training (Data source: Fieldwork)

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
Regression	.020	1	.020	1.338	.248 ^b
Residual	4.903	325	.015		
Total	4.924	326			

a. Dependent variable: Members' training

Linear-by-linear association

N of valid cases

b. Predictors: (Constant) Involvement in decision-making

3.056

326

Interactions with Tourists and Education (Data source: Fieldwork)					
Chi-square tests	Value	Df	Asymptotic (two-sided)	Significance	
Pearson chi-square	10.939 ^a	6	.090		
Likelihood ratio	10.956	6	.090		

.080

Table 5. Chi-square tests showing the relationship between

Five cells (41.7%) have an expected count less than 5. The minimum expected count is .03.

1

The relevant literature on tourism also posits a higher interaction between the tourists and the educated locals than with the relatively uneducated ones (Scheyvens & Momsen, 2008; Simpson, 2008; Attuquayefio & Gyampoh, 2010; Eshetu, 2014).

Factors enhancing good interaction between the tourists and the locals

Tourism is, essentially, a service industry, and, thus, issues of the moment of truth are cardinal to the matter of actual and potential visitors to tourist destinations (Kiss, 2004; Rogerson & Visser, 2004; Scheyvens & Momsen, 2008; Zapata et al., 2011; Duvic et al., 2014; Ramón-Hidalgo et al., 2018; Schmidt & Uriely, 2018; Yasu et al., 2018). Against such as background, ecotourism development can successfully be achieved at BFRBS only if the locals in the Kubease community continue to be friendly towards the tourists who visit the Sanctuary. For the aforementioned reason, the locals of Kubease were asked to suggest different ways of enhancing their interactions with the tourists. In response, 23.5% of the respondents said that selling to the visitors would create good interactions between the locals and the tourists. At the time of the current study, during the holidays the Sanctuary received large numbers of visitors, thus providing a venue where the locals could sell their artefacts and food products to the tourists. A small gift shop was available on-site, at which African artworks by some of the community members could be promoted for the tourists to buy on a daily basis. Furthermore 11.9% of the respondents mentioned that the employment by, and the proper conservation of, the Sanctuary would create additional opportunities for the locals to interact with the tourists. Additionally, 20.5% of the respondents mentioned that the organising of events and of socialising programmes would increase the interaction between the locals and the tourists (Table 6).

Although the fauna and flora are the primary attractions in the ecotourism business, the organising of such events as festivals, exhibitions and workshops for the stakeholders should ensure good interactions. A copious amount of research posits that festivals can create an opportunity for the exchange of cultures, which is a form of sociocultural benefit, with it also presenting an opportunity for the locals to sell their products to the tourists, from which they can receive an alternative income (Eshun, 2011; Manu & Kuuder, 2012; Mensah & Adofo, 2013; Eshun, 2014; Eshun & Tonto, 2014; Eshun & Tagoe-Darko, 2015). The majority of the respondents (33.3%) mentioned giving directions and holding face-to-face interactions with the tourists to promote good interactions between themselves and the tourists. Another 5.5% said that there would be good interaction between the tourists and local, if only the former were allowed to board buses at the lorry station in their community. At the time of the current study, the taxidrivers in the Kubease community benefited greatly from ferrying visitors to the Sanctuary, because the distance from the community to the Sanctuary exceeded 2km.

Response	n=327, in%
Providing avenues for selling to visitors	23.5
Employment and conservation	11.9
Organising events and socialising programmes	20.5
Giving of directions and the conducting of face-to-face interactions	33.3
Tourists using the buses/taxis provided by the community	5.5
None	4.6
Total	100

Table 6. Factors that will enhance good interactions between the tourists and the locals (Data source: Fieldwork)

Elsewhere, 4.6% of the respondents said that they had no idea of what would improve the interactions between the tourists and the locals. The uniqueness of tourist destinations encompasses a gamut of such factors as their attractions, activities, amenities, and accessibility (Qu et al., 2011; Yang & Nair, 2014). Increasingly, tourism developers are realising that the activities at tourism destinations can make tangible an experience in an immutable way (Rogerson & Visser, 2004; Eshun, 2011; Schmidt & Uriely, 2018). Based on research undertaken in the Balkans, Duvic et al. (2014, p. 61) state, "it is necessary to connect the culture with the natural resources in order to create complex images, so that visitors could be able to develop an awareness of the community and the local way of life".

Ecotourism development that will enhance the well-being of the locals

The locals are reputed to participate well in ecotourism development, when they have extensive knowledge and skill in the field of Hospitality and Tourism (Buckley, 2009; Eshun, 2011; Zinda et al., 2014). To equip the locals with the required knowledge and skills, training must, therefore, be undertaken in the field concerned (Qu et al., 2011). Consequently, a question was asked, as to "whether training community members in hospitality and tourism will encourage their participation in ecotourism and enhance local well-being". Of the total sample of respondents, the vast majority (98.2%) responded in the affirmative. In addition, some of the respondents (31.7%) who did so mentioned that training in Hospitality and Tourism would empower them to take part in the ecotourism development at the BFRBS. Correspondingly, 40.2% indicated that the knowledge and skills that they gained in Tourism would increase their employability. Also, 21.5% of the respondents stated that the locals' learning in Tourism. The remaining 7.5% added that their training in Tourism and Hospitality would bring about innovations.

Earlier research conducted by Eshun et al. (2015) at the Owabi Wildlife Sanctuary showed that the local residents were inadequately equipped with the requisite marketing and entrepreneurial skills to manage ecotourism ventures, or to exploit their positive externalities. Similarly, at the Mombasa Resort in Kenya, low local involvement and high leakage rates are reported as having significantly reduced the contribution made by tourism to the local socioeconomic development (Akama et al., 2011). A plethora of literature exists buttressing the position that, given the right training, the locals can benefit equitably from ecotourism development (Kiss, 2004; Shehab, 2011; Eshun et al., 2016; Yasu et al., 2018). The practice of just informing the local communities on the decisions already taken concerning ecotourism development in Ghana has been shown, at least in part, to shed light on why there is conflict between the local communities and the ecotourism management (Eshun, 2011, 2014). Specifically, some authors have sought to unpack the objectives and the outcomes of local participation on facets of local well-being (Tosun, 2000; Kiss, 2004; Eshun & Tonto, 2014; Zinda et al., 2014; Eshun et al., 2015; Ramón-Hidalgo et al., 2018).

Furthermore, as many as 315 (96.3%) of the respondents stated clearly that involving them in decision-making was a mechanism whereby they could come to participate in ecotourism, whereas 12 (3.7%) indicated otherwise. Earlier, Eshun et al. (2014), researching the same ecotourism site, concluded that the locals were aware that involving them in decision-making about the Sanctuary was a mechanism that would help to ensure their participation in ecotourism. Similarly, Boley and McGehee (2014) mounted the argument that the locals participating in ecotourism contribute to their psychological well-being and continued respect for their norms and traditions.

Eshun (2011) showed that, when ecotourism was introduced to Ghana in the 1990s, an overt attempt was made to institute what became known as the Tourism Management Committee (TMC). The TMCs were formed from selected members of the local communities, so as to ensure that community participation took place. However, the research conducted through the years shows that, where the TMCs have come into being, they appear to be superficial mechanisms used by ecotourism management to assume the form of the ensuring of proper local participation (Afenyo, 2012). Such TMCs are also wrought with issues of a lack of transparency and of equitable distribution of the benefits that are generated at the ecotourism sites concerned (Eshun, 2011; Afenyo, 2012; Amoah & Wiafe, 2012; Eshun, 2014; Eshun & Tagoe-Darko, 2015). In reality, the TMCs are also poorly trained, especially in tourism management, which, inevitably, reduces the amount of benefits gained from ecotourism by the local communities (Eshun & Tonto, 2014).

Furthermore, the members of the TMCs tend neither to represent the local population, nor to desire to address the issue of community marginalisation (Eshun, 2011). For example, non-indigenes are often excluded from the benefits to be gained from the Campfire projects conducted in Zimbabwe (Dzingirai, 2003). Similarly, at Makuleke Contract Park in South Africa, the locals, in the past, accused the chief of employing his own family members as part of the Park's staff (Shehab, 2011). Thus, the locals in Kubease were asked to suggest ways in which they could help to ensure their full participation in the associated ecotourism ventures, so as to enhance their sense of well-being. The results show that 84 (25.7%) of the 327 respondents suggested that giving the locals jobs would do so, whereas 105 (32.1%) indicated that training and education would be required for them to fully participate in the ecotourism involved. The majority of the locals (106; 32.4%) also mentioned that the full involvement of the locals in the related decisionmaking would help to ensure a local sense of well-being (Figure 4). Of the locals, 23 (7.0%) said that recognising the input of the locals would help to ensure local participation in ecotourism development, and some of the respondents (9: 2.8%) made no suggestion regarding the question. Earlier research that was undertaken into ecotourism development in Ghana concluded that the local people also face the challenge of finding working captital, time and the requisite business acumen to exploit opportunities in the ecotourism trade (Amoah & Wiafe, 2012). Ultimately, participation in ecotourism towards contributing to the local sense of well-being is likely to remain a naïve chimera, without the adoption of a suitable multipronged approach to ecotourism development, in terms of which the local involvement does not appear to be an activity undertaken on an ad-hoc basis.

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Figure 2. Involvement of the locals in decision-making about the Sanctuary (Source: Fieldwork, 2019)

CONCLUSION

The current study focused on enhancing the participation in ecotourism development for the promotion of a sense of local well-being. The results showed that the level of local participation in ecotourism at the Sanctuary was low at the time of the research. The locals were little involved in decision-making regarding the Sanctuary. Further, their lack of involvement was also partly due to their lack of knowledge about tourism, as well as to them not having frequent access to the visitors, and as a result of management-imposed restrictions. Currently, at Kubease community, which is the main local community, there is no tangible infrastructure like a market/school/health facility or good roads built due to the benefits that they should have received from the ecotourism conducted in their domain. Many related works posit that such a lack of adequate benefits for the local communities can result in the development of negative attitudes among the locals towards ecotourism development and its sustainability (Kiss, 2004; Lacher & Nepal, 2010; Eshun, 2011, 2014). The education and training of the locals in the field of Tourism and Hospitality, and employing the locals in such positions as, for example, tour guides could help to empower them to participate fully in ecotourism development at the BFRBS, and it could contribute to the local sense of well-being. Other stakeholders have also to be encouraged by the management of the Sanctuary to play their role in ecotourism, especially in terms of empowering the locals through entrepreneurship.

In the light of the findings of the current study, the following recommendations should be considered to ensure successful local empowerment, so as to enhance the locals' participation in ecotourism development, for their own sense of well-being. The management of the Sanctuary should ensure good and proper engagement between the locals and themselves. The above can be done through ensuring the revival and effectiveness of the TMC, which would help to create cordial relationships between the management and locals, by ensuring that the locals are fully involved in any decision-making regarding the Sanctuary. The government, through the Ministry of Tourism, Arts and Culture and the Ghana Tourism Authority, should provide scholarships to some of the residents in the community, so that they can gain professional qualifications and skills in Tourism and Hospitality. The National Tourism and Hospitality Training Policy 2019 provides an avenue for Metropolitan, Municipal and District Assemblies to benefit from such assistance. Such assistance should help to build the local capacity all the way from the

frontline to the top managers, and it should contribute to Ghana becoming a leading tourism destination in Africa. The overarching challenge has been learning how to sustain engagement with the diverse actors in tourism, so as to ensure local empowerment, product development, and tourism financing, entrepreneurship and marketing. The actors at the Sanctuary must introduce a local festival that will create an avenue for the locals to interact with the visitors, by means of the selling of products and the exhibiting of their culture. Based on the present study's results, the conclusion is drawn that a critical examination of the sense of local well-being must give more space to ecotourism scholarship to ensure that the 'dual mandate' of ecotourism does not continue to remain largely a mirage.

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INDUNG/PARENT MANAGEMENT COMMUNICATION MODEL TO ESTABLISHMENT OF TOURISM IDENTITY BASED ON SUNDANESE CULTURAL VALUES

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Abstract. The purpose of this research is to know the values of local wisdom of the Indung Parent Management in the development of a region in Purwakarta regency, Indonesia. The object of this study is Purwakarta as one regency located in the northern part of West Java, Indonesia. The content of local wisdom in Purwakarta development is generated by government bureaucrats' communication on Sundanese characters. The present research employed case study method with data collection technique in the form of in-depth interviews, observations, focus group discussions, and literature studies. The results of the research show that the development pattern of the city identity being applied in the Purwakarta regency area refers to the concept of "Indung Management", which means a mother who is protecting her child, and signifies that the government must protect the community. The conclusion of the research indicates that the values of local wisdom in the development of a region are able to provide a distinctive unique and creative identity to embody a friendly city in terms of the culture, environment and welfare as long-term investment in the future.

Key words: Indung Management, Sundanese Culture, Local Wisdom, Urban Development

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INTRODUCTION

The development and growth of urban development in an area are going faster along with more easy access to technology obtained by the community, government, and other interest groups in planning the development process. Conversely, the usage of advanced technology in the development concept is not always good in building characters of the people. Development is a criterion of the progress or withdrawal of an area. Therefore, the phenomenon of development and its society is a reality of problems on the infrastructure, social, cultural, economic and political superstructure which today becomes reference for achieving the welfare of a region (Matlovicova et al., 2014, Markovic et al., 2017; Rogerson & Rogerson, 2019). Through the varying development sectors, it is expected to improve the Human Development Index (HDI) and other variants according to the goals of the vision and mission of the local officials.

The regency government of Purwakarta shows a great commitment in the development in all fields, specifically infrastructure. Purwakarta, as a strategic regency of "Pasundan Gate" which is adjacent to the national capital, has its distinctive advantage to actively participate as the development agent for the growth of national development. The existence of regional development becomes the competency for managing competitive regional apparatuses by utilizing the potentials of human resources, natural carrying capacity, and social potentials in an effort of embodying prosperity for the community. Efforts of Purwakarta development are regulated through regional development policy with orientation for the concern and welfare of the community, education excellence, health, agriculture, industry, trade, services and infrastructure development of the region based on the values of local wisdom. In the view of Sartini (2009), the definition of local wisdom is personality, the cultural identity of the community in the form of values, norms, ethics, beliefs, customs and specific regulations accepted by the community and have been tested for their resilience, endure all the time. Under guidance of local wisdom values, the head of (Regent) Purwakarta has laid the foundation for the development under the philosophy of "Indung Management". The concept of "Indung Management" embodied in many strategic policies, urban planning policies, building layout, governance system and village governance management and governance service system, where the concept of "Indung Management" in cultural approach can be used as a reference in establishing the identity of a region, which expresses traditional but still respect the development of science and technology and combine it with the values of religious and philosophy embraced by the community. It is similar to those stated by Perbawasari and Setianti (2013), Egresi and Polat (2016), Baudrillard et al., (2018), Dimitrova et al., (2018) and Mathias (2018) that culture plays a role as a determinant of boundaries, signifying that culture can make a difference or to create a unique organization with other organizations as an identity.

The implementation of local cultural values has become the basic idea of developing "Indung Management" within regency government of Purwakarta. "Indung Management" is a concept of a development approach that combines social-cultural characters of Sundanese which emphasizes humanist and religious situation. Through Sundanese local values applied in the development system, it can be a main attraction for regional heads. In fact, Sundanese local wisdom value is used as a policy in the development process within an administrative region and even Sundanese local culture serves as work culture identity and becomes an effort to attract investors and the public to visit Purwakarta. Sundanese culture is a system value which has the nature of interactive causality, implying that life must be balanced with the principle of silih asah silih asih silih asuh/ penance honeys for the sake of love and care for foster (Anshori et al., 2018; Musthofa, 2018; Moriyama, 2018; Ramadhan et al., 2018; Saringendyanti et al., 2018). These characteristics are implicit in the development concept of "Indung Management" which was initiated by Regent Dedi Mulyadi for 2 (two) periods of his leadership in Purwakarta Regency. Pros and cons emerge in carrying out and implementing the concept of "Indung Management" in regency government of Purwakarta. However, alongside the content of the concept of "Indung Management" as a part of maintaining cultural value integrated in the development pattern, it can be used as a reference for regional government in developing the potentials of local culture, making it a spirit to build the regional identity.

Local wisdom values become the basis for the development sector, both for infrastructure and governance management (Pinquart & Kauser, 2018). The management of a region's development emphasizes on the importance of local wisdom values in the context of urban development with identity. Identity in the practice of regional development within a region is the cornerstone of the existence of a city that to have a bargaining value for improving tourism visit (Beier & Kramer, 2018; Cocks et al., 2018; Estrada et al., 2018; Oba, 2018). Identity can be a characteristic, attraction, existence, and consistency of a city in the face of competition in tourism industry, which is seen as a very promising prospect in increasing regional income. In terms of the development that has come into realization, Purwakarta is regency in the northern region of West Java with development values based on Sundanese local philosophy. To this day, Purwakarta, under the leadership of Regent Dedi Mulvadi, has received numerous awards from the international world and has hosted several national and international activities related to the preservation of cultural values and harmony and diversity. Activities organized by the Purwakarta regency government can be an alternative for establishing place branding formation regarding the identity of Purwakarta Regency.

Referring to those stated by Ilieş and Ilieş (2015), Sziva et al., (2017) and Wulandari (2013) the place branding is a marketing activity that supports the creation of the name, symbol, logo, word marks or other graphics, to identify and distinguish the objectives, delivering the promise of a memorable, unique travel experience related to the destination, and serving to consolidate and strengthen the memories from the destination experience; all of which are aimed to create images that affect the visitors' decisions to visit these destinations (Ungureanu, 2014). The establishment of Purwakarta regency identity is an effort carried out by the government bureaucrats to deliver and share policy information through formal and informal government communication networks. The efforts of Purwakarta Regency in introducing its regional potential to outsiders requires a consistent identity to be easily recognized by the public as destination target for them to visit Purwakarta. The existence of a city identity becomes a powerful tool to inform and explain the peculiarities of an area with another, in the form of goods or services.

The provision of the identity of an area is the result of the policy decisions of the regency government as legitimate authorities. The existence of a city identity is bale to give a distinct impression for the community regarding the regional potential, so that they have to be able to positively compete in the development participation in the tourism sector. Based on the description above can examine how the concept of development identity is formed in Purwakarta Regency as one that preserves local wisdom values. The objective to achieve in this research is to find out and explain the concept of Purwakarta Regency's identity formation through government communication, based on local wisdom values.

LITERATURE REVIEW

Local Wisdom

Local wisdom in foreign languages is often conceived as local wisdom, local knowledge or local genious (Abubakar, 2018). Local wisdom can also be interpreted as a

thought about life. The thought is based on clear reasoning, good thinking, and contains positive things. Yagi (2018) states Local wisdom can be translated as the work of reason, a feeling of depth, character, form of temperament, and encouragement for human glory. Mastery of local wisdom will carry their souls increasingly virtuous. Local wisdom is an identity/personality of the nation's culture that causes the nation to be able to absorb and cultivate foreign cultures according to their own character and abilities (Orhan, 2017; d'Estrée & Parsons, 2018; Gunko & Medvedev, 2018; Habibi, 2018).

Local wisdom is human intelligence possessed by certain ethnic groups obtained through community experience. That is, local wisdom is the result of certain communities through their experience and not necessarily experienced by other communities. These values will be very strongly attached to certain communities and that value has gone through a long time journey, throughout the existence of the community.

Tourism Identity and Intercultural Communication

Culture is a complex whole, in which the knowledge, beliefs, arts, morals, laws, customs, and other abilities contained by someone as a member of society are contained (Chakrabarti, 2018; Dupré, 2018; Michael et al., 2018; Parra-Cardona et al., 2018). The ideal form of culture is culture in the form of a collection of ideas, values, norms, regulations, etc. which are abstract in nature. This form of culture lies in the heads or in the minds of the people. If the community expresses their ideas in written form, then the location of the ideal culture is in essays and books produced by the writers of the community members. Culture is something that will influence the level of knowledge and includes a system of ideas or ideas contained in the human mind, so that in everyday life, culture is abstract (Billi & Tricarico, 2018). Identity has had a huge influence in the communication process (Anderson, 2018; Korson, 2018; Puyenbroeck et al., 2018).

Identity is formed partly by self and partly in relation to group members. The self consists of various identities and this knowledge of identity is tied to culture. In the interaction of intercultural communication, wrong identities often become worse and can create communication problems. It is often assume that knowledge of other people's identities is based on their membership in their cultural groups. However, this clearly overrides the individual aspects of that person. Dialectical perspectives can help us recognize and balance the individual and cultural aspects of other people's identities. Identity is expressed communicatively in core symbols, labels, and norms. Core symbols are fundamental beliefs and the main concepts that distinguish certain identities. Labels are a core symbol category. Label is a term used to refer to certain aspects of our and other people's identities. Norms are some of the values of behavior that are related to a particular identity.

Planning Theory

Planning theory is divided into two main approaches, namely normative approaches and action approaches. In both approaches first learn how to make decisions in management (Brigevich, 2018; Nadadhur, 2018). This is a difference made in the planning study by Clausen and Garcia (2018). Normative political science related to how planning must be processed rationally. The action of the approach is more directed at the opposite boundaries in trying to fulfill a rational action program. Rational planning theory is based on a holistic view of the system and seeks to provide a comprehensive view of all aspects related to living systems and those not related to life. That part of the system of life includes the system of regions and life on it. A system can be defined as a set of interdependent components with relatively high scope, relevance and stability (Zagalo et al., 2018). The closure of external dependence, to what extent the system components do not interact with other components outside the system. Connectivity measures internal dependence, which is a level limit at which system components interact with each other.

Stability is related to the length of time at which the system ends without any significant changes or disturbances. Thus regional and city planning in essence can be approached through a system approach, by determining the scope, relevance, and system stability.

RESEARCH METHODS

The present research was carried out using a qualitative case analysis. Case studies or field research were intended to intensively examine the background of the condition and the current position, as well as the environmental interaction in certain social unit as it was. A case study is in-depth study of certain social unit of which results give a broad overview and deep understanding of the social unit under study. The research subjects might be individuals, groups, institutions or communities (Danim, 2002). The subjects in this research were informants who met the criteria of being directly involved in the development concept of "Indung Management", either directly or indirectly perceived, namely the concept initiators, concept implementers, and concept evaluators. Of these three criteria in determining the subject, there were names involved in the implementation of "Indung Management" concept, conducted by the regency administration, namely Purwakarta Regent, the heads of relevant Departments, as well as community leaders/the public. Respondents of this study were obtained by the Purposive Sampling method which consisted of the Purwakarta Regent, the relevant Heads of Service as many as 32 respondents, 15 sub-district heads and 21 community leaders. As for data collection, it was done by observation, in-depth interviews, Focus Group Discussions (FGD) and documentation study conducted in 2018.

RESULTS AND DISCUSSION Result

The development implementation as a whole begins with the conception or idea that pays attention to aspects of the needs of the regional community, the balance of nature, values, life philosophy and life of the local community (Fuschi & Evangelista, 2017; Kheni & Adzraku, 2018; Simon, 2018). The success of Purwakarta development is inseparable from the role of leader figures in communicating their vision and mission to stakeholders. The development process in Purwakarta Regency lies in the efforts of how the government is able to create superior and characterized human resources, build a competitive economic sector of the community, and the way the government can preserve local values in implementing physical development activities within the modern life. The correlation between development orientation and the development process can be seen through the implementation of regional values relevant to the pattern of development in this day and age. One of these regional values is Sundanese values was applied by the regional administration of Purwakarta. There are many Sundanese values which intersect and synergize with these modern concepts of development. The synergy of Sundanese local wisdom values are related to the orientation of development in the fields of human, economic and even environmental resources. One of the concepts of local wisdom conducted by the Purwakarta regency government under the leadership of Regent Dedi Mulvadi is the concept of "Indung Management".

The Indung Management was applied in Purwakarta Regency under the leadership of Regent Dedi Mulyadi from 2008–2018, and the initiator was himself. The concept of "Indung Management", the youngest of nine brothers who then applied to governance life and organizational system. "Indung Management" is expected to bring forth an inspiration for professional implementation of development process. According to Mulyadi (2011), the concept of "Indung Management" was born from a woman with deep meaning. Firstly, women are a source of beauty; therefore, the development in Purwakarta should pay attention to the aspect of beauty, not just buildings. Secondly, women give birth to various generations, and the affection of a woman (mother) to her children knows no bound. Therefore, in relation to the implementation of development, the government as the "Indung/ Parent" should continue to pay attention to the development process from the beginning to the end for their children. Thus, the concept of "Indung Management" should be a spirit in the development in Purwakarta Regency.

Several implementations in the program of "Indung Management" philosophy become the flagship programs of the Purwakarta Regency government, which are spread over aspects of community life and governance. Meanwhile, the concept realization of the "Indung Management" is applied to explore ideas about basic capital development, health insurance for weak economic communities, foster bureaucratic professionalism, regional development politics, autonomy of regional government, optimization of regional functions, information technology revolution, public service based IT, competency-based education, building people's economy, and creating community independence to work together in a sustainable, characterized development process (Strba, 2015; Gluesing, 2018; Meyer & Xin, 2018). In relation to the implementation of "Indung Management", the professionalism sector of Civil State Apparatus (ASN) is conducted by allowing the government employees to work in neat clothing, instead of requiring them to work in uniforms like other civil servants. However, the Regional Government requires them to wear uniform with different types of clothes and days, including on Monday, the employees are obliged to wear white shirts and black pantsuits; while on Tuesday and Wednesday, they wear traditional Kampret clothing with headbands for men and kebava for women. On Thursday, they wear Batik and on Friday they wear neat clothing, such as t-shirts and jeans, including sports shoes. By non-bureaucratic official clothing, when the state Civil State Apparatus (ASN) mingle with the community, they will blend more with them, because releasing ranks is usually a limiting factor in getting the information needed in the community for information needs for the relevant agencies.

In terms of development programs in the infrastructure sector, the activities include building uniformity in government buildings, organizing events which are based on the local culture, the preservation of arts and culture, as well as the creation of the icons in Purwakarta Regency locality identified with the philosophy of Sundanese values as regional identity. The existence of identity of a region will make a city easily known and remembered according to its potential, through the development of government and community facilities and infrastructure, preservation of cultural values, tourist destinations, culinary, and policies. Several of the implementation of Purwakarta Regency's identity development is implemented through cultural arts performances, restructuring city parks, the establishment of statues, and distinctive architecture, and giving names to schools after Sundanese figures. Giving names after Sundanese terms within the community is expected to foster Sundanese noble values and social intelligence in a sustainable manner. As for the identity development program in terms of cultural preservation, Purwakarta Regency holds cultural art performances, such as the Tatar Sunda and Cirebonan Cultural Arts Stage events, the Nusantara Arts and Culture Stage, and Asean State Culture and Arts Festival. These cultural arts events are held to welcome important events, such as in commemoration of Purwakarta Anniversary. Meanwhile in terms of urban layout, Purwakarta Regency Government has built many urban parks, thematic sculptures, and typical Sundanese buildings.

In terms of restructuring urban parks, Purwakarta District Government makes excellent programs which are optimally proclaimed and carried out through the

installation of traditionally-decorated Sundanese ornaments. It is intended to the comfort and beauty of the city, where a city park can be a tourist destination for the community in minimizing the burnout level which eventually can increase the citizen's happiness index. The city park built by Purwakarta Regency Government is not limited to certain areas alongside Purwakarta protocol roads, but also on the parks located precisely on the road markings and strategic places close to government offices. In addition to the city park which is the object of structuring, the construction of several statues that complement the city park adds the beautiful atmosphere of each city corner in Purwakarta. The statue built reflects the identity of plural Purwakarta Regency. For instance, ceramic-shaped statue which is the identity of Purwakarta becomes the center for craftsmen from clay and ceramics found in Plered District. These ceramic statues are placed in the city park art intersection crossing into the administrative area of Purwakarta. There are also statues of leather puppet characters that illustrate Purwakarta as part of Sundanese culture that inspired the stories of puppet figures, such as Cepot, Arjuna, and Semar. Lastly, there are statues of figures from Indonesia's first president and national vice president at the city intersection. These national figure statues illustrate that Purwakarta has a spirit of heroism and a sense of nationalism as a part of the Unitary State of the Republic of Indonesia (NKRI). Meanwhile, the implementation of other developments, namely the development process that greatly glorifies the regional value of Sundanese culture in several types of development and ornament of government office buildings and village gates which must be characterized by distinctive architectural patterns, including the elements of Julang Ngapak rooftops, Melati fencing, and Indavu Rahavu Gate.

The concept of "Parent Management" is part of the achievement of the regional development target of the Purwakarta Regency government which formulates the vision and mission under the nine steps of "Ngawangun Nagri Raharja", where the focus point in located in the effort to develop the values of local wisdom as the main basis of development, which translates into various aspects of life. First, in the education system, it is expected that local wisdom can be established and built early through character development contained in the education curriculum in the elementary and secondary schools. Second, in the government system, which should be able to provide exemplary methods as a form of education for the community in terms of behavior patterns of humanist, cultured, and professional employees; Third, in the field of agriculture, livestock and fisheries undertaken by the development of plant-based traditional organic values, such as the use of natural fertilizers. Fourth, in the field of urban layout, it is done by creating a design about the Sundanese-based architectural design concept that implies an understanding of the tropical climate condition of the region and the mitigation of natural disasters; and fifth, increasing the development of infrastructure and superstructure in the areas of Purwakarta Regency through the management of government bureaucracy oriented to professionalism.

The concept of "Indung Management" applied by the Purwakarta regional government will create regency with different characteristics from other districts in West Java, as districts with identities. This is part of a cultural strategy that should be enforced by the government as the authority in the development of its territory. In designing urban development system, it is proper for the cultural stem to provide more value as a legacy of civilized construction that has been tested and undeniably is a unique and definite personality of the Eastern nations. The implementation of Indung Management show in Figure 1. From Figure 1 above, it can be explained that the concept of "Indung Management" in building the Purwakarta region is an idea of the Regent Dedi Mulyadi who served for 2 periods, namely from 2008-2018, based on experience during his life with his parents. In the Purwakarta area development practice, the concept of "Indung

Management" is implied in the vision and mission of the Purwakarta regency government, which is to preserve the local Sundanese cultural values. Purwakarta regency's vision and mission are stipulated in Regional Regulations and Regent's Regulations to have legal power.



Figure 1. The Implementation of Indung Management In Purwakarta Regional Development

In the implementation of "Indung Management" concept, it becomes a policy that must be integrated with Regional Work Unit (SKPD) programs and are directly related to services for the community. Through the superior programs launched by SKPD, it is expected that it will have a positive impact on the development and improvement of community welfare so that they can realize the identity of the Purwakarta region as an area that has certain characteristics introduced by the term 'Purwakarta with Character'.

In relation to the communication strategy carried out by the Purwakarta regency government in disseminating the concept of "Indung Management" on governance and development, it includes: the mechanism of formal communication, informal communication and face-to-face communication and media communication through gempungan warga, minggoan and Short Message Services (SMS) Center programs, These three programs are implemented in order to determine the extent of information about the needs of people that have been brought into reality and those not received by the community. It is done by face-to-face meeting between government officials and the community, as well as the utilization of information and communication technology, such as SMS. Referring to an expert in communications planning, Middleton (1980) in Cangara (2014), it is defined that communication strategy is a combination of the best of all the elements of communication from the communicator, message, channel (media), receiver (communicant) to the effects designed to achieve optimal communication goals. Therefore, the concept of "Indung Management" is made as the development philosophy in Purwakarta a communication strategy that focuses on the message packaging element through a cultural approach applied to the life sector of the community. The content of Management of the

Parent is delivered systematically through character-building development programs carried out by the official apparatus of Purwakarta district government.

Discussion

Communication is a process of delivering a statement by someone to someone else. Communication is also a process that involves individuals in a relationship, groups, organizations and communities that respond and create messages to adapt to each other's environment. The communication process is that the communicator forms a message (encode) and communicates it through a certain channel to the recipient who causes certain effects (Merolla & Kam, 2018). Communication can be done with Formal, Informal and Non-Formal Communication. Formal communication is a process of communication that is official and is usually carried out in formal institutions through the command line or is instructive based on the organizational structure by actors who communicate as officers of the organization with the status of each - whose purpose is to convey messages related to service interests. A communication can also be said to be formal when communication between two or more people in an organization is based on the principles and organizational structure. Informal communication is carried out between people in an organization, but it is not planned or not specified in the organizational structure.

Informal communication function to maintain social relations of informal group friendship, dissemination of personal and public information as well as the Management Concept of the Parent. The informal communication should not be based on information that is still unclear and inaccurate, look for sources of information that can be trusted, always use common sense and act on positive thoughts. Information in informal communication usually arises through a crowd chain where someone receives information and is forwarded to someone or more and so on so that information is spread to various circles (Liew et al., 2018). The implication is that the truth of the information becomes unclear or blurred. Nevertheless informal communication will be to fulfill social needs, influence others, and overcome the slowness of formal communication which usually tends to be rigid and must go through various channels first.

Non-formal communication is carried out by a communication process that is between formal and official with an informal or informal one. This type of communication is usually in the form of communication related to personal relationships. A large culture usually has a sub-culture (or commonly called a sub-culture), which is a culture that has little difference in terms of behavior and beliefs of its parent culture. The emergence of sub-cultures is caused by several things, including differences in age, race, ethnicity, class, aesthetics, religion, work, political views and gender, There are several ways that people do when dealing with immigrants and cultures that are different from the original culture. The manner chosen by the community depends on how much the difference is between the main culture and the minority culture, how many immigrants come, the nature of the native population, the effectiveness and intensification of intercultural communication.

CONCLUSIONS

The concept of "Indung Management" is a Sundanese cultural philosophy based on inspiration from the leadership of Regent Dedi Mulyadi formulated through the Regional Medium Term Development Plan (RPJMD) as a basis for development policy in managing governance and infrastructure development in Purwakarta Regency. It can be used as the identity of one district regency West Java. Furthermore, the direction of urban layout with local wisdom identity of "Indung Management" can increase the dimensions of the government's economic development for the region and the community. In the end, the urban development identity activities within a region can give effect to the sense of pride that can encourage the development of other sectors, particularly in expanding employment and opportunities for doing business; therefore, development with urban layout identity can improve/ build tourism business to make it a superior sector that will help propel the economic activities, public revenue and boost local revenue.

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ASSOCIATED ECONOMY - WIDE EFFECTS OF TRANSPORT AND LOGISTICS CLUSTERS

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Abstract: Regional competitiveness can be improved by providing value-added services, such as transport and logistics services to both the local and global supply chains. Transport and logistics clusters have been shown to reduce trade transactions and to improve the efficiency of both local and international transactions. The aim of this study was to identify the sectors that comprise the transport and logistics cluster and to determine the cluster's associated economywide effects. Using a cross-sectional study design, location-specific competitive advantages and economic multipliers associated with the clustering of transport and logistics companies were computed for the North-West Province in South Africa. Findings illustrate that the transport and logistics cluster comprises seven sectors that associate positively with upstream and downstream multipliers in various sectors within the region. Additionally, the sectors in the cluster are relatively integrated and have high interlinkages. The cluster has potential for higher levels of integration once the cluster is strengthened. In the context of South Africa, this implies that transport and logistics cluster optimisation has a knock on effect on various industries including tourism as shown elsewhere. This study offers a unique econometric approach to identify and quantify the effects of transport and logistics clusters on regional competitiveness and provides practitioners and policy makers with insights into alternative strategies to enhance regional competitiveness and growth.

Key words: transport and logistics clusters, economy-wide effects, regional competitiveness

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INTRODUCTION

Various factors contribute to country-level competitiveness. Substantial evidence exists on the successes of various strategies to attain global competitiveness. The success of East Asian economies such as Hong Kong, Taiwan and Korea, after World War II, is attributed to the promotion of trade (Balassa, 1978). Exporting promotes technological advancements leading to the development of technological capabilities and production

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efficiency as a result of the efficient allocation of resources (Awokuse, 2008). The manufacturing-led growth strategies propelled the economies of first world countries such as the US, UK and, more recently, China. Other notable strategies are service innovation in the form of the provision of value-added services that improve the service offering of physical products as well as cluster formation to enhance cooperation and competitiveness (Sheffi, 2010; 2013). Regional competitiveness can be improved by providing high value-added services, such as transport and logistics services to both the local and global supply chains (Ahmad et al., 2017). Logistics is derived demand for transport and warehousing resulting from other activities such as the need to transport raw materials to production factories and the need for storage and distribution of finished goods to retail locations (Prause, 2010). Logistics clusters are geographic concentrations of transport and logistics service providers including transport carriers, warehouses, forwarders, third-party logistics service providers and companies with logistics-intensive operations (Hylton & Ross, 2018). These clusters also typically include the logistics operations of industrial firms such as the distribution centres of retailers and aftermarket parts suppliers (Sheffi, 2010; 2013). Despite the importance of transport and logistics clusters, there have been no studies investigating their potential contribution to the South African or NWP economies. Following the recommendations of Rivera et al. (2016) this study aims to identify the sectors that make up and that would benefit most from the transport and logistics clustering phenomenon. In addition, this study investigates the associated economy-wide effects of transport and logistics clusters on the NWP economy.

LITERATURE REVIEW

Transport and logistics clusters comprise transport services at the core of the cluster. Other sectors that make up the cluster include supporting industries (e.g. maintenance, legal, and information technology firms), critical institutions (e.g. manufacturing firms and wholesalers) and related industries (e.g. universities and other research institutions) (Sheffi, 2010; Lambourdiere et al., 2012). Transport and logistics clusters are classified in terms of scale (e.g. logistics villages in Germany, freight villages in Turkey, distribution parks in Japan); scope (e.g. urban distribution parks; regional or international clusters); by functions (e.g. free trade zones, bonded logistics parks or export processing zones); or by mode (e.g. airports, seaports, rail logistics parks, trucking logistics parks or hubs, or multi-modal parks) (Kasarda, 2008; Mangan et al., 2008; Sheffi, 2013b, 2016; Rivera et al., 2016). Some of the largest and most successful logistics clusters in the world are Memphis, Tennessee; Zaragoza, Spain; Rotterdam Port, Holland; Singapore Port area, Singapore; Panama Canal Zone, Panama; and Alliance in Fort Worth, Texas USA (Sheffi, 2013b). Schutjens and Stam (2003) found that business relationships between firms are localised in specific locations. Business relationships include cooperative relationships, sales relationships, supplier relationships, and outsourcing. Interaction between firms and institutions create supporting structures that link these interactions, and allows firms to prosper sustainably (Rivera et al., 2016).

Transport and logistics clusters can reduce transaction costs and improve the efficiency of both local and international trade. This is attributed to cooperation and collaboration between transport and logistics service providers located in close proximity (Cruijssen et al., 2010; Ergun et al., 2007; Sheffi, 2010; Van den Heuvel et al., 2015). Sheffi (2013a) postulates that the benefits associated with industrial cluster formation also accrue to members of transport and logistics clusters. Firms in transport and logistics clusters experience lower transport and transaction costs owing to economies of scale, economies of scope, economies of density and economies of frequency, which reduce the operational costs and enhance firm profitability (Rivera et al., 2016). Economies of scope
in transport and logistics clusters are derived from the minimisation of the number of empty return trips for trucks by freight carriers through coordination of cluster members making use of the empty return trips (Sheffi, 2013b). Transport and logistics clusters generate economies of scale in freight transport owing to the high volumes of freight originating from and delivered to the cluster. These high volumes make it attractive for freight carriers to invest in larger vehicles, which in turn will reduce the unit cost of transporting freight for cluster members (Sheffi, 2013b). Economies of density relate to the coordination by freight carriers or third-party logistics operators to ensure that vehicles deliver a full load from the origin to the destination particularly for last mile deliveries (Sheffi, 2013a). Lastly, the large number of firms in a cluster increases demand for freight transport and increases the frequency of deliveries or shipments as a result of resulting in vehicle capacity being filled quicker owing (Sheffi, 2013a).

Transport and logistics clusters generate a wide range of jobs including manual jobs (sorting and hand-picking) (Chhetri et al., 2014), seasonal jobs during peak periods, which in turn create jobs for students and prospective candidates for full-time positions (Rivera et al., 2016). Professional jobs such as truck and train drivers, as well as ship and plane pilots, are created in transport and logistics clusters owing to the demand for technical expertise to operate various conveyance vehicles (Sheffi, 2012). Owing to the sophisticated IT applications used in supply chain management, transport and logistics clusters offer specialised IT-related jobs (Sheffi, 2013a). Transport and logistics clusters encourage the development of new and advanced logistics services such as network design, network planning, consulting and information technology services. Consequently, the transport and logistics industry is one of the major users of sophisticated information and communication technology. Such advancement creates innovative, new and highpaying specialised jobs. Lastly, there are several executive and managerial jobs in transport and logistics clusters (Sheffi, 2013b). Furthermore, owing to the on-job-training nature of logistics jobs, marginally educated workers can be promoted based on their experience in transport and logistics clusters (Rivera et al., 2016). Transport and logistics clusters enable firms to share assets such as warehouses, vehicle capacity and labour owing to the similarities in tasks performed in the cluster, for example, picking, sorting, loading, transporting, tracking, unloading and delivery (Rivera et al., 2016).

Transport and logistics clusters provide opportunities to enhance the value-added services at a lower cost. Distribution centres in these clusters create an opportunity for value to be added to products, for example, through tagging, packaging, preparing for retail display, and performing postponed operations before products move into the retail channels (Sheffi, 2010). Furthermore, clusters offer specialised services such as technology extension services, technology centres, export assistance, small business centres, and private sector services (Rada & Van der Merwe, 1988). These services are provided by specialists such as designers, engineering consultants, accountants and lawyers, among others. In Taiwan clusters offer convenient services, such as bureaus for tariff duties to handle import as well as export affairs, logistic centres for customs-related issues and one-stop service shops that offer employment information (Oi & Liu, 2015). In addition, the authorities also provide preferential loans, tax relief, and long-term financing, as well as other services, to cluster members. Cluster formation results in efficiencies by attracting infrastructure investment to the region and improve the efficiency of the transport networks (Khadaroo & Seetanah, 2007). Transport and logistics clusters can facilitate the efficiencies of other sectors including tourism (Riviera et al., 2016). Improvements in transport derived from cluster formation result in improved service offering for the tourism sector in that affordable transport options improve accessibility to tourist destinations and increased accessibility. Transport and logistics clusters have been shown to improve accessibility to facilities including retail outlets, hospitals education facilities and tourism facilities (Hall & Jacobs, 2012).

STUDY SETTING

South Africa, an emerging market, has been grappling to position itself as a key player in the global market. An analysis of the growth of South African supply or exports relative to international demand (imports) for the top 20 product sectors, reveals the structural weaknesses in South Africa's trade competitiveness. The top 20 export sectors contributed 59.2% of South Africa's total exports which amounted to US\$9.44billion in 2018 (Trade Map, 2019). Exports from South Africa are mainly primary sector products, which constitute a small proportion of world market share and are in low growth market segments. The largest export sectors (classified by volume) in 2018 were 1.) Platinum; 2.) Coal; 3.) Motor cars for the transport of persons and 4.) Gold (TradeMap, 2019).

The growth in supply of South African exports decreased for the most of the top 20 sectors. South Africa's platinum market share declined by 1.9% despite world imports increasing at a rate of 5% (TradeMap, 2019). Similarly, South Africa's market share for gold, decreased (-5.83%) despite world demand for this sector increased at a rate of 3% between 2014 and 2018. A large proportion of South Africa's exports in 2018 were classified as losers in growing markets (TradeMap, 2019). This means that despite these markets experiencing high positive growth rates, South Africa's share in world exports between 2014 and 2018 declined, implying loss of competitiveness for South African products. The North West province (NWP) of South Africa comprises four district municipalities which contain 18 local municipalities (Table 2). The economic composition of the NWP, the main producer of mineral resources, is not any different.

The NWP lies directly over the Rustenburg layered suite (RLS), a mineral ore deposit belt, which contains the world's largest mineral deposits of chrome, gold, vanadium, manganese and platinum group elements (North West Provincial Government, 2013; Bafokeng Platinum, 2012). Table 1 shows that the province's output is mainly concentrated in the mining sector. In 2018 the sector contributed 32% of the province's total output. Finance, insurance, real estate and business services (13%); Wholesale and retail trade catering and accommodation (11%); Manufacturing (10%); and General government (10%) sectors contributed 24% to provincial output. Dependency on primary commodity exports makes the country and the province's macro-economic stability vulnerable to external shocks arising from fluctuations in global demand and exchange rate variations. It is therefore imperative to investigate alternative strategies for the NWP to explore in order to diversify economic activity and create new competitive advantages.

Sector	Output at basic prices 2018 R million	Share of total NWP output in 2018
Agriculture, forestry and fishing	17741,93	3,18%
Mining and quarrying	177624,305	31,87%
Manufacturing	56083,799	10,06%
Electricity, gas and water	18408,656	3,30%
Construction	23345,268	4,19%
Wholesale and retail trade, catering and accommodation	57947,014	10,40%
Transport, storage and communication	34812,848	6,25%
Finance, insurance, real estate and business services	73293,425	13,15%
General government	55054,686	9,88%
Community, social and personal services	42984,629	7,71%

MATERIALS AND METHODS Data

A cross-sectional analysis was performed using two data sources in this study. Firstly, employment and output data for the transport and storage sub-sector was obtained from the Quantec Easy Data, RSA Standardised Regional Indicators database (2019). In this database, industries are classified under the Standard Industrial Classification (SIC) system into ten aggregated sectors, which include the aggregated transport, storage and communication sector. In particular, data for the transport and storage sub-sector per local municipality in the NWP was analysed.

Secondly, a social accounting matrix (SAM) for the NWP was used to identify the sectors that make up the transport and logistics sector and to calculate multipliers. A SAM captures the interlinkages and flow of funds between various entities in an economy. It comprises production accounts (also known as activities), commodities, factors of production institutions, households, firms and government (Robinson et al., 2001). A SAM depicts the circular flow of income that occurs in the economy (Round, 2003). The commodity accounts purchase finished goods from activities (producers) and the rest of the world (imports), while paying tariffs for imports (UNDP, 2012) The commodity accounts also sell commodities to the activity accounts (intermediate inputs) and to final demand (households, government, investment, and the rest of the world). In this study, it was more appropriate to use a region-specific or provincial SAM for the NWP, rather than a national SAM, to identify clusters that are specific to the province.

The 2006 SAM for the NWP was compiled by Conningarth Economists (2009). The 2006 SAM is the most recent available SAM for the NWP. This is because "data typically used to build SAMs include Input-Output (I-O) tables of the economy, national accounts, fiscal accounts, trade data, other balance-of-payments information and surveys providing information on the composition of household income and expenditures" (Debowicz et al., 2013: 2). I-O tables are published every five years while national income and product data are published on an annual basis (Robinson & El-Said, 1997). As a result, SAMs are lagged owing to the reliance on I-O data (Harun et al., 2012).

Methods

Firstly, the transport sector's output and employment per local municipality were analysed in order to highlight the sector's spatial distribution in the province. In addition, growth rates were computed Secondly, a structural path analysis (SPA) and the power of pull (PoP) method were used to identify the sectors that make up the transport and logistics cluster in the NWP and to quantify the cluster's economy-wide effects relative to other clusters. This paper builds on previous work done on the identification of industrial clusters in the NWP (Pisa, 2014; Pisa et al., 2017). In-depth descriptions of the structural path analysis (SPA), and power of pull (PoP) methods have been described and published elsewhere (Pisa, 2014; Pisa et al., 2016). SPA shows how, in structural terms, an exogenous demand shock on the origin (transport) sector affects the destination sector (37 commodity sectors). An exogenous demand shock can be applied to export demand, government spending, or investment demand.

In this study a 10% increase (shock) in the transport sector's exports, was imposed on intermediate demand for the other commodities in the NWP SAM. The shock was applied to the transport sector as the NWP SAM includes a transport sector and does not include a logistics sector. Based on the literature identifying the transport sector as the core sector in transport and logistics clusters (Sheffi, 2010), the transport sector was selected as the basis to identify the transport and logistics cluster in the NWP.

SPA computes path multipliers or quantifies the degree of amplification conferred throughout the elementary paths (inter-industry linkages) by adjacent circuits (i.e. an

origin and destination account) (Defourny et al., 1984). The analysis traces the effect of a shock in the transport sector in the entire NWP economy (i.e. the 37 commodities in the NWP SAM) and produces path multipliers to all 37 commodities as destination sectors. In order to define the structure of the transport and logistics cluster, the destination sector was identified on account of the highest average path multiplier. Only the intermediate input demand generated was analysed without taking into consideration factors of production and institutions, as the focus of the analysis was identifying production sectors that make up the cluster. SimSIP SAM, a Microsoft Excel tool that utilises MATLAB (Parra & Wodon, 2009) was used to analyse the NWP SAM and to identify the network of the transport and logistics cluster. This method, however, does not identify the cluster's economy-wide effects relative to other clusters. As previously mentioned, this study builds on previous work to identify multiple industry clusters for the NWP. Consequently, the power of pull (PoP) method was used to define the network effects of the transport and logistics cluster relative to other clusters in the NWP into a quantifiable criterion (Luo, 2013). The principle behind the PoP method is assessing a sector's ability to 'pull' itself and the activities and output of all other sectors. This also includes all sectors connected to it directly or indirectly throughout the economy. This ability of a sector is referred to as the PoP. By applying SPA and, subsequently, the PoP method to NWP SAM, the transport sector's PoP can be assessed and ranked to determine the economy-wide effects of the transport and logistics cluster in the NWP.

Lastly, the NWP SAM was used to compute simple economy-wide multipliers to illustrate the effects of the transport and logistics cluster on the economy of the NWP. Type I and type II multipliers were calculated to capture the downstream effects and upstream effects of the associated sectors in the cluster. Information embedded in the SAM table is used to calculate the cluster sectors' interlinkages (direct and indirect) as well as the cluster sectors' interlinkages with the rest of the sectors in the NWP SAM. In particular, the intermediate demand from the NWP SAM, is used. The total upstream effects of the cluster denote "the proportionate reduction in costs in an individual cluster sector caused by the lowering of intermediate input prices if the value added of all cluster sectors could be produced at zero cost" (Learmonth et al., 2003: 579).

If a sector in the transport and logistics cluster uses a high proportion of inputs from other sectors in the NWP economy, it will have high total upstream effects and vice versa. The downstream effect measures "the proportionate reduction in the output of a particular cluster caused as a result of reduced intermediate demand if the final demands for the output of all cluster sectors fell to zero" (Learmonth et al., 2003: 579). If a sector in the transport and logistics cluster has high intermediate sales to other sectors, then its downstream effects score will be high and vice versa.

RESULTS DISCUSSIONS Results

In 2018 the NWP's output for the transport and storage sector ranked seventh relative to the other nine provinces (Quantec Easy Data, 2019). The NWP contributed 4.4% (R2.8million) of the national output in transport and storage (Table 2: Quantec Easy Data, 2019). When compared to the other major economic hubs, the contributions to transport and storage output of Gauteng, KwaZulu Natal and Western Cape (32. 7%; 23. 2% and 14. 8% respectively), the NWP is lagging (Quantec Easy Data, 2019). In terms of spatial distribution of the transport and storage sector, output and employment data for the NWP were analysed according to local municipalities. Rustenburg and Madibeng local municipalities produced the highest proportions of transport and storage output in 2018 (21.35% and 17.56% respectively). Both local municipalities are in the Bojanala District

Municipality (Table 2). City of Matlosana, located in the Dr Kenneth Kaunda District Municipality contributed the third largest proportion of transport and storage output. Mafikeng, located in the Ngaka Modiri Molema District Municipality, contributed the fourth largest output. The five lowest performing local municipalities in terms of output at basic prices in the transport and storage sector are not located in one single district municipality, but are dispersed over all four district municipalities that make up the NWP. Ratlou in the Ngaka Modiri Molema District Municipality, and Kgetlengrivier Local Municipality in Bojanala contributed 0.98% of transport and storage output in 2018.

		Output	Employment		
tra	transport, storage and communication in 2011 (Data source: Quantec Easy Data, 2019)				
	Table 2. Spatial contributions to output, employment and profit in				

		Output			Employment		
District municipality	Local municipality	Output at basic prices (Rand million)	% share of provincial output	Output growth rate 2016 -2018 (%)	Employment: Total (Number)	% share of provincial employment	Employment growth rate 2016 -2018 (%)
τοται	South Africa	638639,8		4,48%	605618		0,49%
IOIAL	North West	28407,5	4,45%	5,22%	24903	4,11%	0,28%
	Moretele	1190,806	4,19%	1,28%	1211	4,86%	-4,79%
	Madibeng	4988,55	17,56%	5,74%	4351	17,47%	0,47%
Bojanala	Rustenburg	6065,652	21,35%	5,79%	4698	18,87%	1,24%
	Kgetlengrivier	277,369	0,98%	5,89%	284	1,14%	1,08%
	Moses Kotane	1756,656	6,18%	4,66%	1632	6,55%	-0,86%
	Ratlou	279,385	0,98%	4,23%	409	1,64%	-0,24%
Ngaka	Tswaing	540,699	1,90%	5,25%	577	2,32%	-0,85%
Modiri	Mafikeng	2543,199	8,95%	5,15%	2163	8,69%	-0,82%
Molema	Ditsobotla	1616,935	5,69%	5,26%	1304	5,24%	2,08%
	Ramotshere Moiloa	787,045	2,77%	5,73%	698	2,80%	0,53%
	Kagisano/Molopo	138,772	0,49%	7,68%	156	0,63%	2,00%
Dr Ruth	Naledi	592,198	2,08%	4,84%	579	2,33%	-1,13%
Segomotsi	Mamusa	239,221	0,84%	5,64%	308	1,24%	-0,85%
Mompati	Greater Taung	536,807	1,89%	4,76%	521	2,09%	1,18%
	Lekwa-Teemane	545,177	1,92%	4,11%	520	2,09%	0,06%
Dn	Ventersdorp	259,999	0,92%	5,02%	309	1,24%	-1,36%
Konnoth	Tlokwe City Council	1689,695	5,95%	5,73%	1549	6,22%	1,19%
Kaunda	City of Matlosana	3992,697	14,06%	5,12%	3218	12,92%	1,30%
Naullua	Maquassi Hills	366,639	1,29%	5,90%	416	1,67%	1,83%

Ventersdorp in the Dr Kenneth Kaunda District Municipality produced 0.92% of the NWP output in the sector. The Mamusa and Kagisano Local Municipalities in the Dr Segomotsi Mompati District Municipalities contributed the lowest output, that is 0.84% and 0.49% respectively. In terms of output growth rates in the period 2016 to 2018, the local municipalities with smaller transport and storage sectors showed high growth potential, namely Kagisano/Molopo (8%), Maquassi Hills (6%) and Kgetlengrivier (5.89%). Rustenburg and Madibeng, the local municipalities with the largest transport and storage sectors, grew by 5.79% and 5.74% respectively. The majority of the NWP's local municipalities experienced growth above 5%, except for Moretele, which experienced a growth rate of 1.28% in the sector (Table 2). The NWP contributed 24 903 (4.1%) jobs in the transport and storage sector. Similar trends to the locality of output can be observed with respect to the locality of employment in the NWP. The main employment centres for the transport and storage sector were Rustenburg, Madibeng, City of Matlosana, and Mafikeng. These four local municipalities contributed 57% of the transport and storage sector employment in the NWP. The lowest proportions of employment in the sector were in Ratlou, Ventersdorp, Mamusa, Kgetlengrivier and Kagisano/Molopo. The rates of employment growth were lower than output growth. The Ditsobotla and Kagisano/Molopo local municipalities experienced the highest sectoral employment growth rates between 2016 and 2018 (2.08% and 2% respectively). Overall, the employment growth was low in the NWP with eight of the local municipalities experiencing negative employment growth.

The SPA results show the induced effects (elementary path or path multipliers) of a shock on the transport sector on all 37 commodity accounts or sectors that make up the NWP SAM as shown in Table 3. The results show the effects of the shock on all 37 sectors of the economy, and a clear cluster structure is not delineated. In order to identify the sectors that make up the transport and logistics cluster, averages of each sector's elementary paths were computed. The sector that yielded the highest average path multiplier was selected as the destination sector and was used to define the sector composition of the transport and logistics cluster for the NWP.

Elementary Paths Transmitting Global Influence of 0,0515994	Direct Influence	Path Multiplier	Total Influence	Total/Global Influence (%)
Transport/Communication	0,0165	1,3397	0,0221	42,74
Transport/Trade/Communication	0,0039	1,4576	0,0057	10,98
Transport/Real Estate/Communication	0,0035	1,5722	0,0054	10,56
Transport/Trade/Communication	0,0013	1,4576	0,0019	3,69
Transport/Real Estate/Trade/Communication	0,0006	1,6669	0,0010	1,97
Transport/Community, Social and Personal Services/Communication	0,0005	1,3848	0,0006	1,25
Transport/Communication	0,0004	1,4798	0,0006	1,22
Transport/Chemicals & Chemical Products (including(incl Plastic Products)/Trade/Communication	0,0003	1,6522	0,0004	0,84
Transport/Communication	0,0003	1,4646	0,0004	0,84
Transport/Communication	0,0003	1,4732	0,0004	0,82
Transport/Communication	0,0003	1,4847	0,0004	0,80
Transport/Business Services/Communication	0,0003	1,3742	0,0004	0,76
Transport/Trade/Real Estate/Communication	0,0002	1,6669	0,0003	0,60
Transport/Communication	0,0002	1,4668	0,0003	0,51
Transport/Real Estate/Communication	0,0002	1,6710	0,0003	0,50

Table 3. Fixed origin from the transport sector to the communication sector: Structural path analysis (Data source: Conningarth Economists 2006 NWP SAM, 2009)

The communication sector yielded the highest average path multiplier and, as a result, was identified as the destination sector in the fixed origin analysis of SPA. This implies that highest degree of amplification of the effects of a stimulus in the transport sector to the rest of the NWP economy can be conferred through the communication sector. Table 3 shows the SPA results of effects of a stimulus on the transport and logistics cluster (as the origin sector) on intermediate demand for the other commodities. SPA calculates the direct influence, path multiplier, total influence and total/ global influence (as a percentage) for each elementary path. The direct influence

isolates the individual paths through which the influence of the 10% increase in transport export follows effects in the communication sector, if all other things remain constant (*ceteris paribus*). The global influence is the sum of induced and feedback effects resulting from underlying interlinkages between sectors (Defourny et al., 1984). A 10% increase in transport exports yields a 5% increase in the communication sector (0.052; column 3; Table 3). It is evident that there are several direct paths between the transport and the communication sectors as there are several direct paths linking the two sectors without any other poles. Of the global influence (0.052) of a shock on transport, 47% is conferred if the communication is exercised directly while the remainder is exercised through indirect paths. The elementary path with highest direct effect accounts for 42.74% of the global influence. The communication sector is the most important sector in the cluster as it appeared the most times (15 times) in the elementary paths of the cluster.



Figure 1. Transport and logistics cluster: Structural path through the communication sector in the NWP (Source: Conningarth Economists 2006 NWP SAM, 2009)

Figure 1 shows the sectors that make up the transport sector. The transport and logistics cluster comprises seven sectors, namely: i) Transport ii) Trade iii) Communication iv) real estate, v.) Community, social and personal services, vi) Chemicals and chemical products, and vii) Business services. The relationships between the cluster sectors or inter-industry linkages between sectors are shown by lines connecting the sectors. The absence of a line between sectors shows that no interlinkages exist between those sectors. The thickness of the line represents the relative volume of flow or strength of the interlinkages along the path. The thickest lines represent the greatest volume of flow, while the thin lines represent the least relative volume of interlinkages in the cluster. As shown in Table 3 the communication sector is the most important sector in the cluster as the highest volume of interlinkages exist (thickest line; Figure 1) between the transport and communication sectors. The transport sector also exhibits strong links with trade and real estate. Other, less important linkages in terms of magnitude are between trade and communication as well as between real estate and communication. Although six of the 37

sectors in the NWP benefit from induced demand increases in the transport sector export, the cluster generates a cumulative effect of 78.09% in the economy (Table 3).

Table 4 shows the transport sector results of the PoP analysis, namely: i) the PoP values and rankings, and ii) the sector's direct measures in the NWP SAM. The direct measures are a measure of the contributions of the transport sector to intermediate inputs, commodity output and value added in the NWP SAM. The direct measures show the actual size of the sector and these differ from the results of the PoP, which trace the induced effect of a shock on the sector. The PoP of the transport and logistics cluster ranked 14th out of 37 potential commodities clusters (fifth by intermediate input; sixth by commodity output and eighth by value added) compared to the other 36 commodities making up the NWP economy. This implies that although the sector is relatively large, as shown by the intermediate input, commodity output and value-added rankings, the efficacy of its influence on other sectors is moderate.

Table 4. NWP's transport and logistics cluster rankings according

 (Data source: Conningarth Economists 2006 NWP SAM, 2009 and PoP results)

Sector	Po	оP	Intermediate Input (SAM)		Commodity Output (SAM)		Value Added (SAM)	
Sector	Value	Rank	Value (Rm)	Rank	Value (Rm)	Rank	Value (Rm)	Rank
Transport	1,911	14	6 803	5	11 789	6	4 985	8

The results of the multiplier analysis for the transport and logistics cluster are presented in Figure 2. The figure shows the multiplier values for the sectors that make up the transport and logistics cluster for the NWP. The results presented in this section are similar to a previous analysis identifying industrial clusters in the NWP, as the sectors that make up the economy are the same (Pisa, 2014). As a result, the sectors that make up the transport and logistics cluster are similar but not identical to any of the clusters identified in the study of Pisa (2014). Figure 2 depicts the transport and logistics cluster's interlinkages with the rest of the sectors in the NWP.

The figure shows, for each sector in the cluster, the size of the sector (according to the 2009 NWP SAM – given by size of the bubble), the downstream effects (y-axis) and the upstream effects (x-axis). The scale for the upstream and downstream effects lies between 0 and 100 percent. The scale or size of the sector does not influence the levels of upstream and downstream effects. The highest relative backward and forward linkages (indicative of a strong cluster) are associated with sectors that lie in the top right corner of the diagram. Such a cluster is indicative of a set of sectors that have high interlinkages, are highly reliant on each other's value added and final demands, and is thus illustrative of a highly integrated cluster. In terms of scale the Trade and Community, social and personal services (CSPS) are the largest sectors in the cluster. The Business services (92%) and Chemicals and chemical products (chemicals etc; 75%) sectors use a high proportion of inputs from other sectors in the NWP economy that is, these sectors have high upstream effects. The TTrade sector has the highest downstream effects (85%) indicating that the sector has high intermediate sales to other sectors. The CSPS sector has low downstream effects and relatively high upstream effects. The Real estate sector is characterised by high downstream effects and low upstream effects. The Transport and Communication sectors have low upstream as well as low upstream effects. This cluster is relatively integrated and has potential to integrate more with cluster formation.

Discussion

The aim of this study was to identify the sectors that make up and that would benefit most from the transport and logistics clustering phenomenon. This study also investigated the associated economy-wide effects of transport and logistics clusters on the NWP economy. This is the first study, to our knowledge, to investigate the composition of transport and logistics clusters and their associated effects on the economy of the NWP in South Africa. This was achieved by analysing the output and employment data for the NWP for 2018 in order to determine the locality of the sector's economic activity in the province. The SPA and PoP methods were then applied to a provincial SAM for the NWP to identify the sectors that make up the transport and logistics cluster and to quantify the cluster's economy-wide effects relative to other clusters in the NWP.



Figure 2. Upstream and downstream linkage effects of the NWP transport and logistics cluster and related sectors (Source: Conningarth Economists 2006 NWP SAM, 2009)

Thirdly, type I and type II multipliers were computed to determine the associated effects of the transport and logistics cluster on the economy of the NWP. The analysis of the province's comparative advantage showed that the NWP's output for the transport and storage sector ranked seventh relative to the other nine provinces and contributed 4.4% (R2.8million) of the national output in the transport sector. The results revealed that the province's comparative advantage in the transport and storage sector lies in Rustenburg and Madibeng local municipalities located in the Bojanala District Municipality; City of Matlosana, located in the Dr Kenneth Kaunda District Municipality; and Mafikeng, situated in the Ngaka Modiri Molema. This suggests that the locality of clusters is likely to be in these local municipalities. Barkley and Henry (2001) stated that "a prerequisite to developing a cluster is the identification of regional competitive advantage based on labour force characteristics, unique regional attributes, availability and quality of public and private infrastructure, and proximity to input and product markets".

Future research should investigate the levels of collaboration between firms in the transport and logistics cluster to determine if the cluster is active or latent. Latent clusters exist where critical mass for cluster formation exists, but there is little or no interaction and information flow between firms (Enright, 2003). This means that firms are not aware of the potential benefits of strengthening existing interlinkages or are not willing to engage in collaborative cooperation. An analysis of the NWP's growth rates in output and employment in the transport and storage sector showed that the municipalities with the largest contributions to transport and storage output, Rustenburg and Madibeng, recorded the highest growth rates of 5.79% and 5.74% respectively. However, the rates of

employment growth were lower than output growth with the highest growth rate of 2% experienced in the municipalities with smaller transport and storage sector contributions to output, namely Ditsobotla and Kagisano/Molopo local municipalities. Hylton and Ross (2018) found associations between high growth rates and and the number of logistics firms in the cluster. This implies that transport and logistics clusters attract more firms to locate and operate in the region, thus increasing sectoral output and employment.

With respect to identifying the sectors that make up the transport and logistics cluster, the averages of the path multipliers were computed. Key strengths of this study include the robust methodology in determining the cluster used in this current study as the main independent variable (detailed methodology described elsewhere, Pisa, 2014; Pisa et al., 2017). The main advantage of using SPA in industrial cluster identification is its ability to isolate direct and indirect components and the various paths through which income flows (Defourny et al., 1984). However, SPA has the following shortcomings: Cross-sectional data, namely the NWP SAM, output and employment data for transport and storage sector, were used to identify sectors that make up the transport and logistics cluster. This data is dated and lagged in the case of the SAM, increasing the likelihood of identifying old trends and therefore clusters that may be declining. In addition, cross- sectional data can only test associations, and causality cannot be inferred. Baydar et al. (2019) found that, despite significant efforts by the government to support logistics clusters, Turkish freight villages were significantly smaller and were under-utilized owing to the fact that these spatial clusters of logistics firms were surrounded by residential firms rather than by supporting industries that would benefit from the cluster. It is therefore important for future research to determine the composition of firms in the areas identified to have a high concentration of transport and storage economic activity, namely Rustenburg, Madibeng, City of Matlosana and Mafikeng, to ensure that the cluster can facilitate coordination and collaboration in the flow of goods. The elementary paths between the transport and communication sectors vielded the highest average path multiplier and were used to define the composition of the transport and logistics cluster. The analysis revealed that the transport and logistics cluster comprises seven sectors, namely: i) Transport, ii) trade, iii) Communication, iv) Real estate, v) Community, social and personal services, vi) Chemicals and chemical products, and vii) Business services. The communication sector is the most important sector in the cluster as the highest volume of interlinkages exists between the transport and communication sectors. The transport sector also exhibits strong links with trade and real estate.

The results of the PoP analysis showed that the PoP of the transport and logistics cluster ranked 14th (fifth by intermediate input; sixth by commodity output and eighth by value added) in the NWP economy. This implies that although the sector is relatively large, as shown by the intermediate input, commodity output and value-added rankings, the efficacy of its influence on other sectors is moderate. The multiplier analysis for the transport and logistics cluster revealed that the transport and logistics cluster comprises sectors with high upstream (business services and chemicals, etc.) and downstream effects (trade). Overall, this cluster is relatively integrated and has the potential to integrate more with cluster formation. The assumed benefits of logistics clusters have also been tested and were found to be positive in other studies. Duschl et al. (2015) and Rivera et al. (2014) found higher employment rates in logistics clusters compared to that in non-clusters.

Hylton and Ross (2018) found mild effects of logistics clustering on growth. Furthermore, it has been shown that spatial clusters have a strong positve association with transport infrastructure investment (Yu et al., 2012). It is therefore expected that the transport and logistics clusters will attract investment in infrastructure, which will in turn improve distrubution networks, reduce transport and transaction costs, and improve business competitiveness. A closer examination of relationships between the cluster sectors suggests that the composition of sectors in the identified transport and logistics cluster resembles the characteristics of transport and logistics clusters outlined in the literature.

The cluster comprises the business services sector, which has interlinkages with the transport and communication sectors. In addition to the interlinkages with the transport sector, the real estate sector has interlinkages with the trade and communication sectors. The community, social and personal services sector has interlinkages with the communication and transport sectors, while the chemicals and chemical products sector has linkages with transport and trade. This could be indicative of the existence of third-party logistics service providers or integrated logistics service providers in the provincial economy and in the cluster specifically. These findings are consistent with recent studies on the identification of logistics clusters that have found the cluster composition to include logistics service providers (Rivera et al. 2014; Van den Heuvel et al., 2015), supporting industries (such as insurance and finance), customers (e.g., manufacturers) and, in this present study, the chemicals and chemical products sector (Sheffi, 2010). These clusters are classified as vertical clusters and comprise sectors up and down the value chain (Sheffi, 2010). The NWP transport and logistics cluster is characteristic of a freight village, as the province is landlocked and does not have a major airport.

Freight villages offer support services to facilitate the flow of goods using intermodal solutions and infrastructure (Baydar et al., 2019). The two outcomes presented in the current analysis namely; output and employment growth assocaiate with transport and logistics clusters are known independent predictors for tourism industry in South Africa. Furthermore, 12 key transport and logistics factors have been identified and discussed in depth by Litman (2008). In summary these included: i.) the cost of travel ii.) the level of connectivity of the network iii.) the levels of intergation of the different transport modes iv.) the number of transport modes available and the availability of travel substitutes (Litman, 2008; Van Truong & Shimizu, 2017). Currie and Falconer (2014) found improvements in accessibility, (which are derived from improvements in transport and logistics) to improve the competitiveness in the tourism sector. Transport and logistics optimisation was found to improve tourism networks (Frias, et al., 2015) tourism flows (Pagliara et al., 2015) and costs associated with travel, accomodation and services at the tourist destinations (Bimonte et al., 2015; Van Truong & Shimizu, 2017). In the context of South Africa, this implies that transport and logistics cluster optimisation has a knock on effect on various industries including tourism as shown elsewhere.

CONCLUSION

To our knowledge, this is the first analysis to explore the association between transport and logistics clusters with economy-wide effects in the NWP of South Africa. A methodological framework, to define the composition of transport and logistics clusters and to test the associated effects on the NWP economy, is demonstrated in this study. Positive associations exist between the transport and logistics cluster and multipliers (upstream and downstream effects) in various sectors within the NWP. Additionally, the sectors in the cluster are relatively integrated and have high interlinkages. The cluster has potential to integrate once the cluster is strengthened. This study offers a unique econometric approach to identify and quantify the effects of transport and logistics clusters on regional competitiveness, and provides practitioners and policy makers with insights into alternative strategies to enhance regional competitiveness and growth.

However, the results should be interpreted with caution as macro-level (crosssectional) data used in this analysis do not reveal micro-relationships or provide insights into whether the clusters are latent or active. It is therefore important for future research to investigate the levels of existing cooperation between firms in the cluster.

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DISASTER MITIGATION ON CULTURAL TOURISM IN LOMBOK, INDONESIA

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Abstract: The unitary state of the Republic of Indonesia is prone to natural disasters. The loss from natural disasters that occurred was quite large, both in the economic, social and tourism sectors. This requires a company, non-governmental organization (NGO) and the Government to work together to prepare, respond to, and design new effective disaster management strategies. This study aims to determine disaster mitigation efforts and their relationship to cultural tourism areas. Data were collected through literature studies, in-depth interviews, and observations. This study aims to explore disaster mitigation efforts and their links to cultural tourism areas. This research uses a descriptive qualitative approach. Data were collected through literature studies, in-depth interviews, and observations. The study found that disaster mitigation in Segenter Indigenous Village consists of structural and non-structural mitigation. Structural mitigation is based on mechanical mitigation dimensions. Meanwhile, non-structural mitigation includes dimensions of knowledge, values, decision-making mechanisms, and group solidarity. The communities seek disaster mitigation with local knowledge and education or direction from outsiders. The Segenter Indigenous Village community is open to all input as long as it has a positive impact.

Key words: disaster mitigation, cultural tourism, local wisdom

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INTRODUCTION

Indonesia is a country that consists of various ethnic groups with local wisdom and full of potential natural disasters (Asriningpuri, 2018). Natural disasters can include earthquakes, floods, typhoons, volcanic eruptions, and drought (Delita, 2017; Oloruntoba et al., 2018; Orhan, 2016). According to research by the United Nations (UN), Indonesia ranks third as an earthquake-prone country in the world (Isa, 2016).

Report of the Meteorology and Climatology and Geophysics Agency (BMKG), significant and destructive earthquake data that occurred in Indonesia over the past 5 years continued to increase from six times in 2014 to twenty-three times in 2018 (BMKG, 2019).

The disaster caused many losses in various fields such as economic, social, and tourism (Artiani, 2011; Asriningpuri, 2018; Zahnow et al., 2019). Natural disasters often hit Indonesian tourist destinations such as the earthquake in Lombok, West Nusa Tenggara in 2018. The total loss of the Lombok earthquake reached Rp 12.15 trillion. That figure includes building damage of Rp 10.15 trillion and economic losses of Rp 2 trillion (Gumelar, 2018). The successive earthquake of Lombok in 2018 caused 564 fatalities, 1,886 injuries, and 472,419 people were displaced. In addition, it is also known that 4,636 tourists became victims, 100,000 tourists were reduced, and suffered a loss of Rp 1.4 trillion in the tourism sector. Of the many fatalities, the district of North Lombok suffered the highest loss, with 469 dead, 178,122 displaced, and 906 injured (BNPB, 2017). The earthquake in Lombok is a threat to the tourism sector. Tourism is a very macro and dynamic industry.

Many tourists are not only interested in natural beauty, but also turn to tourism products such as religious tourism, the environment, culture, and unique attractions (Permadi et al., 2018). North Lombok is one area in Lombok that has its own tourism charm. North Lombok Regency has beautiful natural charm. This supports the growth of businesses in tourism as a natural tourism destination. On the other hand, cultural tourism is also a tourist destination by local and foreign tourists (BPS Lombok Utara, 2017). One of the cultural tourism is located in Segenter, Sukadana Village, North Lombok. This village is one of the traditional villages in Lombok. The location of the Segenter Indigenous Village, which is close to a small plate, Mount Rinjani, and Gunung Baru, makes this village prone to earthquakes. The risk of disasters in the Segenter Village requires the community to mitigate against disasters. As a concept of developing cultural tourism in the Segenter Indigenous Village community which is thick with its customs is an interesting topic to be studied and analyzed its role in responding to disasters.

Natural disasters require a company, non-governmental organization (NGO), and the Government itself to work together to prepare, respond to, and design new effective disaster management strategies (Oloruntoba et al., 2018). Disaster mitigation is carried out through physical development, rules, and awareness or education. Based on the Regulation of the Head of the National Disaster Management Agency (BNPB) No. 4 of 2008 explained that disaster mitigation is divided into structural mitigation and non-structural mitigation. Structural mitigation is carried out through physical and infrastructure development efforts to reduce disaster risks. Development can also be carried out through technology development (Wulan et al., 2016). Meanwhile, non-structural mitigation is carried out in an awareness or education effort to reduce disaster risk. Managers had to improve for each employee's knowledge about disaster mitigation to be aware of disaster risks and how to overcome them in the company where they work as well as pre-disaster actions to reduce greater risk in Adapazari, Turkey (Orhan, 2016). Disaster managers in Chile utilize the knowledge of local communities, and validate political knowledge as an essential element for efficient disaster management (Tironi & Manríquez, 2019). Other findings of previous research on disaster mitigation are related to local wisdom. Thene (2016) found that local wisdom is one of the effective ways in disaster mitigation in the people of Rote Ndao.

Mitigation measures are non-structural mitigation which is proven to be able to minimize the impact of earthquakes that occurred. Suparmini, et al. (2016) explored local wisdom as part of disaster mitigation by the Baduy community. That is in the form of non-structural mitigation such as the worship of Dewi Sri (goddess of rice), the tradition of plantation, the rules of building, and the distribution of forest zones. While structural mitigation consists of; 1) Skills in building houses, bridges, and barns; 2) Conservation of ecosystems with forest zone division; 3) Use of plantation equipment and procedures.

Other forms of disaster structural mitigation also occur in the form of mechanical and vegetative mitigation. Mechanical refers to construction of breakwater, installation of signs for evacuation routes, signs for the indication of return current on the coast, construction of seawalls, and signs for evacuation routes. Vegetative mitigation was carried out by planting mangroves along the coastline. In addition, non-structural mitigation involved early warning system, coast guard, and disaster preparedness community.

This is an effort to mitigate disasters as well as efforts to maintain tourist attraction. Such management makes Pandawa Beach continue to increase in terms of safety and comfort for tourists (Wulan et al., 2016). By highlighting from previous studies, this study takes cultural tourism as one of the objects of disaster mitigation that will be explored various mitigation efforts that have been implemented and pursued.

MATERIALS AND METHODS

This research used a qualitative descriptive approach in which data are collected in the form of personal documents, interviews, literature studies, and other documents. A qualitative approach seeks to discover and narrate a phenomenon that occurs (Anggito & Setiawan, 2018; Yusuf, 2017). This study used descriptive data in the form of written or oral words from the observed actors. In-depth exploration of information is revealed to find value, quality, or meaning (Fitrah & Luthfiyah, 2017). Descriptive research strategies are used to describe, express, or describe various existing data.

Primary data were collected through interviews and observations. The interview is an in-depth interview to get data to reveal the facts. While secondary data was taken from literature study such as documentation (photos), journals, books and various other supporting documents that review about the Segenter Adat Village, North Lombok. This literature was used as supporting data to obtain various information and concepts related to research. Observations and interviews were conducted during May and July 2019 with the community and the Head of Segenter Village.

RESULTS AND DISCUSSIONS Disaster Mitigation in Segenter Communities

Segenter is a village with Sasak people, a native of Lombok. The Sasak people have a traditional house, which is a hereditary building. The building structure of the house is not soaring high and has similarities to the Ancient Bayan Beleq Mosque. The roof has a frame using bamboo and rattan as a binder, the cover uses reeds or grass, the pillars use wood, and the walls are made of woven bamboo. Now it is found that some of the houses in Segenter Village have been turned into permanent buildings.

The earthquake that occurred in Lombok in 2018 caused huge losses, especially in North Lombok. However, this has a different impact on cultural tourism in Segenter. The total number of permanent residential buildings in Segenter that were damaged by the earthquake was slight. The majority of the conditions of the post-earthquake Segenter Indigenous house building still stand strong. This can be seen from the bamboo walls that are still standing and the protective roof is still attached tightly to protect the furniture inside. The lack of damage that occurred in Segenter was due to disaster mitigation that the community tried. The Segenter Society which is a cultural tourism area, in its life, uses structural and non-structural mitigation as disaster mitigation. This mitigation effort is a form of community and government contribution. The management of the tourism area is carried out by the government together with the community to become a tourist attraction that is repaired and improved in view of the devastating earthquake last year. These improvements range from infrastructure, security and comfort for tourists. In addition, efforts to form a disaster resilient community were also realized by the role of local community knowledge, facilities and the role of government.

The establishment of a disaster resilient community is strived to shape the character of a disaster prepared community. It provides an important role in disaster management because disaster risk can be minimized. This is relevant to the purpose of preparedness that seeks to anticipate disasters through organizing and through appropriate and efficient steps in a series of activities (BNPB, 2012). Anticipating disasters is a step to minimize the adverse effects of disasters that occur. Minimizing losses can be carried out with effective preventative measures, rehabilitation, and recovery to ensure effective and timely management and delivery of post-disaster assistance. With preparedness is expected to be able to avoid casualties, property losses, and changes in people's lives in the future (Sutton & Tierney, 2006). Segenter Society shows local knowledge and the ability to think or behave openly to government policies.

The local knowledge of the community on the basics comes from the values of local wisdom they possess. The value of local wisdom is born from a society, passed down from generation to the next generation, and is preserved through habituation to form personality according to the norm. Local wisdom of the community which synergizes with the role of government in handling disasters makes the community more prepared to face disasters. The community has the provision to provide a role for more preparedness in facing changes that occur in their environment (BNPB, 2017) and the government plays a role in disaster management both in terms of education or infrastructure.

Non-structural mitigation in Segenter society is divided into several dimensions including knowledge, values, decision making mechanisms, and group solidarity. In the community's knowledge capacity, there is also the intervention of outsiders who provide disaster knowledge such as the Bayan Health Center. Whereas structural mitigation carried out in the Segenter Indigenous Village covers mechanical mitigation.

Non-structural Mitigation

Knowledge

The level of knowledge is one that must be developed and improved to gain insight in pre-disaster and post-disaster management in order to minimize the risk of disasters faced by companies in Turkey (Orhan, 2016). Knowledge is everything that humans know about a particular object which is a treasure of mental wealth obtained through the ratio and experience (Suriasumantri, 1996). The Segenter community knows that before a disaster occurs it is always marked by the sound of birds and strange animal behavior. This is relevant to the findings of Agung (2019) that animals would give cues when disasters will occur such as their strange behavior. In addition, the community also understands that the yellow moon marks a disaster in the near future. This community trust plays a role in shaping patterns of community behavior in protecting themselves and taking disaster mitigation actions. The signs came out from indigenous leaders (Pembekel) at night to the community through the kiai (Islamic leader) when they were togheter. In Segenter, the community respected and trusted the knowledge of the adat leader. This knowledge is used continuously by traditional leaders for generations in understanding natural signs. Traditional leaders' beliefs and knowledge are used to regulate people's behavior to be more vigilant and to protect their environment.

The Segenter community also knows that the area is at risk of an earthquake and a volcanic eruption. In addition, the community has also received guidance, disaster education and health from the Bayan Community Health Center. The community also knows and understands how the BPBD appeals. BPBD delivers notification of forecasts on disaster to the public. The Segenter Society is open to the knowledge and participation of outsiders. The knowledge of Segenter's community as mitigation based on local wisdom, openness of the community, and education provided by the Bayan Health Center become the basis for disaster mitigation by the community. Public knowledge will contribute to readiness in dealing with disasters that occur in their environment. Regarding that community knowledge, it is proven that the knowledge of Society in Nepal encourages members of women's networks to advocate for earthquake-safe communities and implement risk reduction measures. This action has developed an understanding of the process scientifically and systematically, and increased their confidence with important new technical skills and new leadership roles in their communities to reduce the risk of earthquakes (Shrestha, 2019). Furthermore, disaster managers in Chile also utilize community and local knowledge, and validate political knowledge as an important element for efficient disaster management (Tironi & Manríquez, 2019).

Values

Values are references and beliefs in determining choices (Mulyana, 2004). Values are also normative benchmarks that influence humans in determining their choices among alternative ways of acting. Choices in determining how people's lives work. Integrating local values, sharing everyday experiences, and sharing memories of risk becomes one of the strategies and guidelines for behavior that may be effective in encouraging citizens' disaster preparedness (Appleby et al., 2018). The Segenter Society is a Sasak people who have traditional values that have existed in their lives. The communities also have values related to disaster mitigation such as belief in supernatural beings, ancestral spirits, and guardians (spirits) all over the place. The watchman is believed to live by the community both in the home environment (epen bale) and the neighborhood where they live (epen gubug), even in rivers, forests, seas, land that is used as a place to grow crops, and in the construction of houses. This belief is in accordance with their beliefs about animism, which means believing in the existence of spirits or spirits in people's lives (Dhavamony, 1995). However, this belief does not make people worship spirits. They continue to believe in one God (Islam).

The community believes that everything has been created by God with their respective roles and has a life. Trust in God and His creatures provides a pattern for people's behavior in life. This makes the community always careful in acting and maintaining environmental sustainability. The community believes that God's relationship, the environment and humans must be emphasized in their balance to achieve harmony. This statement is reinforced by the theological approach theory about environmental ethics which states that human ethics towards the environment comes from religion with noble values (Amir, 2019). This shows how nature was actually created and human functions and the interactions that exist between nature and humans.

Religion teaches humans to maintain the balance of nature. All beings understand that there is a need for good relations between beings in life. In addition, there is a belief in the guardian creatures that live in the forest, within a certain radius around the forest are not allowed to build activities. This value makes the preservation of the forest environment run well. Society not only recognizes the existence of God and its power, but also recognizes that there are other forces and spirits inhabiting certain places that will affect human life directly or indirectly (Rayson et al., 2014). Both of these values play a role in regulating the behavior of the Segenter community in maintaining their behavior and can preserve their environment in residential areas, agricultural land, or forests.

Decision Making

Natural disaster management aims to protect the community from disasters and their impacts. Disaster and Regional Disaster Management Agency (BPBD) is the executor of government administration in the field of disaster management and community protection against disasters, whether natural, non-natural or social disasters. In this case, disaster management efforts are carried out through the implementation of emergency response and recovery of the conditions of the people in the area.

Furthermore, officers make preparedness in overcoming natural disasters, such as appeals, emergency response, rehabilitation, and reconstruction. The announcement of the traditional leader *(pembekel)* to the community through the *kiai* to convey information on the way of life *(Awik-awik Gubuk)* and disaster is as a form of harmony between tradition and religion. This is supported by their belief in *pembekel* as a highly respected figure. The community is also very obedient to the attitude and advice of the *kiai* by manifesting it as a pattern of worship approach and introduction to human relations with God (Amalia, 2017). According to Indonesian Dictionary *(Kamus Besar Bahasa Indonesia--KBBI) awik-awik* is Traditional law in the form of regulations that are prepared and stipulated by community members regarding the rules of community life in the fields of religion, culture and socio-economics. Awik-awik in Segenter society includes the separation between residential land and farming land by hedges and prohibiting the use of forest land as built up land. This rule is an effort to maintain and preserve the community's environment, both on residential land, agricultural land, or forests.

The relationship between *pembekel* and *kiai* in the context of delivering information to the community as an effort to maintain good togetherness for tradition can continue for generations. This disaster information is related to how to maintain the continuity of life and signs of impending disaster. Community togetherness usually occurs on Islamic holidays and traditional events. The main event of the community gathering is that the community is expected to be able to conduct early detection of disaster events and their impact can be minimized through the announcement from *Kiai* or *Pembekel*.

Group Solidarity

Humans are social creatures who have social dependence to always live with others. As social beings, of course humans themselves need other humans in living their lives. That's where social relations will be born from interactions that go well. Various social groups consisting of families, professional organizations, regional organizations, and so on so that each member would interact with each other either in direct contact or indirectly. This process of solidarity is the most important for achieving a common goal.

The form of group solidarity occurs in the form of joint awareness by strengthening social networking networks that closely encourage the community to do business together such as mutual cooperation. The Segenter community has a strong mutual cooperation spirit. This is reflected by the farming ceremony. In addition to the ceremony, the spirit of mutual cooperation was also seen when other community members were affected physically, materially, and spiritually (Amalia, 2017). One community will help other community members. In this connection, a life of high solidarity makes relations between members of the community harmonious. Social solidarity in society is divided into two, as in the perspective of the strength of cooperation and the value of mutual cooperation, the higher the social value they have. In addition, there is a tradition of community gatherings held every night, Islamic holidays, and at traditional events. This community gathering tradition reflects the solidarity of the community in establishing communication and the continuation of tradition for generations. This association also opens up local knowledge and discusses education from outside parties for the good of the Segenter community.

Local knowledge is knowledge that is owned by the local community on their environment. Local knowledge is knowledge that already exists in people's lives that is positive in relation to nature and the environment, this is sourced from religious values, customs, ancestral advice or local culture (Rindrasih, et al., 2018). Acceptance of knowledge from outsiders is a public openness to new knowledge which is usually difficult for indigenous peoples. Therefore, the Segenter community belongs to an open society.

He refers to people who are open to information, ideas, theories, and research results that have more truth levels (Asriningpuri, 2018). The openness of indigenous peoples can be seen from the input provided by the Bayan Community Health Center and received a call for disaster forecasts from the BPBD. This knowledge is adjusted to the local knowledge of indigenous peoples. In this case, traditional leaders and religious leaders also play an important role in making decisions to receive information from outside the Segenter.

Structural Mitigation

Mitigation actions taken by the Segenter Indigenous Village community are not only non-structural mitigation, but also in the form of structural mitigation. Structural mitigation is an action to reduce the impact caused by physical disasters such as infrastructure development or infrastructure facilities (BNPB, 2008).

This mitigation can take the form of mechanical and vegetative, or a combination of both (Maulana et al., 2017; Wulan et al., 2016). Mechanical structural mitigation is usually chosen for communities around the beach by installing evacuation pathway signs, reverse flow signposts on the beach, seawall, and breakwater (Wulan et al., 2016).

The use of cube, groin, river stone, limestone, sand in sacks, and talud beach shelters is also a mechanical mitigation (Maulana et al., 2017). Mitigation efforts found in the Segenter community are putting up signs on the volcano disaster evacuation route. This is intended as information or direction for visitors and the community when a volcano erupts. Evacuation routes in disaster areas are important so that people do not panic when natural disasters occur (Delita, 2017). The evacuation route is one form of concern for disaster mitigation. In addition, the community also has a role in mechanical structural mitigation through its local skills such as building facilities for disaster preparedness independently. Local skills are a form of community ability as a result of adaptation and understanding of their lives. Community skills are supported by resources in the surrounding environment.

The Segenter community has the skills to make earthquake resistant houses as has been experienced by the Sade and Bayan indigenous people. In addition, the traditional houses of Kampung Naga, Garut, West Java also did not collapse during an earthquake (Salasah, 2018). Earthquake resistant houses have three principles such as simple and symmetrical floor plans, building materials must be as light as possible, and load-bearing construction systems that must be adequate include roof structures, walls, and foundations (Sahay, 2010). Home building materials in Segenter are made of bamboo, rattan, reeds, and wood. The community uses bamboo as the wall of their home. Endy Sugijono, a house made of bamboo does not collapse because when an earthquake happens, the bamboo building will also shake (Sugijono, 2009). The concept that exists in earthquake-resistant houses is a form of adaptation of the community to the environment. The earthquake resistant house became the center of attention of experts as a house that has a sustainable system.

According to Arief (2016) sustainable building is interpreted as an ecological house, where the concept provides the benefits of improving air quality in the building space and reducing environmental impacts, minimizing liquid waste and the effects of heating in space. The construction of houses that are united and made from natural materials is a solution in establishing good relations with nature. In addition, paying attention and being responsible to the environment becomes a commitment in achieving a better life. This is what was applied by the Segenter community in building their houses. Nature always has a role in their lives like other Lombok Sasak tribes that humans are equal to nature (Rayson et al., 2014).

Group	Dimension	Mitigations
	Knowledge	 a. Understanding signs before a disaster such as the sound of birds and the yellow moon b. Understanding when disaster will occur in the near future such as the red moon c. Disaster education from the Bayan Health Center d. Understanding that the area is prone to earthquakes and volcanoes e. Understanding BPBD's call when delivering forecasts of forecasts about disaster
Non- Structural Mitigation Decisio Makin	Values	a. The belief in supernatural beings such as ancestral spirits and guardians (spirits) all over the placeb. The belief that there are guardians (spirits) that live in the forest within a certain radius around the forest should not be used for awakening activities
	Decision Making	a.The appeal of the traditional leader (<i>Pembekel</i>) to the community through the <i>Kiai</i> to convey information on how to live (<i>awik-awik gubuk</i>) and disaster
	Group Solidarity	 a.Strong mutual cooperation culture b. The tradition of community gatherings every night c. The tradition of gatherings during traditional events and Islamic holidays d. Openness among fellow citizens in anticipating disaster
Structural Mitigation	Mechanic	a.Signs for evacuation routes b. The skill to make earthquake resistant houses

Table 1. Disaster Mitigation in Segenter community, North Lombok

CONCLUSION

One of the interesting cultural tourism in Indonesia is the Segenter traditional tourism. This tour is precisely located in North Lombok. It is located in the transition area of Mount Raung to the south and Carik Beach to the north. This position puts the Segenter at risk of disaster. The community seeks to minimize the impact of the disaster by carrying out structural and non-structural mitigation. Non-structural mitigation society involves dimensions of knowledge, values, decision-making Segenter mechanisms, and group solidarity. Non-structural mitigation is derived from local knowledge of the community as well as outside influences. Efforts to mitigate disasters originating from insiders, the community uses its local wisdom. Whereas external mitigation such as the education efforts provided by the Bayan Health Center on health and disaster. Meanwhile, structural mitigation carried out by the Segenter community is mechanical structural mitigation. This is sought by BPBD such as a volcano disaster evacuation route board. In addition, local skills possessed by local people also play a role in mechanical structural mitigation efforts such as the community's ability to make earthquake-resistant houses using natural resources in their environment.

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SOCIO-ECONOMIC IMPACTS OF FESTIVALS AND EVENTS: A CASE STUDY OF THE MZANSI GOLDEN ECONOMY PROGRAMME IN SOUTH AFRICA

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Abstract: The Mzansi Golden Economy (MGE) programme in South Africa is intended to unlock the arts, culture and heritage sector to create sustainable jobs and economic development as well as address social cohesion. This research focuses on one of the main sub-categories, the Festivals and Events Grant Programme of the MGE and investigates the programme for a three year funding cycle period. The methodological approach included an examination of 30 organiser reports submitted to DAC and indepth interviews to examine the spatial distribution, amount and number of years of funding received, types supported, job creation and socio-environmental impacts of the Festivals and Events. A spatial spread across South Africa's nine provinces, different types and sizes of Festivals and Events, job creation, and variation in funding (with reliance on public funding) were noted. The Programme meets the broader objectives of the MGE to contribute to increased diversity of cultural offerings.

Key words: The Mzansi Golden Economy (MGE), Festivals and Events, South Africa, culture, impacts, job creation

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INTRODUCTION

The cultural and creative sector is increasing in prominence with numerous associated benefits including job creation, economic development (including contributing to tourism growth), cultural preservation and regeneration, and promoting social cohesion (Drummond & Snowball, 2019; Haines et al., 2018; Higgins-Desbiolles, 2016; O'Hagan, 2016; Swart et al., 2018; Throsby, 2016). Specifically, Drummond and Snowball (2019) assert that the creative and cultural industries have become popular policy tools for promoting economic growth and development. However, as Baldi (2018) and Mulino (2016) indicate, despite the potential of the cultural economy, the sector relies heavily on public funding globally. Public funding is justified on the grounds that the cultural and creative sector provides public goods and services (Gertzer, 2017), and have the potential to contribute to economic development and social transformation (O'Hagan, 2016).

A major component of the cultural and creative sector is Festivals and Events. These are viewed as key activities in profiling cultural attributes and interests as well as being a catalyst to market destinations. Hemmonsbey and Tichaawa (2019) show how events can be used for destination branding. Luonila and Johansson (2015) indicate the roles that Festivals and Events play in the regional development of cities with them being increasingly integrated into regional strategy development. Quinn (2019) specifically states that Festivals and Events are a mainstay of urban landscapes. featuring strongly in urban development, regeneration and tourism policies. Higgins-Desbiolles (2016) particularly highlights how festivals can be tools for cultural maintenance and revival, cultural sharing and economic opportunities for Indigenous Australian communities. Similarly, Yolal et al. (2016) illustrate the impacts of Festivals and Events on local economic development and resident's well-being. They also highlight the community, cultural and educational benefits of hosting Festivals and Events. Festivals and Events are important in the South African context as well where colonial and apartheid structures and systems systematically undermined and marginalised traditional cultural practices and peoples' ability to explore cultural expressions and genres as well as leverage economic opportunities. Tichaawa (2016), Laing (2018) and Ouinn (2019) state that although there is increasing recognition of the socio-economic impacts of Festivals and Events, there has been limited research in this area.

Getz (2019) and Getz and Andersson (2016) underscore the importance of examining the profiles, experiences and impacts of Festival and Events. They assert that this is particularly important in contexts where Festivals and Events are supported by government funding. Andersson et al. (2017) also argue that the quality of events should be examined to permit an assessment of satisfaction levels that can inform future planning and management. Thus, the literature notes the relevance of undertaking research on Festivals and Events. Oyekunle and Sirayi (2018) state that as the creative industries become a high driving force in the international marketplace, it is important to measure their effect on the economy and also on society at large. Swart et al. (2018) assert that in the South African context this type of research is important given that public funds are used to support these events and activities. This study contributes to the body of knowledge pertaining to the impacts of government supporting this sector.

In the South African context, the Mzansi Golden Economy (MGE) programme, initiated by the Department of Arts and Culture (DAC) in 2011, is intended to unlock the arts, culture and heritage sector to create sustainable jobs and economic development as well as address social cohesion. From its inception, the MGE programme has provided substantial funding in different sub-categories, including the Festival and Events Grant Programme. There are limited studies that examine the impacts of the arts, culture and heritage sector or creative and cultural industries generally and the MGE programme specifically. This research focuses on the Festivals and Events Grant Programme, by undertaking an investigation of this programme for a three year funding cycle period (2014-2015, 2015-2016 and 2016-2017). The objective of this study is to examine the socio-economic impacts of the Festivals and Events Grant Programme of the MGE by looking specifically at the spatial distribution of Festivals and Events funded, the amount and number of years of funding received, types of Festivals and Events supported, job creation and skills development, and social development and greening initiatives, and the sustainability of the Festivals and Events supported by MGE funding.

The next section briefly examines key literature in relation to the arts, heritage and cultural sector. This sector is also referred to as the cultural and creative industries. Thereafter, an overview of the materials and methodological approach used is provided together with a brief overview of the MGE Programme. This is followed by an analysis of the key findings emanating from the data collection, specifically in relation to the spatial distribution of Festivals and Events funded, the amount and number of years of funding received, types of Festivals and Events supported, employment and job creation and socio-environmental impacts. Finally, concluding remarks are offered.

IMPACTS ASSOCIATED WITH THE ARTS, CULTURE AND HERITAGE SECTOR

There are differences in the definitions of what constitutes the arts, culture and heritage sector/ creative and cultural industries. Weber (2017) indicates while this sector is difficult to define, it refers to intellectual property and knowledge products linked to skills and talent. Throsby (2008) notes that cultural heritage is made up of a stock of cultural capital that is passed on from one generation to another, being handed on to future generations. Joffe (2013) argues that the cultural and creative economy places emphasis on goods, services and activities of a cultural/ artistic and/ or heritage nature whose origin are in past or present human activities. Joffe (2013) further asserts that this definition not only includes the output of human creativity and industrial reproduction, but other activities as well that contribute to the creation and distribution of cultural and creative products. Swart et al. (2018) indicate that the cultural and creative industries range from the visual and performing arts to software development in recent years. They further assert that cultural events, performances, shows and exhibitions play an important role to preserve as well as expose society to cultural heritage, contributing to cultural sustainability. In the South African context, Snowball et al. (2017) state that in the South Africa context the arts, culture and heritage sector is conceptualised more broadly to encompass commercial activities, denoted as the cultural and creative industries.

Joffe (2013) states that the cultural and creative economy in Africa should be strengthened and promotes to enhance development in all its dimensions (human, social, ecological and economic) and for growth. Bialostocka (2014) states that the heritage sector in South Africa is a means to preserving the legacy of South Africa's freedom struggle and a possible economy booster through heritage tourism. Goto (2017) argues that governments financially support the cultural and creative sector to further excellence, innovation and access; recognise and celebrate national, regional or local identity; promote continuity; and support diversity. Linked to the commercial value is that heritage is generally viewed as a powerful engine of economic development that is linked to activities such as tourism (World Bank, 2001). The importance of the relationship between cultural heritage and tourism is also highlighted by Throsby (2016) and Torre and Scarborough (2017) who indicate that cultural activities and tourism are reciprocally beneficial. van der Merwe (2016) emphasises the importance in South Africa of relevant government departments preserving, transforming and engaging in segmented marketing of the country's cultural assets to sustain and grow cultural tourism in the future. Furthermore, Rogerson and van der Merwe (2016) note that in relation to local development agendas in the global south, heritage tourism can maximise opportunities. Additionally, Kruger and Saayman (2016) state that arts festivals (the focus of this study) are one of the fastest growing segments of events tourism which have considerable economic value. Snowball et al. (2017) state that the cultural and creative industries is seen to offer great potential to create jobs and promote social inclusivity.

This is supported by Gregory (2019) who asserts that the creative industries have been used globally as a lever for economic development and urban regeneration. van den Bosch (2009) shows how artists transmit various forms of cultural capital and generate income. Haines et al. (2018), Mulino (2016) and the United Nations Conference on Trade and Development/ United Nations Development Programme (UNCTAD/ UNDP, 2008) assert that the cultural and creative industries contribute to job creation and economic growth, and have the potential to further contribute economically. Holden (2007) denotes economic relationships with culture and the creative industries as being linked to direct transfers of product, skills and ideas; the creation of cultural ecologies in which creative industries thrive; and culture forming part of the networks and resources that underpin the creative economy. O'Hagan (2016) indicates that cultural activities contribute to experimentation and innovation which result in breakthroughs and positive impacts which can be commercialised. Furthermore, O'Hagan (2016) states that cultural activities can have economic spillover effects (from direct employment of artists and other staff as well as indirect/induced/ multiplier impacts from attracting visitors/ tourists and businesses to an area as well as using additional service providers) which contributes to promoting employment, economic growth and balanced regional development.

Ansell (2016) cautions, however, that this instrumentalism by politicians of seizing on music and the cultural industries to deal with problems of unemployment and economic underdevelopment, which the MGE aims to do, is problematic.

Soini & Birkeland (2014) indicate that sustainable development embedded in fostering global and intra-generational equity and fairness in the distribution of welfare, utilities, and resources must value culture which is key to achieving these objectives. Additionally, they highlight the importance of ensuring people's participation in the use and sharing of cultural capital to make cultural heritage accessible and ensure sustainable heritage preservation. O'Hagan (2016) identifies a key societal outcome of cultural preservation and activities as identity and social cohesion that permits the expression of national/ regional life that characterise a country and/ or specific groups as well as encourages collective enjoyment and audience participation as well as volunteering which promotes a sense of community and group identity. Snowball et al. (2017, p. 295) state that the cultural and creative industries is "one sector that is especially open to, and appreciative of, social diversity in terms of race, class, cultural group and gender".

Snowball et al. (2017) underscore the importance of transformation (referring to black and women economic empowerment) in relation to economic opportunities associated with the cultural and creative industries in the South African context. They assert that transformation in post-apartheid South Africa achieves employment and ownership patterns that are more representative of the demographics of the country. This issue is also relevant globally. As Bell & Oakley (2015: 5) state, "culture-led economic growth has proved highly unequal in the distribution of benefits". They also note that there are spatial inequalities since cultural commercial activities tend to be concentrated in urban areas with larger populations. This is supported by Drummond and Snowball (2019) who state that theory cultural and creative industries cluster in cities where there are higher levels of socio-economic development and better hard and soft infrastructure. The prominence of public funding globally to support the cultural and creative industries is noted by several researchers (Bagwell et al., 2015; Baldi, 2018; Getzner, 2017; Long & Morpeth, 2016; Mulino, 2016; Petrova & Hristov, 2016).

Specifically, Bagwell et al. (2015) indicate that different sources of government funding from the public sector is critical for cultural activities, especially for those that are outside commercialised components of the sector. Getzner (2017) argues that public funding for the cultural and creative industries is warranted because this sector is viewed as being part of the public good. Furthermore, Oyekunle & Sirayi (2018) state that the creative industries are not a self-sufficient production system.

The social and aesthetic value of cultural activities as a public good is justified on normative grounds that include equality (citizens should access and experience culture irrespective of whether they can afford to pay for it or not), freedom of cultural expression which is not dependent on income or resources available and efficiency to support the creation of a cultural ethos/ atmosphere in society and economic opportunities (Getzner, 2017; O'Hagan, 2016).

This is also linked to Bialostocka's (2014) assertion that not all sites and products, irrespective of how well they are publicised or preserved, are economically viable. As the above discussion indicates, there is increasing recognition of the significance of the arts, cultural and heritage sector. However, concerns are expressed in relation to studies that attempt to assess impacts, especially when public funding is used to support cultural activities. For example, King et al. (2016) indicate the difficulties associated with measuring cultural value and what is actually meant by value in cultural contexts. The importance of examining economic impacts and the limited research in this area is highlighted by researchers such as Dalmas et al. (2015), Ellwood and Greenwood (2016) and Torre and Scarborough (2017).

These authors, however, also note the challenges of reducing impacts to economic measures which include how to integrate the social value of expenditure commitments (given that many aspects of the arts and culture sector have intangible value) to overall economic valuations that aim to establish monetary values, how to include indirect contributions to the economy such as the case with cultural tourism, and how to accommodate changes over time which influence cultural demands and trends.

MATERIALS AND METHODS

A case study approach is used with a focus on the Festivals and Events Grant Programme of the MGE. The MGE is part of DAC's (2016) broader efforts to maintain an efficient, effective, transparent and accountable national arts, culture and heritage dispensation to support the lives of South Africans. According to DAC (2011), a major challenge faced in South Africa is unemployment and the arts, culture and heritage sector is well positioned to contribute to address this challenge by increasing economic growth opportunities and creating jobs. They refer to this sector as the 'new gold' and assert that the MGE aims to unlock both the demand-side and supply-side constraints within the South African cultural economy and promote market development for the arts sector as well as other related sectors such as tourism. Drummond & Snowball (2019) indicate that the cultural and creative industries is referred to as the 'new gold' in the MGE Guidelines because of their potential to increase economic growth and create jobs. The MGE programme provides funding to cultural events and activities in five sub-categories: Festivals and Events, Touring Ventures, Provincial and National Flagships, Public Arts and Miscellaneous. The MGE Festivals and Events Grant Programme is a tool designed to strengthen and grow the arts, culture and heritage sector (National Arts Council of South Africa, n.d.). It aims to assist local organisations in hosting arts and cultural events in communities, and by providing more opportunities for arts organisations and artists to perform and showcase their work. As outlined by the National Arts Council of South Africa (n.d.), the specific objectives of the Programme are to:

• Create a coordinated programme for events and touring exhibitions that will allow the Department to move away from *ad hoc* funding to strategic funding based on clear programmes and a strategy for events/ festivals and exhibitions.

• Upscale and create extravaganza at existing events and festivals allowing increased diversity of cultural offerings, enhanced quality, more to be offered and/ or over longer duration for the event with economic and social benefits for the location and on ensuring that parts of the events can tour from province to province.

• Increase the audience and exposure that each production receives which in turn will increase the number of jobs/ livelihoods/ income and work these events/ exhibitions create.

• Increase the social cohesion of the country - in particular of the location in question.

• Increase the up-skilling opportunities to arts and culture communities and the tourism sector.

The evaluation of the Festivals and Events sub-category of the MGE focused on three years of funding cycles (2014-2015, 2015-2016 and 2016-2017). A survey was developed by the researchers in discussion with the South African Cultural Observatory (SACO) and DAC who provided the funding as a broader project to monitor and evaluate the 5 sub-categories that comprise the MGE programme. One hundred and fifty three Festivals and Events supported by the MGE programme were identified from information provided by DAC. Purposively selected Festivals and Events organisers from the list compiled from DAC were approached to be interviewed. The sampling approach adopted was purposive to ensure that different types of Festivals and Events were chosen in relation to genre, amount of MGE funding received and spatial/ geographical spread.

The target for the surevys that probed detailed information was 20% and 30 surveys were successfully completed. Festivals and Events organisers participated in a face-to-face or telephonic interviews. Trained fieldworkers who were postgraduate students at the University of KwaZulu-Natal conducted the interviews. A document analysis was also undertaken in relation to information provided by DAC which included contracts and organiser reports submitted to DAC after the Festival/ Event was held.

RESULTS DISCUSSIONS

Profile of organisation/ business and diversity of cultural offerings

Among the 30 Festivals and Events interviewed, the number of times the organisation planned the MGE funded event as well as being involved in organising events ranged from one to 22 years with an average of 3.4 years and 6.7 years, respectively. Only one organiser was involved in organising cultural events/ activities for more than 20 years with most being involved for less than 10 years.

The results show that many of the events have been held longer than the number of years that the MGE programme has been in place. The results indicate that organisers have been involved with planning the event/ activity for a few years and generally organisers have been organising events/ activities for the same period that they have been organising the MGE funded event which suggests that that in several cases, both the event and the organisation are relatively new in the cultural event/ activity arena.

This supports assertions by DAC (2016/ 2017) that government funding (in this case via the MGE programme) is creating opportunities for new entrants into the sector and for more cultural events/ activities to be held in South Africa, contributing to the MGE objective of increasing and diversifying cultural offerings. It is important to note that the impacts are beyond hosting a cultural Festival or Event but also reflect that opportunities are being created for relatively young organisations (and persons within these organisations) to conceptualise, plan and manage cultural events/ activities.

This has broader impacts related to capacity and skills development. The type of organisation/ business that planned the MGE funded events/ activities were mainly Non-Profit Organisations (NPOs) (43.3%). Equal proportions (26.7%) of the rest of the organisations interviewed were Closed Corporations and Proprietary Limited businesses. One event/ activity was a Section 21 company.

Spatial distribution of Festivals and Events supported

In terms of the spatial distribution of the Festivals and Events sub-category, results from documentary analysis presented in Table 1 reveal that events/ activities were hosted in all nine provinces with the most dominant provinces being Gauteng (34.6%), Limpopo (14.5%), KwaZulu-Natal (13.8%) and Western Cape (11.2%). The provinces with fewer Festivals and Events supported were the more rural provinces. The results reveal the spatial inequalities in the distribution of cultural activities as indicated by Bell & Oakley (2015) and Drummond & Snowball (2019). Specifically, the clustering of Festivals and Events in the more urban-based provinces (Gauteng, KwaZulu-Natal and Western Cape) with higher populations is evident. However, in the South African context there seems to be a concerted effort by DAC to ensure geographical spread of the Festivals and Events supported by the MGE programme with all nine provinces hosting these activities.

	Frequency	Percentage
Eastern Cape	11	7.2
Free State	4	2.6
Gauteng	53	34.6
KwaZulu-Natal	21	13.8
Limpopo	22	14.5
Mpumalanga	3	2.0
Northern Cape	2	1.3
North West	3	2.0
Western Cape	17	11.2
No information/ could not be determined	16	10.5

Table 1. Provincial distribution of Festivals and Events (n=153)

Funding and economic aspects

While 2 of the 30 respondents did not indicate how many years they received MGE funding, among the rest 13 (43.3%) had funding for one year during the three year reporting period and 50% received funding for multiple years. Only three (10%) were funded for all three years. Most (66.7%) had funding for 2015/2016 while 40% received funding for 2016/2017 and 23.3% for 2014/2015 (Figure 1). This indicates that the Festivals and Events were not supported for the entire three year period. This is aligned to the MGE framework to create opportunities for many cultural activities and organisations. Furthermore, as indicated earlier, many of the organisers are relatively new in organising events/ activities in the cultural sector. Among the 153 Festivals and Events funded during the three year period, different levels of funding were received and

ranged from R30 000 to R4 000 000. Forty percent of the respondents stated that there were no sponsors other than MGE funding. Among the rest of the events/ activities, sponsors identified were mainly local and provincial government departments. This indicates the reliance on public funding which is of concern given that for all the event/ activities MGE is already a main sponsor. Other sponsors included media partners, organisations (mainly in the arts sector) and retail and private companies. These were far fewer than the public sector sponsors. It is important to note that a few of the organisers indicated that some of the sponsorships (generally from the private sector) were in-kind (advertisements and meals were specifically mentioned). The total amount of sponsorship received from both public and private sources ranged from R200 000 to R11 208 750 with an average of R1 153 060 for the last year that the organiser received funding. The results again reflect the high levels of variation among the Festivals and Events supported. It is important to note that most of the respondents (60%) stated that there were no sponsors other than the MGE funding, again denoting the heavy reliance on public funding. The average proportion of total sponsorship the MGE funding made up was 83%.





Job creation and skills development

As indicated in the literature review section, a major factor that influences public funding in developing contexts of the cultural sector is the assumption that jobs will be created and economic growth will be enhanced. Among the Festivals and Events surveyed, the number of people the business/ organisation receiving MGE funding generally employed on a permanent basis ranged from two to 58 (Table 2). The average number of persons employed permanently in the organisation was 8.4. In addition to general permanent employment practices on an annual basis for the last year that MGE funding was received, respondents were asked about the number of people the business/ organisation employed during the course of the year on a permanent basis who work directly with the MGE funded event/ activity. The results ranged from two to 58 persons as well with an average of 9.3. For 66.7% of the events/ activities, the number of persons employed permanently in the organisations were also the number of permanently employed persons who worked on the MGE event/ activity.

It is interesting to note that more permanently employed persons for the MGE event/ activity than generally permanently employed persons were identified for two Festivals/ Events. The discrepancy was not explained but suggests that organising the MGE funding event/ activity results in more permanently employed persons in the organisation which aligns to the MGE objective of promoting job creation.

The results suggest that in many of the organisations that the MGE funds, Festivals/ Events are one of the main activities or the only activity the organisations are involved in. This again indicates the importance of MGE funding in promoting and supporting the diversity of cultural events/ activities in South Africa.

Table 2. Summary of number of people business/ organisation employsduring the course of the year on a permanent basis generally and on a permanentbasis who work directly with the MGE funded event/ activity (n=30, in %)

5		
Number of persons employed	In the	In the organisation who work with
on a permanent basis	organisation	the MGE funded event/ activity
None	6.7%	10%
Average	8.4	9.3
Range	None-40	None-58

Given that an average of 9.3 persons were employed on a permanent basis in the organisation who worked with the MGE funded event/ activity and that 153 events/ activities were funded by the Festivals and Events programme, 1 423 permanent jobs are associated with the MGE Festivals and Events programme.

In addition to assisting with the MGE funded event/ activity, other functions of permanent employees were organisational administration and business operations, logistical and transport support, skills and career development in the arts and culture, programme/ event coordination and management, marketing and advertising, sales and fundraising, catering, security aspects, community outreach and school art projects.

reporting year the organisation received MGE funding categorised into groups (n=30)				
	Frequency	Percentage		
No response/ not applicable	4	13.3		
Less than 10 3 10.0				

5

16.7

Table 3. Number of additional persons employed to assist in the Preparation for or during the event/ activity, excluding volunteers for the last reporting year the organisation received MGE funding categorised into groups (n=30)

It is worth noting that several of the events/ activities specifically indicated direct involvement in developing and promoting cultural skills, education and research. For example, one organiser assisted with organising and conducting drama classes as well as the promotion and production of theatre plays. Another promoted artistic development and taught artistic skills. A few of the organisers focused on youth education and empowerment activities. These examples reveal that some MGE funded organisers are contributing to cultural development in South Africa in addition to the specific Festival/ Event being supported. Skills development in the creative and cultural sector is being enhanced which aligns to the achievement of the broader objectives of the MGE programme. Table 3 shows that the number of additional persons employed to

10-20

assist in the preparation for or during the event/ activity (excluding volunteers) for the last reporting year the organisation received MGE funding ranged from 5 to 610. The average number of additional persons employed was 95.

The profile of the additional persons employed were also established with most employed on a temporary/ casual basis for a day, more than a day to a week, more than a week to a month and more than a month. While fewer respondents provided disaggregated information on gender, historical racial category and location of additional persons employed; trends were noted among those organisers who were able to provide the information. No substantial major differences are noticeable in relation to the employment of males compared to females. However, it is apparent that both women and men (although mostly on a temporary/ casual basis) are being exposed to job and skills development opportunities in the arts, cultural and heritage sector.

Among the additional persons employed, in terms of historical population groups, mostly Africans were employed generally for a day, more than a day to a week or more than a week to a month. Therefore, Africans (who are the key equity target group in South Africa) are benefitting from the MGE programme as per its stated objectives. The temporary/ casual nature of the employment that pervades the sector is of concern since this is indicative of a lack of job security in the creative and cultural industries and generally reflects lower paying jobs. This concern is also highlighted by Bell & Oakley (2015) in relation to job creation in the creative and cultural industries more generally. Mostly locals who worked for a day or more than a day to a week were employed as additional persons. With the exception of one additional person employed permanently nationally for the MGE funded event/ activity, the rest were locally-based (that is, from the city/ town/ municipality where the event is held).

The again reveals that the MGE objective of focusing on locally-based job creation and opportunities in the creative and cultural industries is being met. A range of roles and functions were performed by the additional persons employed, with the main ones being technical support, ddministrative support, infrastructural support, sales and marketing and artists/ participant management as shown in Table 4.

	Frequency	Percentage
Technical support	19	63.3
Administrative support	17	56.7
Infrastructural support	17	56.7
Sales and marketing	17	56.7
Artists/ participant management	16	53.3

Table 4. Main roles and functions peformed by additional persons employed (n=30)

The results show that additional persons employed were being exposed to a range of different types of skills. In additional to persons receiving remuneration, 46.7% of the Festivals and Events organisers interviewed indicated that they had work-integrated learning or volunteers for the event which ranged from 1 to 175 with and average of 20. Training and skills development opportunities are also provided.

Social development and greening initiatives

As highlighted by Bialostocka (2014) and Soini & Birkeland (2014), supporting cultural events has impacts beyond economic contributions. The survey included questions on whether the Festival or Event resulted in social development and greening initiatives. Ninety percent of the respondents stated that the event/ activity supported

by MGE funding initiated social/ charitable initiatives to contribute to social inclusivity, cohesion and empowerment while 10% did not. This question was prefaced by a statement that "cultural events/ festivals/ activities are linked with social impacts that con contribute to social inclusivity, cohesion and empowerment" which aligned to stated MGE objectives. Among the respondents who stated that social/ charitable initiatives were activated, several were identified, namely, education (60%), youth (50%), culture/ arts (43.3%), disability (26.7%) and rural (20%) programmes. The results indicate that the Festivals and Events are contributing to addressing social issues which is a key component of the MGE programme. Respondents were also asked what MGE funded events/ activities (such as the one the organisation is involved in) can do to be socially responsible. Suggestions were forwarded by 90% of the respondents with the main ones relating to uplifting communities and disadvantaged groups in particular (such as the youth and persons with disabilities), promoting social cohesion and diversity, supporting education and training programmes/ skills development, supporting and empowering artists (including providing scholarships and bursaries), and building local community pride and identity. Thus, the event organisers highlighted that more could be done to meet the MGE objective of enhancing social cohesion in specific locations via their respective events/ activities.

Audience exposure to cultural activities is also important in relation to promoting social cohesion and strengthening positive social identities. Furthermore, as Throsby (2016), Torre and Scarborough (2017) and van der Merwe (2016) indicate, cultural events/ activities can contribute to tourism. The numbers of persons attending the Festivals and Events from information derived from the surveys and the reports submitted to DAC ranged from 100 to 45 000 with an average of 5 153.

This again is indicative of the diversity in relation to the types of events/ activities supported. Many of the respondents stated that some of the persons in attendance (especially for the larger Festivals and Events) were tourists. With an average of 5 153 persons attending and given that 153 events/ activities were funded in this category, 788 409 persons were exposed to Festivals and Events. The possible range is likely to be between 630 727 (a 20% underestimate) to 946 091 (a 20% overestimate).

Sixty percent of the respondents stated that the event/ activity supported by MGE funding initiated greening initiatives to reduce negative environmental impacts and be more environmentally responsible while the rest did not.

This question was prefaced by a statement that "there is increasing concern over the impacts of events, festivals or activities on the environment". Among the respondents who indicated that greening initiatives were activated, several types were identified with the main initiatives being proper disposal of waste (43.3%), recycling (33.3%), conserving water (23.3%) and promoting green behavioural change/ information on environmentally-friendly behaviour (20%). Respondents were also asked what MGE funded Festivals and Events (such as the one the organisation is involved in) can do to be environmentally responsible. Again, 90% of the respondents provided suggestions which included conserving water and energy, proper disposal of waste, using more environmentally friendly products, promoting recycling, and enabling environmental awareness and education at events/ activities. Associating the events/ activities with pro-environmental messaging was specifically highlighted. While environmental aspects are not directly stipulated in the MGE objectives, this is an important component of sustainability. It is pleasing to note that many of the MGE Festivals and Events are considering environmental issues.

Sustainability of Festivals and Events

All the respondents, with the exception of two, pointed out that their respective organisations planned to have this event/ activity next year. The two respondents who indicated that they did not plan to have the event/ activity stated that funding was the key issue. While 70% of the respondents noted that the organisation would have the event/ activity next year or in the future without MGE funding, the rest (30%) would not. The main reason was funding constraints since MGE is the main and, in many cases, only funder of the event/ activity. As one respondent stated, "the MGE funding is the only source funding for this event and without it there are limited financial resources to organise the event". Respondents were asked to rate on a scale of 1-5, where 1 is not at all important and 5 is very important, how important MGE funding was for specific aspects outlined in Table 5. The results indicate that in respect to all aspects (financial, status or recognition of event, quality of cultural aspects, ability to include local communities and artists, promotion of social cohesion, and skills and employment in the cultural sector), the importance of MGE funding was highly rated.

The results further suggest that, according to the event organisers, MGE funding is having a positive impact on cultural promotion, social cohesion, skills development and employment creation as well as event/ activity financial sustainability. Thus, from their perspective, the MGE objectives are being met.

T is not at an important and 5 is very important (in-50, in 70). Multiple responses						
Importance of MGE funding for:	1	2	3	4	5	No response
The financial sustainability of the event/ activity	-	-	-	6.7	90.0	3.3
The status or recognition of the event	-	-	3.3	16.7	76.7	3.3
The quality of the cultural aspects	-	-	-	20.0	80.0	-
Ability to include local communities and artists	-	-	3.3	16.7	80.0	-
Promote social cohesion	-	-	3.3	23.3	73.3	-
Improve skills and employment opportunities in the cultural sector	-	6.7	3.3	23,3	66.7	-

Table 5. Rating of statements in relation to specific aspects regarding the importance of MGE funding for various aspects of the event on a scale of 1-5 where 1 is not at all important and 5 is very important (n=30, in %): Multiple responses

CONCLUSION

The evaluation is based on an analysis of 30 Festivals and Events and assessments of documents submitted to DAC which the researchers had access to. The MGE Festivals and Events Grant Programme aims to strengthen and grow the arts, culture and heritage sector in South Africa, and to assist local organisations in hosting arts and cultural events in communities by providing more opportunities for arts organisations and artists to perform and showcase their work. The results indicate that the MGE Festivals and Events Grant has assisted new organisers in the cultural event/ activity arena. The MGE programme is therefore creating opportunities to support more and new forms of cultural events/ activities to be supported in South Africa.

This indicates that the MGE objective of increasing and diversifying cultural offerings within the country is being achieved in relation to the Festivals and Events sub-category. These opportunities also provide a platform for skills development in the creative and cultural industries that include event management, administration and logistical capacity development. The Festivals and Events displayed a range of different types of cultural genres and aspects including festivals, exhibitions, performances, workshops and training events (mainly targeting youth and schools). Given the diversity

of cultural events/ activities that are supported by the MGE programme, it is clear that audiences throughout the country are being exposed to different types and genres of cultural events/ activities which is one of the objectives of the programme.

The different types, sizes and spatial/ geographical spread of the Festivals and Events is meeting the broader objective of contributing to increased diversity of cultural offerings. While the dominance of the more populated and urban provinces is evident in relation to the geographical spread, there is certainly a concerted effort by DAC to ensure that Festivals and Events are supported in all provinces.

The results show that jobs generated from the hosting of the event/ activity is largely temporary or casual in nature. However, Festivals and Events are creating permanent jobs as well which can be sustained if these become annual activities which can be complemented by additional cultural offerings that the organisations can become involved in. Temporary/ casual employees as well as volunteers are being exposed to much needed skills development and training opportunities.

Several of the events/ activities specifically indicated direct involvement in developing and promoting cultural skills, education and research; thus contributing to cultural development in South Africa beyond that of the event/ activity being funded. They are enhancing skills development in the creative and cultural sector which is one of the objectives of the MGE programme. Event management skills are being enhanced through the Festivals and Events programme positioning event organisers to host other events within the arts, cultural and heritage sector. From a transformation and empowerment perspective, it is also important to note that both men and women, blacks and locals benefit from jobs created which is a key objective of the MGE programme. The MGE funding further supported, in many instances, small enterprises.

A major concern emanating from this study is the substantial reliance on public funding (especially the MGE programme). For most Festivals and Events, public sponsors are the main and oftentimes only sponsor. DAC has a long-term objective of reducing reliance on their funding. To achieve this, it is imperative that organisations supported via the MGE programme receive training on how to leverage sponsorships from the private sector and increase income generating opportunities associated with the Festivals and Events, such as having exhibitions and stallholders as well as increasing ticket sales. Another key objective of the MGE Festivals and Events Grant is to increase social cohesion and social benefit for the location. The majority of event organisers stated that the event/ activity supported by MGE funding initiated social/ charitable initiatives to contribute to social inclusivity, cohesion and empowerment. The main initiatives were education, culture/ arts, youth, and rural programmes.

The link to cultural/ arts social initiatives is once again underscored and contributing to the MGE objective to strengthen and grow the arts, culture and heritage sector. Sustainability is also highlighted as a key issue in relation to the objectives of the MGE programme. Most Festivals and Events supported by MGE funding are involved in greening initiatives with the main aspects being proper disposal of waste, recycling, promoting green behavioural change/ information on environmentally-friendly behaviour and conserving water. This study indicates that supporting the creative and cultural industries can have multiple benefits.

The Festivals and Events sub-category of the MGE programme is playing a major role in supporting the arts, culture and heritage sector. The results suggest, however, that the over-reliance on public funding requires further research and policy attention to ensure longer term sustainability of these types of cultural activities. This study illustrates the importance of undertaking research to assess the impacts of publicly funded cultural events/ activities as part of a broader monitoring and evaluation effort.

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ETHNOGRAPHIC MUSEUMS IN THE RURAL AREAS OF CRIŞANA REGION, ROMANIA – KEEPERS OF LOCAL HERITAGE, TRADITION AND LIFESTYLE

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Abstract: Crişana Region is a historic region in the north-western part of Romania, rich in cultural heritage and traditions and a small, yet valuable part of this heritage can be found exhibited in the ethnographic museums from the rural areas. The aim of our study is to draw attention upon these museums, which are small museums, usually organized at the initiative of local people in their own houses or in old houses of deceased relatives (the case of Muzeul satului din Finiş – Finiş Village Museum). The collections are of various sizes, containing older and newer objects belonging to them or to other members of the community, however, the common issue which characterizes these museums is that they are all very eclectic, most often unorganized collections. We also made a cartographic representation of their distribution in the territory, so they could be easily located by those interested in this type of ethnographic cultural heritage.

Key words: ethnography, museum, heritage, rural area, tradition

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INTRODUCTION

Museums, generally, have been for a long period of time the keepers of valuable exhibits of different nature and from different domains like art, history, anthropology, ethnography, etc. Most museums are large and are situated in cities and towns where

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they can be visited by the local people as well as by tourists and travelers through the respective locality, due to the fact that towns and cities are the localities abundant in cultural attractions, amongst which museums. Museums are the object of our study, (Harris & O'Hanlon, 2013; Herman & Vârnav, 2014; Ilieş et al., 2018; Indrie et al., 2018; Lincu et al., 2018; Mihincău et al., 2019; Navarrete Hernández, 2014; Turner, 2014) but those which can be found in rural areas, more specifically in the rural areas of Crișana Region, Romania. They host collections of ethnographic items which reflect very well the past and present local realities of the communities. Crișana Region is located in the north-western part of Romania (Figure 1) and it comprises Bihor County entirely and parts of Arad, Sălaj and Satu Mare Counties. The region benefits of all types of landforms (Figure 1), from low plains such as Crișurilor Plain, in the western part of the region, hills and depressions, Crasnei Hills, Vad-Borod Depression, Beiuş Depression, to mountains like Plopiş Mountains, Bihor Mountains, etc (Blaga, 2014, Ilieş et al., 2018). The component population of the region is of various ethnicities: Romanians, Hungarians, Germans, Slovaks and Rroma (Bodocan, 2001).



Figure 1. Geographical location of Crișana Region in Romania and within the European Continent

Other ethnicities are also represented, but in a very low number. The landforms are important in our study because they have a great deal of influence upon the people's occupations, since the land provides materials for them, and, implicitly, on the objects they create in order to work. People of different ethnicities contribute with their own culture and traditions to the local ethnographic heritage.

MATERIALS AND METHODS

A mixed methodological approach was used, data collection and analysis, as our aim is to present the ethnographic museums from the rural area of Crişana Region and the type of exhibits they host. The ethnographic heritage of the entire region, or of smaller areas of it, has been studied by many specialists in the domain (David, 2015; Filimon, 2012; Ghinoiu, 2011; Godea, 1977; Godea, 1981, Herman & Gherman, 2016; Herman & Benchiş, 2017; Ilieş et al., 2017; Ilieş et al., 2018; Josan, 2009, 2010), however, we consider that the ethnographic museums from rural areas were not given proper attention. Therefore, we compiled a list of these museums and two of them were taken into study by comparison: *Finish Village Museum* (Figure 2) and *"Horea and Aurel Flutur" Museum of Ethnography* (Figure 3), both from Bihor County.

The two above mentioned museums were studied in situ by observation and the photographic technique was used to illustrate the exhibits. From cartographic point of view, two maps were made using GIS (Geographic Information System Mapping). One of them depicts the geographic location of Crişana Region and the second one represents the distribution of the ethnographic museums in the region.



Figure 2. The household which hosts the *Finiş Village Museum*

Figure 3. The entrance to the *"Horea* and Aurel Flutur" Museum of Ethnography

The ethnographic museums are spread throughout the rural area of Crişana, they are present in most counties which compose the region, reflecting through the collected objects the local ethnographic heritage. They are organized in households and houses or under the form of exhibitions in schools or culture houses which are themselves representative for the local type of buildings and rural architecture.

Museum	Locality	County				
Beliu Museum Collection	Beliu	Arad				
The Museum of Buteni Commune	Buteni	Arad				
"Horea and Aurel Flutur" Ethnographic Museum	Chișcău	Bihor				
Finiș Village Museum	Finiș	Bihor				
Sălacea Museum House	Sălacea	Bihor				
Ligia Bodea Museum House	Iaz	Sălaj				

 Table 1. The ethnographic museums from the rural areas of Crișana Region, Romania (Data source: http://ghidulmuzeelor.cimec.ro)

Obviously, there are ethnographic collections and exhibitions in the big and more famous museums from the urban areas as well, and they are even more organized, more compact than those from the rural areas, but the cultural value of the latter lies in the fact that everything there is suggestive, from the small objects and tools which were used in various household works and occupations, traditional clothing and fabrics, specific to the villages or to the area, to furniture pieces, as they all reflect the lifestyle of the local community, their love for artistry and their craftsmanship.

Even the names of these museums suggest either the type of collection they comprise or the name of the founder (Table 1). Table 1 illustrates the ethnographic museums and the localities and counties where they can be found.



Figure 4. The ethnographic museums from rural areas and the "lands" of Crișana Region

The reasons why there are three ethnographic museums in Bihor County alone are that the entire county is in the region, it has all the landforms mentioned earlier and all the ethnicities, fact which leads to a wide variety of occupations, traditions and lifestyles. It can be noticed that most of these museums are in in the vicinity of mountainous areas (Figure 4), since higher relief provides other occupation possibilities besides agriculture, due to the existence of raw materials: forestry, building with wood, wood processing, carving; mining; milling, sheep breeding, etc., and the more occupations the population have, the richer their heritage is. Besides the counties, Crișana is also made up of "lands", "mental spaces" (Cocean, 1997; Cocean, 2011; Cocean & Filip, 2008; Ilieş, 1998; Ilieş, 2014; Ilieş & Wendt, 2015; Ilieş, 2017; Ilieş, 2018;) which have a strong influence on the region's cultural heritage: Silvaniei Land, Beius Land and Zărandului Land (Figure 4). Thus, Beliu Museum Collection and The Museum of Buteni Commune are in Zărandului Land, "Horea and Aurel Flutur" Ethnographic Museum and Finis Village Museum are in Beius Land, Ligia Bodea Museum House is in Silvaniei Land and, although Sălacea Museum House is in neither of the mentioned lands, it is in another well-defined area, Ierului Valley.

RESULTS AND DISCUSSIONS

When considering ethnographic museums or collections in rural areas, it can be noticed that there is no consistency regarding the exhibits. Obviously, they all have similar items such as household objects, clothing pieces, tools, icons, etc., gathered from the respective area, but the way they are exhibited depends solely on the owners' or founders' space possibilities and vision, their purpose being to reflect as accurately as possible how people used to live and work in their villages.

Finiş Village Museum, located in Finiş Locality, Bihor County, is a small museum organized by the owner of the household who inherited it from his grandparents. It contains the main building made up of a porch, two rooms and a kitchen between them. There is also a pantry with separate entrance, a barn and a water well in the yard. The rooms are set up as a bedrooms and family rooms, decorated in a manner which is typical for Beiuş Land and for the entire region: two beds on opposite walls, one bench in front of each bed, a table in the middle of the room, a wardrobe and a dresser (Figure 5, left).



Figure 5. Bed, table and benches (left); loom (right)

The beds are decorated with pillows and fabrics with traditional patterns. There are also mannequins showcasing traditional clothing, typical to the Hungarian

ethnicity. One room, besides the bed, table, cupboard, also features a traditional loom, dating back to 1928, used by women to weave their own fabrics (Figure 5, right)

The kitchen features a built-in traditional oven and shelves for dishes (Figure 6). The objects exhibited in house recreate the living conditions of a typical, fairly rich family (we know this by the number of pillows on the beds, they represent wealth).

The household objects are very eclectic from various periods of time. Although most of them are not very old, some are contemporary, they reflect the household organization and the rural particularities of the family life. More household objects are exhibited in the pantry and tools in the barn (Figure 6).



Figure 6. Barn (up-left); pantry (up-right); kitchen (down)

"Horea and Aurel Flutur" Ethnographic Museum from Chişcău, Bihor County is also a family cared ethnographic museum, set up in the household of brothers Horea and Aurel Flutur and their families. Just like the museum from Finiş, this one also has a room set up with traditional furniture pieces, mannequins dressed up in traditional clothing, fabrics woven in the house and decorated with local patterns, etc., representing the usual living conditions of the local people (Figure 7). There is also an old classroom accessible to the visitors (Figure 7). The rest of the objects are exhibited in a large, covered barn, on categories. In this case the exhibits did not belong solely to the family, they were collected from other people in the village and even from neighboring villages. First of all, they represent the lifestyle of people through the household objects, then there are tools and mechanical machines which reflect their occupations: from shoe-making, weaving, pottery, wood-processing and carving, carpentry, to forestry and mining (Figure 8).



Figure 7. Traditional room (left); old classroom (right) *"Horea and Aurel Flutur" Ethnographic Museum*

The exhibits are very many and they belong to various periods of time and to several areas, not only to Chişcău Village, so we can say that a part of Beiuş Land is reflected here, mostly the mountainous area of Bihorului Mountains. Some of the items have tags explaining their origins, such as the period of time when they were made, which part of the area they were brought from or who they belonged to.

Some others, especially wooden objects have the owner's name and the year they were made carved in them. However, most objects have no indications of origin or former owners, or dating, as they were usually passed on from one generation to another, without any additional information. The main principle of organizing them was by category: chests on one side, baskets, on another side, mechanical machinery in one place, furniture pieces against one wall, pottery on another wall, etc. (Figure 8).



Figure 8. Barn with exhibited eclectic objects (left and right)

CONCLUSIONS

Both analyzed museums exhibit mainly the heritage of the founding families, especially the *Finiş Village Museum* which recreates the traditional household of the family who actually inhabited the house for almost two centuries (Figure 9).



Figure 10. Flutur family pictures at the *"Horea and Aurel Flutur" Ethnographic Museum* from Chişcău

The same situation is encountered in *"Horea and Aurel Flutur" Ethnographic Museum* from Chişcău (Figure 10), a family collection combined with the miscellaneous collection of objects from the local population and from the surrounding areas.

It can be noticed that family, traditions, old habits and the connection to the past are very important for the people in rural areas. They are important enough to make the people go through the trouble of founding these ethnographic museums with the only purpose of carrying on these spiritual and material values. The income of owners provided by visits to the museums lies in visitors giving a volunteer donation (if they consider it worth it), in the case of *Finiş Village Museum* and the optional shopping of traditionally made objects in the case of *"Horea and Aurel Flutur" Ethnographic Museum* from Chişcău. The opening hours of the first are not established, there is just the phone number of the family's grandson who comes and opens the museum for visitors and proudly walks them through, providing information about the family heritage and answering any potential answers.

The latter, the more developed one, has opening hours and visitors walk around the museum on their own, but there is somebody to answer questions if necessary. It resembles more a regular museum, except the fact that not all items are dated and that there are very many objects cluttered in a fairly small space. According to the owners of both museums, not many people visit them, unless they are passing through the villages and they happened to hear about them. An advantage of *"Horea and Aurel* *Flutur" Ethnographic Museum* from Chişcău is that it is situated near *Bear's Cave*, so visitors to the cave might be interested in the ethnographic museum as well.

Museums are not the typical tourist attraction in rural areas, they are representative mostly for urban areas, yet we consider that the ethnographic museums from rural areas have cultural and tourist value exactly because they reflect rural life from the remote past up to the present and they contribute a great deal to the promotion of the local ethnographic heritage, not only to the younger generation, but also to visitors from other parts of the country or even from abroad.

They stand for local uniqueness in a world where the globalization tendencies cannot be avoided (Richards, 2007). Further research and talking to the local population could help finding more about the origins of the object composing the ethnographic heritage. Better marketing strategies should also be found in order to raise awareness regarding the spiritual and material importance of these museums from cultural, economic and social point of view (Benedek & Dezsi, 2006).

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PRELIMINARY GEOMORPHOSITES ASSESSMENT ALONG THE PANORAMA ROUTE OF MPUMALANGA PROVINCE, SOUTH AFRICA

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Abstract : South Africa's geomorphological diversity offers spectacular landscapes recognized for their ecological and cultural/archaeological associations, making the landscapes important sites for geoheritage and geotourism activities. Evaluation of value types in geomorphosites has gained in popularity in geomorphological heritage research. This study aims to apply a comprehensive methodology for South Africa using several guidelines for geomorphosite assessment. Methodological procedures focusing on geomorphosite specificities were used with numerical assessment for fifteen geomorphosites. The approach integrated qualitative and quantitative procedures for the inventory and quantification of geomorphosites of South Africa. Using a modified criterion, geosite assessments and inventories of the Panorama Route were achieved focusing on specific attributes of the locality. Fifteen geomorphosites were studied and four geomorphosite obtained high scores in Geomorphological Value (GmV) and Management Value (MgV) and consequently high score in Total Value (TV) and Ranking Value (Rk). The results for each indicator are used for ranking and comparison between sites with the interpretation of the results used for supporting site management decisions. The assessment of the geomorphosites along the Panorama Route demonstrates the potential of this type of methodology has for the understanding of geomorphosites and tourism in the province.

Key words: Geomorphosites, Assessment criteria, Landscapes, Geotourism, Panorama Route, Mpumalanga

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INTRODUCTION

Geomorphological features of a landscape are known as geomorphosites. Panizza (2001) indicates that the term is a contraction of 'geomorphological sites'. Three attributes bring out the differences between geomorphological features and geomorphosites owing largely to their aesthetics, dynamics, and size making them specific kinds of geosites. Panizza and Piacente (1993) have argued that human perception or

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exploitation of geomorphosites have resulted in a special value being attached to landforms. This is a relative value and is likely to vary in any of the following five forms as argued by Reynard (2005); 1. Scientific, 2. Ecologist, 3. Cultural, 4. Aesthetic and/or, 5. Economic. Grandgirard (1997) and Reynard (2005) considered the constraints offered by the meaning of the term and opined that a geomorphosite could be any part of the Earth's surface that is important for the knowledge of Earth, climate and life history.

A general acceptance considers that geomorphosites can only exist if they have one or more types of value. The consideration given to the scientific value is high and is regarded as a fundamental value for recognition, although other types of value are also important criteria in the selection and comparison of geomorphosites. The purpose of undertaking activities such as geomorphosite evaluation according to Comanescu et al. (2011) and Comanescu & Dobre (2009) is to develop proper solutions for their protection and even their promotion as tourist destinations. When the economic value is considered, it, therefore, refers mainly to the tourism potential of sites.

Geomorphosite research focuses on one of the most important issues relating to the methodologies which look at the value evaluation present in geomorphosites. The use of and the expertise of assessors combined with qualitative procedures in the selection of geomorphosites constitutes one of the two main types of assessment commonly used. Watson and Slaymaker (1966) popularized the qualitative approach and the method used in different types of inventories during the 1960s. Since the 1990s the quantitative approach has been particularly developed to rank the sites (Grandgirard, 1997; Rivas et al., 1997). There are no universal guidelines as national geomorphological contexts and objectives are different. Bilhar (2016) proposes methodological procedures which focus on geomorphosite specificities while other researchers had different views which give rise to the existence of various groups of researchers on the subject. The unsystematic approaches to the process of geomorphosite selection have placed attention on numerical assessment resulting in high levels of objectivity expressed by the results obtained. Assessment approaches that are qualitative and quantitative are direct and indirect (or parametric) methods, respectively, as observed by Bruschi and Cendrero (2009) and Bonachea et al. (2005).

Experts supporting the identification and selection of the geomorphosites in the scope of inventories have grown in numbers. The selection criteria tend to be not well explained and becomes highly subjective. Using numerically quantified criteria, on the contrary, is possible to obtain clear and replicable results using parametric methods as they are objective. The parametric approach used by the Geomorphosites Working Group methods aims at the quantitative assessment of previously selected geomorphosites. The approach does not clarify exactly how the sites were identified and selected Pereira and Pereira (2010). The identification of potential geosites must be considered before any accurate quantitative assessment can be done. In that context, integrating quantitative and qualitative procedures for the inventory and quantification of geomorphosites would be in line with the Geomorphosites Working Group's goals.

In this study, we demonstrate the use of a comprehensive methodology that can function in the different stages and approaches of geomorphosite assessment using Pereira and Pereira (2010) study model. The methodology supports the selection of appropriate geomorphosites amongst several geomorphological assets and is used for comparison and ranking of the selected geomorphosites. The geomorphosite assessment of both approaches and the essential criteria for the compilation of qualitative and numerical values is of great relevance in this study. Kubalíková (2013) argues that the use of several assessment methods that represent a significant tool for geoconservation and geotourism purposes are necessary for geomorphosite assessment consideration. The assessment then can be carried out from several perspectives with an emphasis on scientific, cultural and economic parameters of the fifteen sites along the Panorama Route.

MATERIALS AND METHODS Geomorphosite Assessment Criteria

Assessment methodologies used for geomorphosites generally conform to the goal of evaluating landform heritage features and the determination of the types of values. Reynard (2005) argues that there is a general acceptance of the value attached to geomorphosites. Such value should meet a criterion of either being scientific, ecological, cultural, aesthetic and/or economic. Although Gray (2004) considers both physical and biological functional value of landforms as they support environmental systems. Scientific value is the essential value related to methodological proposals generally accepted (Grandgirard, 1997, 1999; Coratza & Giusti 2005).

Categories that include assessment criteria like cultural, aesthetic, ecological, and other non-intrinsic values that can be assessed for management purposes related to the potential for use and the need to protect geomorphosites can be considered.

There is a consensus on the features to be valued as revealed in several works of literature dealing with the assessment criteria proposed. In the category of scientific representativeness, integrity, value. criteria like rarity, and diversity of geomorphological features are considered, including other criteria like scientific knowledge and Paleo-geographical value (Reynard, 2009). Pereira (2006), argued that the additional value, as a criterion is generally less precise depending on the levels of sensitivity the assessor would have to accomplish the assessment. Management concerns have been focused mostly on the criteria dealing with accessibility and visibility, for instance, vulnerability to measure the need for protection. Bruschi and Cendrero (2005, 2009) argue for the usefulness of measures for evaluating the potential of use and need for protection include the relationship with existing planning or limits of acceptable change as supported by Serrano and González-Trueba (2005) in their contention that the proximity of facilities and services are useful criteria also.

Inventory Quantification

The methodology used in this study is adapted from the works of Pereira (2006) and Pereira and Pereira (2010). The methodology is characterised by an approach that considers two approaches, the first one being an inventory and quantification stage and the second being a six sub-stages approach (Figure 1). Geomorphosites selection and characterization are the predominant activity during the inventory stage and in the second approach the quantification stage, the numerical assessment of criteria of sites is determined by their importance. This allows the comparison of sites to be done. Three types of geomorphosites define the meaning of the methodological approach which is based on a predetermined observation scale: (single places, fields and panoramic viewpoints approach). This observation scale is shown in (Figure 2).

When dealing with the scale, its assessment accuracy is important by future management activities. The observation scale types of geomorphosites are made up of one or more groups of landforms. The landscapes can only be seen by the observer moving into an area, consequently, such activity gives rise to large landforms with panoramic viewpoints which can be perceived. This approach observing landforms considers three categories including local points, single points and areas as units of observation. Geomorphological knowledge of an area establishes the foundation for this assessment method. At the regional setting, the main landforms and processes,

structural framework, climatic features, human activities, and geomorphological mapping, are necessary information sources as well as other relevant natural and cultural aspects. Using such kind of information which is scientific, ecological, cultural and aesthetic, the diverse characteristics of landforms may be identified.



Figure 1. Inventory and quantification stages and sub-stages of geomorphosite assessment used in the study (Source: After Pereira, 2006; Pereira et al., 2007; Pereira and Pereira 2010)



Figure 2. The observation scale that defines a typology of geomorphosites used in the study (Source: After Pereira, 2006)

Six Sub-stages for Inventory Quantification

Sub-stage 1: The identification procedure at this level focuses on a predefined range of measures. This is indicated in Table 1. The inventory quantification stage focuses on the selection of landforms which will be defined as geomorphosites or potential geomorphosites. Sub-stage 2: The determination of intrinsic value, potential usage, and required protection are constructed employing a qualitative evaluation process. The definition of the intrinsic value is achieved using the scientific, ecological, cultural and aesthetic features, with scores being assigned from 'nil' values to 'very high' values for ecological, cultural and aesthetic criteria (Table 2).

(Dua cources Frances of a auprea from Ferena, 2000)						
Number	Criteria for PGI					
I.	Scientific relevance recognized during the geomorphological survey of the area or by early scientific works					
II.	Landform aesthetics and peculiarity, compared with other sites in the same or other fields					
III.	Links between landforms and cultural factors such as archaeological features, population settlements, castles, farming, and so on					
IV.	Links between landforms and ecological topics such as fauna and flora settlements					

 Table 1. Criteria for Potential Geomorphosites Identification (PGI)

 (Data source: Framework adapted from Pereira, 2006)

Table 2 Assessment of Potential Geomorphosites Criteria used in the study
(Data source: Framework adapted from Pereira, 2006)

CR	ASSESSMENT SCORE	
Geomorphological	• Scientific (Sc)	 Low Medium High Very high
Intrinsic Value (IV)	 Other geomorphological values (Ogv) Ecological (Ec) Cultural (Cul) 	 o. Nil 1. Very low 2. Low 3. Medium 4. High 5. Very high
Potential Use (Pu)	 Accessibility (Ac) Visibility (Vi) Use of other natural or cultural values (Oth) 	 Very difficult Difficult Medium Easy/good Very easy/good
Need for Protection (NP)	Deterioration (De)Vulnerability (Vu)	1. Low 2. Medium 3. High

As can be observed from Table 2 there is a variation of the category of scientific value scores from 'low' values to 'very high' values. The assessment potential as proposed by Pereira (2006) confirms the methodology based on the previously identified potential geomorphosites. The results stand out as having scientific relevance (Table 2). Resultantly, the criteria 'potential use' is therefore defined based on three primary criteria: accessibility, visibility, and evidence of importance in other disciplines.

The last criteria in the table also take the current promotion and use of a site in other fields into account. The need for a protection category includes assessment of levels of deterioration and vulnerability, with scores ranging from 'high' to 'low'. This criterion allows the inclusion of the past (deterioration due) or future (vulnerability Vu) threats during the assessment. Although the qualitative assessment is characterised by being brief, subjective, and strongly influenced by the assessor's understanding of geomorphology, it is a fundamental step in the overall assessment. The effects, therefore, serve as a foundation for further sub-stages in the inventory phase.

Sub-stage 3: The previous qualitative assessment is used for the selection of geomorphosites and rank performance of sites showing overall highest scores. These are selected for further characterization (Table 3). Potential geomorphosites were selected using indicators listed in Table 3 with indicator selection criteria such as 'very high' scientific value, without considering their performance in other criteria (Type I). Further,

with some measure of independence sites with the criteria of 'high' geomorphological intrinsic value, 'high' potential use (accessibility, visibility, and use of other natural or cultural values) and low deterioration and vulnerability were selected and made up the Type II category. All single places or areas which required protection were selected only if they showed 'high' scientific value or 'high' or 'very high' score in one or more of the other geomorphological values giving the category of Type III characteristics. Panoramic viewpoints located outside of the study area were selected if they had at least a 'high' scientific value and furthermore a 'very high' ecological, cultural or aesthetic value and good conditions of accessibility and visibility qualifying them to belong to category Type IV.

SELECTION CRITERIA					
TYPE					
Ι	Sc = 5				
II	Sc = 4 or Sc = 3 and Ec > 4 or Cul > 4 or Ae > 4;				
	Ac > 3 and $Vi > 4$ or $Oth > 4$;				
	De < 2 and $Vu = 1$				
III	Single places and areas				
	Sc = 4 or Sc = 3 and Ec > 4 or Cul > 4 or Ae > 4;				
	De < 2 and $Vu > 2$ (urgent need for protection)				
IV	Panoramic viewpoints outside the study area				
	Sc = 4 or Ec = 5 or Cul = 5 or Ae = 5;				
	Ac > 3 or Vi = 4				

Table 3. Geomorphosite selection criteria used in the study
(Data source: Framework adapted from Pereira, 2006)

Sub-stage 4: The compilation of the detailed description of complete inventory using each of the selected geomorphosites was based on processes that focused on the cartographic data as well as information on geomorphology, 'heritage value', and use and management. The latter category dealt with half a dozen points, including aspects related to accessibility, visibility, present uses, conservation, vulnerability, legal position and supporting infrastructures. The information collected directly would support the fifth assessment sub-stage, which would benefit future management initiatives.

The process of quantifying then considers two sub-stages: numerical assessment and geomorphosite ranking. Geomorphosite characterization culminates in data compilation necessary during that sub-stage process and to be used for comparison purposes of the inventoried geomorphosites. Sub-stage 5: The numerical assessment is based on the criteria introduced in Sub-stage 4, divided into different categories to create two new levels: principal and secondary indicators. The protection or promotion of geomorphosites and the possible targets of the assessment criteria are significant. The principal indicator 'geomorphological value' includes the secondary indicators 'scientific value' and 'additional values'. 'Management value', as the second principal indicator, integrates the secondary indicators 'use-value' and 'protection value'. The weighting of results, 'geomorphological value' and 'management value' as shown in Table 4 are treated the same with a maximum of ten points each.

The total value of the geomorphosite is a product of all indicators.

Sub-stage 6: The quantification table is used to record the results of the numerical assessment (Table 5) with each of the geomorphosites being subjected to the assessment criteria. A direct comparison of site ranks is possible with data entered in the table (Table 6). The primary and secondary indicators are shown as the total value (TV) after being summed up and rank positions established according to indicators (primary and

secondary) giving the final ranking (Rk). The sites with the lowest final ranking scores may be seen to be the most valuable geomorphosites in the area being measured from the rankings. To bring about relative value or homogeneity of criteria, rank average results in the geomorphosite assessment must be stressed. Thus, the best-placed geomorphosites in the final ranking score well over the entire spectrum of indicators. Differences from Total Value results are produced as a result of the method (Table 6, Geomorphosites 2 and 5).

Table 4. Geomorphosite numerical assessment indicators and criteria(Data source: Framework adapted from Pereira, 2006)

	GEOMORPHOLOGICAL VALUE (GmV; ScV+AdV) (maximum 10)
	SCIENTIFIC VALUE (ScV ; Ra+In+Rp+Dv+Ge+Kn+Rn: maximum 5.5)
Ra	Rarity inside the area (max 1)
In	Integrity (max 1)
Rp	Representative of geomorphological processes and pedagogical interest (max 1)
Dv	Number of interesting geomorphological features (diversity) (max 1)
Ge	Other geological features with heritage value (max 0.5)
Kn	Scientific knowledge of geomorphological uses (max 0.5)
Rn	Rarity at the national level (max 0.5)
	ADDITIONAL VALUE (AdV; Cult+Aest+Ecol; maximum 4.5
Cul	Cultural value (max 1.5)
Ae	Aesthetic value (max 1.5)
Ec	Ecological value (max 1.5)
	MANAGEMENT VALUE (MgV; UsV+PrV) (maximum 10)
	USE VALUE (UsV ; Ac+Vi+Gu+Ou+Lp+Eq; maximum 7.0)
Ac	Accessibility (max 1.5)
Vi	Visibility (max 1.5)
Gu	Present use of the geomorphological interest (1.5)
Ou	Present use of other natural interests (max 1)
Lp	Legal protection and use limitations (max 1)
Eq	Equipment and support services (max 1)
	PROTECTION VALUE (PrV ; In+ Vu; maximum 3.0)
In	Integrity (max 1)
Vu	Vulnerability of use as Geomorphosite (max 2)

RESULTS DISCUSSIONS

The findings of this study demonstrate the methodological sequence adopted whose aim was to use both types of assessment procedures as proposed by Bruschi and Cendrero (2005, 2009). The geomorphosite selection using the direct and parametric methods was dependent on the assessor's geomorphological knowledge approach. The ranking and comparison of geomorphosites relied on numbers, clear standards and indicators used. Inventory and quantification assessment stages were placed in the same process methodology groups. The identification of potential geomorphosites, their comparison, and analysis for management decisions was included in the process. The scale of observation of types of geomorphosites helped in effecting both assessment and management processes. This study did not determine or consider preexistence of inventories and assessment objectives as it is the first in the area. The assessment set forth with the numerical approach since the appraisal was to identify and inventory the geomorphosites of the Panorama Route. Thus, the first stage (inventory stage) sufficiently collaborated findings by Pereira et al., (2017). Following Grandgirard (1999)'s assessment recommendations three critical questions informed our assessment: What? Why? How?

Arguably so the 'What?' question refers to the scope in terms of area size and geomorphological environment of the Panorama route. Followed by the 'Why?' which refers to the definition of one or more main objective, such as identification, inventorying and site protection or promotion of the study sites. The 'How?' question refers to the choice of assessment method we applied in the study. This choice also took into consideration the scope and aims. The findings of this study furthermore, are grounded firmly on a holistic approach to geomorphosite assessment and geomorphosite management as argued by (Pereira et al., 2007). Thus, the assessment, in as much as it did not only involve the classification of sites, suggestions for the geomorphosite protection, promotion, and monitoring are offered. The selection of geomorphosites based on the results of the geomorphological study relied on the numerical assessment following Pereira (2006), Pereira et al. (2007) and Reynard (2009).

The numerical assessment is part of a larger procedure that included the proposals for protection or promotion of geomorphosites. The role of different indicators is particularly useful for supporting site management decisions like measures for the protection, education, and promotion of geomorphosites. While it was possible to obtain a mean geomorphosite ranking these integrated numerical results have no extra significance in terms of management opined Reynard (2009). Contribution to protection or promotion decisions attributed to indicators such as Total Value (TV) or Ranking Value (Rk) did not influence any decision towards protection strategies. The analysis focused on each of the disciplines of the assessment and in that respect, it was desirable to prefer presentation and analysis of results by indicators (scientific, additional, use and protection values) to support better management decisions.

	QUANTIFIED RESULTS OF GEOMORPHOSITES						
Geomorphosite	ScV	AdV	GmV	UsV	PrV	MgV	TV
Sabie Falls (GS ₁),	3,2	4	7,2	6,9	2,5	9,4	16,6
Lone Creek Falls (GS ₂),	4,7	4,4	9,1	6,9	2,5	9,4	18,5
Bridal Veil Falls (GS_3),	3,6	4,1	7,7	6,6	3	9,6	17,3
Mac-Mac Falls (GS_4),	3,3	3,8	7,1	6	3	9	16,1
Jock of the Bushveld (GS ₅),	2,8	3,8	6,6	5,1	1,5	6,6	13,2
Pinnacle (GS ₆),	5,5	4,1	9,6	6,4	3	9,4	19
God's Window (GS ₇),	5,5	4,5	10	7	3	10	20
Lisbon Falls (GS_8),	3	3,9	6,9	6,5	2	8,5	15,4
Berlin Falls (GS ₉),	3	3,9	6,9	5,9	2	7,9	14,8
Bourke's Luck Potholes (GS ₁₀)	5,5	4,5	10	7	3	10	20
Blyde River Canyon (GS_{11}),	5,5	4,5	10	7	3	10	20
Three Rondavels (GS_{12}),	5,5	4,5	10	7	3	10	20
Eco Caves (GS_{13}),	5	4	9	7	3	10	19
Long Tom (GS_{14}) ,	2,8	2,2	5	5,8	2,5	8,3	13,3
Sudwala Caves (GS15)	5	4	9	7	3	10	19

 Table 6. Results of Fifteen (15) Geomorphosites Quantified (Data source: Framework adapted from Pereira, 2006)

Illustrating this, geomorphosite GS7, 10,11, and 12 (Table 6 and Table 7) obtained high scores in Geomorphological Value (GmV) and Management Value (MgV) and consequently high score in Total Value (TV) and Ranking Value (Rk). This partial analysis was excluded from eventual promotion initiatives to be protected. The criteria used which included this method are the outcome of the analysis of other methodological proposals concerning the quantitative assessment of geomorphosites. These criteria with regards to the Panorama Route were considered as most representative of the heritage value of landforms for each of the proposed indicators. It is thus contended that even the selection of criteria brings some subjectivity to the process and such observation is supported by the existence of different standards in each of the analysed methods. However, independently of the criteria used in the Panorama Route assessment, it was important to observe how the assessment organized and divided into the intrinsic value (scientific and extra) and management value (potential function and need for protection), demonstrating the comfort with which the assessment was achieved and supporting management strategy. Lastly, we observe that this arrangement by main assessment indicators/subjects the criteria are the same, independently of the level of the assessment (inventory or quantification).

	(Data source: Autnor 2019, framework adapted from Pereira, 2006)									
#	ScV	AdV	GmV	UsV	PrV	MgV	TV	RK		
1	(GS12) 5,5	(GS7) 4,5	(GS7) 10	(GS7)7	(GS3) 3	(GS7) 10	(GS7) 20	(GS5) 13,2		
2	(GS6) 5,5	(GS10) 4,5	(GS10) 10	(GS10)7	(GS4) 3	(GS10) 10	(GS10) 20	(GS14) 13,3		
3	(GS7) 5,5	(GS11) 4,5	(GS11) 10	(GS11) 7	(GS6) 3	(GS11) 10	(GS11) 20	(GS9) 14,8		
4	(GS10) 5,5	(GS12) 4,5	(GS12) 10	(GS12)7	(GS7) 3	(GS12) 10	(GS12) 20	(GS8) 15,4		
5	(GS11) 5,5	(GS2) 4,4	(GS6) 9,6	(GS13) 7	(GS10) 3	(GS13) 10	(GS6) 19	(GS4) 16,1		
6	(GS15) 5	(GS3) 4,1	(GS2) 9,1	(GS15) 7	(GS11) 3	(GS15) 10	(GS13) 19	(GS1) 16,6		
7	(GS13) 5	(GS6) 4,1	(GS13) 9	(GS1) 6,9	(GS12) 3	(GS3) 9,6	(GS15) 19	(GS3) 17,3		
8	(GS2) 4,7	(GS1) 4	(GS15) 9	(GS2) 6,9	(GS13) 3	(GS1) 9,4	(GS2) 18,5	(GS2) 18,5		
9	(GS3) 3,6	(GS13) 4	(GS3) 7,7	(GS3) 6,6	(GS15) 3	(GS2) 9,4	(GS3) 17,3	(GS15) 19		
10	(GS4) 3,3	(GS15) 4	(GS1) 7,2	(GS8) 6,5	(GS1) 2,5	(GS6) 9,4	(GS1) 16,6	(GS13) 19		
11	(GS1) 3,2	(GS8) 3,9	(GS4) 7,1	(GS6) 6,4	(GS2) 2,5	(GS4) 9	(GS4) 16,1	(GS6) 19		
12	(GS8) 3	(GS9) 3,9	(GS8) 6,9	(GS4) 6	(GS14) 2,5	(GS8) 8,5	(GS8) 15,4	(GS12) 20		
13	(GS9) 3	(GS4) 3,8	(GS9) 6,9	(GS9) 5,9	(GS8) 2	(GS14) 8,3	(GS9) 14,8	(GS11) 20		
14	(GS14) 2,8	(GS5) 3,8	(GS5) 6,6	(GS14) 5,8	(GS9) 2	(GS9) 7,9	(GS14) 13,3	(GS10) 20		
15	(GS5) 2,8	(GS14) 2,2	(GS14) 5	(GS5) 5,1	(GS5) 1,5	(GS5) 6,6	(GS5) 13,2	(GS7		

Table 7 Ranking Results	Using Fifteen (15) Geomorphosites
(Data course: Author 2010	framowork adapted from Paraira 2006)

CONCLUSION

The main goals pursued by many studies leading to the international task force working on geomorphosites assessment methodology acknowledging the difficulty of coming with a standard methodology prompted the current study in the southern African region. Several studies conducted so far to establish a universal methodology for geomorphosite assessment have produced differences in opinion in coming up with a common methodology. The method employed in this work was adopted as part of a contribution to the methodology used in the assessment and inventorying of geomorphosites in different types of geomorphological environments. The study focus was to alter the standards applied by the international task force and use the method in geosite assessments and the inventory of geological heritage along the Panorama Route.

Our argument recognises that this methodological proposal is not meant to establish universal methodological guidelines. We nevertheless, contribute to the discussion on one of the principal subjects of geomorphological heritage. The studies that have been done so far show a consensus well accepted based on the argument that the development of such universal guidelines is very complex owing to the diversity of geomorphological environments, the different assessment purposes and the inherent subjectivity in all the assessment procedures. Nevertheless, the specificities of this method were considered as important guidelines for geomorphosite assessment. The recognition of geomorphosite assessment as a broad procedure based on the geomorphological study, the selection of geomorphosites based on the results, the numerical assessment and the proposals for protection or promotion of geomorphosites; the organisation of criteria by subject, concerning intrinsic values (scientific and additional) and management values (potential for use, threats and need for protection): the representation and analysis of results using these indicators, in order to support accurate management decisions was achieved for the Panorama Route study.

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THE IMPACT OF THE TERRITORIAL MARKETING ON HIGHLIGHTING THE BRAND "BAIKAL" IN THE BAIKAL REGION

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Abstract: The formation of the global market for geoproducts in the Baikal region causes a growing interest in the study of the phenomenon of "Brand of the territory", which affects the effectiveness of the promotion of the territory in the face of growing competition. An analysis of the current state of tourism in many countries makes it clear that tourism development should be accompanied by efforts to promote domestic tourism programs. The purpose of this article is to analyze and to identify tools to attract attention and develop guidelines for the formation of the brand of Baikal and the Irkutsk region as a whole. In the development of the attractiveness of the territory for its potential consumers, the "Territory Brand" plays an important role. It is he who adds value to the geoproduct. Tools for determining the cost of a geoproduct are a marketing analysis of territories - a SWOT analysis of a territory (analysis of strengths, weaknesses, opportunities and threats), analysis and selection of target markets, and positioning (determination of current and desired positions) of territories. The Baikal region is a unique regional ecosystem, which is the most actively developing and becoming a kind of zone of attraction and pilgrimage not only for scientists, but also for many recreants and vacationers. The Baikal region must necessarily have its own identity, name and slogan, which would make it possible to attract as much money into the budget of the territory and give residents a reason for pride

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and self-identification. The brand name is determined by the name of the Baikal territory. The marketing strategy of attractiveness as the optimal strategy for the development of the region was determined, since its prerequisites were originally set by the history and favorable geographical position of Lake Baikal.It is important to develop a platform for the brand of the territory and to develop a creative brand concept in the process of branding the Baikal territory.

Key words: territorial marketing, brand, geoproduct, development, global market, domestic tourism programs.

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INTRODUCTION

The relevance of the study is explained by the fact that the reputation of the territory becomes a part of national capital and is interpreted from the position of determining the strategic priorities of the development of the country (region) and the national idea. The formation of the global market for geoproducts determines the interest in the study of the phenomenon of "brand territory", which affects the effectiveness of the promotion of the territory in the face of growing competition. And this, in turn, affects the development of tourism. The urgency of the problem is obvious and is due to the fact that the Irkutsk region has huge tourism potential: the unique natural resources of Lake Baikal, its rich historical and cultural heritage. All this forms the brand of Baikal and contributes to the attractiveness of the region as a tourist destination. The purpose of this article is to analyze and to identify tools to attract attention and develop guidelines for the formation of the brand of Baikal and the Irkutsk region as a whole.

THE RESEARCH TERRITORY

Lake Baikal is located in the center of the Asian continent, on the border of two constituent entities of the Russian Federation: Irkutsk Region and the Republic of Buryatia. The western part of Lake Baikal with the island of Olkhon is administratively part of the Irkutsk region, and the eastern part with the northern extremity belongs to the Republic of Buryatia, with borders on the west bank along the Elokhin Cape, on the southern - along the Snezhnaya River. In general, about 60% of the Baikal coast is located in Buryatia, 40% - in the Irkutsk region (Suprun, 2006). The lake lies in a sort of basin, surrounded by high mountain ridges and high hills on all sides.

The western shore of Lake Baikal is rocky and steep, while the terrain of the eastern shore is flatter. The area of Lake Baikal is a territory of very high seismic activity: earthquakes happen at the all the time, but most of them are left unnoticed – their magnitude only amounts to one or two points on Richter scale (Galazy, 2019). The main significant characteristics of the Baikal territory are usually (Galazy, 1987):

• Baikal is 20-25 million years old.

• Baikal is a unique creation of the nature with crystal clear and very clean water (Figure 1).

• It is the oldest existing freshwater lake on Earth (20 million–25 million years old), as well as the deepest continental body of water, having a maximum depth of 5,315 feet (1,620 metres). Its area is some 12,200 square miles (31,500 square km), with a length of 395 miles (636 km) and an average width of 30 miles (48 km). It is also the world's largest freshwater lake by volume, containing about one-fifth of the fresh water on Earth's surface, some 5,500 cubic miles (23,000 cubic km).

• Into Lake Baikal flow more than 330 rivers and streams, the largest of which include the Selenga, Barguzin, Upper (Verkhnyaya) Angara, Chikoy, and Uda. There are 30 islands in the territory of Baikal. The largest of them is the island of Olkhon, which is called the pearl of Lake Baikal.

• The Limnological Institute of the Siberian Division of the Russian Academy of Sciences is located in the town of Listvyanka, as is the Baikal Sanatorium, and the hydrobiological station of Irkutsk State University is in Bolshiye Koty (Bolshoy Koti).

• In December 1996, Lake Baikal was included in the UNESCO World Heritage List.

• Baikal's climate is much milder than that of the surrounding territory. Winter air temperatures average -6 °F (-21 °C), and August temperatures average 52 °F (11 °C). The lake surface freezes in January and thaws in May or June. The water temperature at the surface in August is between 50 and 54 °F (10 and 12 °C) and reaches 68 °F (20 °C) in the offshore shallows.

• Plant and animal life in the lake is rich and various. There are between 1,500 and 1,800 animal species at different depths, and hundreds of plant species live on or near the surface.

• There are more than 320 bird species in the Baikal area.

• Baikal contains some 45 islets and islands, the largest of which are Olkhon (about 270 square miles [700 square km]) and Bolshoy (Great) Ushkany (3.6 square miles [9.4 square km]) (Galazy, 1987).



Figure 1. Lake Baikal

Currently, the development and solution of problems of branding territories is becoming relevant. The latter is reflected in the organization of scientific conferences, seminars, in the decisions of municipal governments to pursue a policy of creating a positive brand of territorial objects. In this area, works on the reputation management of territories "Territory Marketing", "Counter-marketing. Debranding and destruction of the image of the territory according to the image of the regions" (Pankhrukhin, 2008), "Image and reputation of the territory as the basis for promotion in a competitive environment" (Vazhenina, 2008) and other scientists (Kavaratzis, 2004).

Branding activity has been the subject of analysis by many foreign experts (Kotler et al., 2010, Lucarelli & Berg, 2011, Sevin, 2014) in the field of market research and consumer behavior: "Brand forever: creation, development, support of brand value", "America: mother of all brands" (Anholt, 2005, 2007, 2010; Gozner et al., 2017; Ilieş et al., 2018; Lincu et al., 2018; Tătar et al., 2018). At the same time, the theoretical, methodological and practical problems of branding the tourist territories and their promotion have not been sufficiently developed (Baker & Cameron, 2008).

An important role in this is given to territorial marketing (Kotleret et al., 1999; Niedomysl, 2012; Szondi, 2007). The concept of territorial marketing was considered as a process of planning, coordinating and controlling the direct ties of territorial administration with its various partners and target groups (Funke, 1998; Kotleret et al., 2002). Territorial marketing is marketing in the interests of the territory, its internal entities, as well as external entities, in which the territory is interested"(Lyubashevsky, 2005; Pankhrukhin, 2008; Kotler et al., 2010).

MATERIALS AND METHODS

In the development of the attractiveness of the territory for its potential consumers, the "Territory Brand" plays an important role. It is he who adds value to the geoproduct.

Tools for determining the cost of a geoproduct are a marketing analysis of territories - a SWOT analysis of a territory (analysis of strengths, weaknesses, opportunities and threats), analysis and selection of target markets, and positioning (determination of current and desired positions) of territories (Gozner et al., 2016; Ilieş et al., 2018; Indrie et al., 2018; Komarov, 2005; Dumova, 2010). According to the SWOT analysis the strengths, weaknesses, opportunities and threats of the Baikal region have been described in this article:

Strengths:

1. Geopolitical position: the Trans-Siberian Railway passes through the region, which plays a key role in the delivery of products from the Far East and the Baikal region to Russian markets and markets in the Asia-Pacific region.

2. According to economic traditions, more than $\frac{3}{4}$ of all mutual deliveries of products and goods between the Baikal region and the regions of Russia fall to the Siberian Federal District - 68.4%.

The economic and geographical location is advantageous, since the Baikal region is a link between the East and West of Russia.

3. Natural and climatic potential:

• The basis for the initial positioning consists of the so-called renewable resources. From the point of view of using raw materials, it is precisely the sectors related to renewable resources that have the greatest potential in promoting the region to foreign markets - the forestry and agro-industrial complex, including all sectors of crop production, livestock raising, production and processing of land and forest products.

• The richness of nature and a wide variety of flora and fauna in the region.

• Climatic conditions and natural resources are combined in such a way that allows you to engage in different types of tourism.

4. The territory of cultural heritage.

The region is characterized by rich cultural heritage. Important cultural attractions

of the region are archaeological finds of ancient cultures on the shores of Lake Baikal, the traditional architecture of the settlements around the lake, 19th century buildings.

5. Economic structure:

• In the economy, the most promising and dynamically developing are: electric power, fuel industry, mechanical engineering and metalworking, non-ferrous metallurgy, timber, woodworking and pulp and paper industries, food and light industries.

• A sufficiently developed level of infrastructure, especially transport. The airport in Irkutsk, as well as the presence of the Trans-Siberian Railway confirm the sufficiency of the transport system to serve domestic and international tourism.

6. Foreign trade turnover and foreign investment:

According to expert estimates, the Baikal region is among the twenty regions with the highest resource potential, and the top five regions with a favorable legislative background for foreign investment.

• The capital of 29 countries is involved in the creation of enterprises with foreign investment in the region, with most of the FDI (136) formed with the participation of countries in the Asia-Pacific region. The largest number of joint ventures was created with China (62), Mongolia (26) and the Republic of Korea (9) (Sanaev, 2011).

At the same time, the region has its weaknesses that impede its further development. These weaknesses can be characterized as follows:

Geopolitical position:

• Today the region is cut off from the nearest traditional markets by its neighbors: from the west, the promotion of goods is blocked by the growing internal integration of the subjects of the Ural Federal District, as well as by such neighbors as the Krasnoyarsk Territory, as well as by the powerful agricultural potential of the Altai Territory; barriers from the east are formed by the Amur Region, the Khabarovsk and Primorsky Territories, which have a much similar economy in structure and have the advantage of access to the sea routes. Thus, the expansion of goods in these areas is accompanied by fierce competition.

• High transport tariffs, which amount to 33% of the country's cargo turnover, are almost twice as much as the share of gross domestic product (Sanaev, 2011). Accordingly, the tariff burden per unit of output is twice as high.

Therefore, current tariffs literally tear apart the economic space, physically tearing the east from the west of the country. It must be admitted that the strict policy of the maximum possible withdrawal of the resources of Siberia and the Far East at some point made it possible to save the country's economy from complete collapse, but at the same time it undermined the economic forces of the eastern regions.

7. Natural and climatic potential:

• Geological exploration of the subsoil of the territory is insufficient.

• The risky farming zone does not fully provide the domestic market with agricultural products.

• An unfavorable factor is the environmental situation. The existence of two environmental monsters on the shores of Lake Baikal - the Baikal Pulp and Paper and the Selenga Pulp and Cardboard Mill. Their existence in pristine and picturesque places, and even more so their negative impact on the nature of Lake Baikal, puzzles many true connoisseurs of natural beauty.

Economic structure:

• The quality of product specialization remains unsatisfactory, primarily due to the lack of a system of regional brands and marketing support for the promotion of many products.

• Inadequate development of the tourism sector. Poorly developed tourism infrastructure, poorly developed human resources. Lack of qualified personnel is one of the key parameters of this problem.

• Of particular difficulty is the lack of technology and know-how on the specifics of the marketing strategy and sales promotion schemes, as enterprises are not familiar with the new methods and tools used in management and marketing strategies.

Opportunities:

1. Russia and the new independent states as a whole have established good cooperation with European countries, especially EU member states. Through various tools for transferring know-how to sectors such as the development of the NSR or the restructuring of enterprises, there is a real opportunity to contribute to the economic development of the region.

2. In the context of global trends in globalization and regionalization, which have swept the whole world today. Globalization has become an objective process of our time and it is necessary to use the opportunities provided. That is why the uniqueness of Russia's geopolitical position lies in the fact that it adjoins the European Economic Space (EEC) and the Asia-Pacific region. The technological and human potential of the mega-region is huge, while the resources and spatial potential are limited. There is a situation that poses the Asia-Pacific region before a strategic choice of cooperation with rich Siberia.

Threats:

1. Price volatility in world raw materials markets, which forms the basis of the regional economy.

2. The threat to remain a raw materials appendage of the Center of Russia, if not to develop high-tech sectors of the economy (Blashenkova, 2012).

RESULTS AND DISCUSSION

The Baikal region is a unique regional ecosystem, which is the most actively developing and becoming a kind of zone of attraction and pilgrimage not only for scientists, but also for many recreants and vacationers. The uniqueness of Lake Baikal bases in the fact that there are many historical and cultural attractions represented by the sites of an ancient man with fortifications, caves, rocks, cliffs and memorials, or ancient letters and drawings. Currently, the tourism industry is developing steadily. According to the results of a study by the "Rating Information Center" and the magazine "Rest in Russia," the Irkutsk Region in 2018 retained the 13^{the} place in the rating of tourist attractiveness among Russian regions. Industry experts divided all 85 entities into three categories. The first ones that were selected were the most successful in 2017 and 2018. Ahead of the Angara region are such recognized tourist regions as the Krasnodar Territory, Moscow and the Moscow Region, the Republic of Crimea, and the Stavropol Territory. Among the subjects of the Siberian Federal District, which were in the top twenty, the Irkutsk region was ahead of only 2 Altai Territory.

To compile the rating, we used data for 2017 and January-September 2018 provided by the Federal State Statistics Service, the Ministry of Internal Affairs of the Russian Federation, information from the Unified State Register of Cultural Heritage Objects, as well as information on the number in the Yandex search engine with the keywords: " Rest in the + name of the region". Irkutsk region is included in the Golden League "Best of the Best" of the National Event Tourism Development Rating in Russia, compiled by the National Association of Event Tourism Specialists. In the ranking of Russian regions following the results of the National Event Tourism Award "Russian Event Awards" of 2018, the Irkutsk region took fifth place. When compiling the rating,

the total number of projects from the region submitted for participation in the competition, the results of regional competitions, and the results of the final of the National Event Tourism Award "Russian Event Awards" were taken into account.

According to estimates by the Tourism Agency of the Irkutsk Region, the volume of services provided to tourists over the 9 months of 2018 increased by 11%. Work continues on a regional tourism development strategy. Proposals were made to the passport of the priority project "Baikal: The Great Lake of the Great Country". In 2018, the Irkutsk region was included in the pilot project of the Federal Ministry of Culture to subsidize tour operators, which will positively affect the increase in organized tourist flow to the region. The basis of the tourist and recreational potential, of course, is Lake Baikal, included in the UNESCO World Heritage List (Interfax Tourism, 23.09.2019)

CONCLUSION

Naturally, the development of recreational resources and the revitalization of innovative activities on the shores of Lake Baikal lead to the stimulation of a civilized tourist industry and the formation of a tourism cluster, which are an integral part of the process of branding a tourist territory (Figure 2).



Figure 2. Map of Lake Baikal (www.beautifulworld.com/asia/russia/lake-baikal/, 2019)

The territorial brand plays an important role in developing the attractiveness of the territory for its potential consumers by creating additional consumer value, which creates additional economic value for the geoproduct.

We determined the marketing strategy of attractiveness as the optimal strategy for the development of the region, since its prerequisites were originally set by the history and favorable geographical position of Lake Baikal. In the process of branding the Baikal territory, we needed to develop a platform for the brand of the territory and develop a creative brand concept. During the development of the brand's platform, we described the vision, mission and values of the brand.

In our opinion, the region should be a global regional tourist complex with the idea of the need to preserve nature and act as its active defender, to promote the rational use of natural and cultural-historical tourist resources of Lake Baikal.

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EFFECTS OF INSTITUTIONAL ARRANGEMENTS AND POLICIES ON COMMUNITY PARTICIPATION IN WILDLIFE TOURISM IN AFRICA

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Abstract: This study examines the effect of policies and institutional structures on the ability of communities to participate in wildlife tourism in the Kgalagadi Transfrontier Park. The research utilized a qualitative approach with two case study sites being Askam (South Africa) and Tsabong (Botswana). The study incorporated 17 semi-structured interviews with tourism stakeholders and 2 focus group discussions with members of the 2 communities, all of whom were purposely selected. It was found that although governing policies from the two countries were generally supportive, the specific park policies were seen to limit the contribution of wildlife tourism to communities' livelihood. Additionally, the institutional arrangements present in the Kgalagadi Transfrontier Park formed some barriers to community participation. Overall, the research provides insight on host community participation in wildlife tourism in the Kgalagadi Transfrontier Park using a cross-border perspective.

Keywords: Kgalagadi Transfrontier Park, wildlife tourism, community participation, collaborative management

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INTRODUCTION

Nature-based tourism with the focus on wildlife is an important research theme that increasingly has captured the attention of researchers owing to its growth and the focus on conservation (Ilies et al., 2017; Andronache et al., 2019; Black & Cobbinah, 2017; Harilal & Tichaawa, 2018). Carvanche-Franco et al. (2019) found nature-based travel to be growing at an annual rate of 5% worldwide. Tourism in Sub-Saharan Africa (SSA) is largely dominated by nature-based experiences, as evident by the UNWTO (2015) report which highlighted that 80% of international travel to the SSA is wildlife-related. This

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clearly denotes growing interest towards wildlife destinations in the sub-continent. Several governments in SSA have begun leveraging wildlife tourism for the attainment of socio-economic benefits and environmental protection (Christie et al., 2013; Thondhlana et al., 2015; Mbaiwa, 2017; UNCTAD, 2017; Chakrabarty et al., 2019). This emerges as the result of protected areas being located within the rural regions of countries, often characterized with low development, high levels of poverty and the lack of effective initiatives to combat these socio-economic conditions (Bhatasara et al., 2013; Belicia & Islam, 2018; Black & Cobbinah, 2018). Consequently, wildlife tourism, based on the principles of sustainable development, conservation and community inclusion, has been positioned as a powerful tool for job creation, poverty alleviation, sustainable livelihoods and local economic development for communities residing adjacent protected areas (Bhatasara et al., 2013; Larkin, 2014; Cobbinah et al., 2015; Mbaiwa, 2017; Snyman, 2017; UNCTAD, 2017; Black & Cobbinah, 2018; Kimbu & Tichaawa, 2018; Markwell, 2018; Panta & Thapa, 2018; Zanamwe et al., 2018). Protected areas are recognized as being crucial to the sustainable growth of countries within this region, owing to their competitive advantage in wildlife features and the ability to generate substantial revenues. The present study specifically draws attention to Transfrontier parks, being transboundary protected areas that have received much support from academia, public and international organisations for their great capacity for biodiversity conservation and sustainable development in host communities (Chiutsi & Saarinen, 2017).

Globally, there are approximately 440 Transfrontier parks, with southern Africa holding 10 of these Transfrontier parks in the region (Bhatasara et al., 2013). The emergence of Transfrontier conservation areas in Southern Africa resulted from the global recognition that the safeguarding of natural resources should take precedence over the international governance boundaries (Bhatasara et al., 2013). Often coined 'peace parks' these transboundary protected areas are widely supported as global solutions to conservation and poverty alleviation (Buscher, 2013). Transfrontier parks are characterised by their multilayer of interests, including bordering communities, governments, international donors and NGOs, as well as the tourism industry (Ramutsindela, 2007; Bhatasara et al., 2013). In this regard, Transfrontier Parks are frequently criticised over their political and institutional nature, in which several studies question the capacity of these protected areas to contribute to job creation and poverty alleviation in host communities as their introduction has since severely marginalised surrounding communities (Ramutsindela, 2007; Bhatasara et al., 2013; Schoon, 2013; Chiutsi & Saarinen, 2017; Zanamwe et al., 2018). Moreover, Chiutsi & Saarinen (2017) maintain that transfrontier parks cannot contribute to socio-economic development, through wildlife tourism, without adequate community participation to derive the conceptualised benefits. This study examines the effect of policies and institutional structures on the ability of communities to participate in wildlife tourism in the Kgalagadi Transfrontier Park.

LITERATURE REVIEW

The role of tourism in conservation and the attainment of development goals have been continuously put forward by several studies (see Atanga, 2019; Harilal & Tichaawa, 2018; Harilal et al., 2019; Makindi, 2016; Markwell, 2018; Synman, 2017; Zafra-Calvo & Moreno-Penaranda, 2018). Often, tourism is seen as crucial for the upliftment of the SSA community as it involves the sustainable use of natural resources for economic gain (Synman, 2017). In examining wildlife tourism and host communities in Transfrontier parks, several studies have questioned the role of national governing policies of these protected areas in achieving the socio-economic development goals often interlinked with the promotion of wildlife tourism. Specifically, Adu-Ampong (2019) questions the effect of government approach and intervention in tourism development and planning towards providing enabling conditions for developing wildlife tourism that is inclusive and collaborative with host communities. Wildlife tourism development in protected areas has been often referred to as being a political activity in SSA (Cobbinah et al., 2015).

Literature has supported this assertion with numerous studies exerting that constraint on community participation in wildlife tourism are, more often than not, due to the centralized approach to tourism planning and development (Bello et al., 2017; Dikobe, 2012; Cobbinah et al., 2015; Harilal et al., 2019; Manatsha, 2014; Mokobo, 2017; Thondlhana & Cundill, 2017). For instance, research in Ghana by Cobbinah et al. (2015) found the responsibilities of developing wildlife tourism and conservation to be the centralized and fragmented amongst different government departments, leading to the conceptualized local benefits of the sector not realized by the host communities.

As policies define the approach to tourism development, and subsequently community participation, this necessitates the evaluation of national governing policies on wildlife tourism and conservation in Botswana and South Africa, in order to gain a more holistic understanding of the socio-political context that the Kgalagadi Transfrontier Park operates in. South Africa has two sets of policies that govern tourism and conservation of protected areas in the country. The conservation of protected areas is governed by 11 pieces of national legislation and 9 provincial legislation pieces, these include the 1998 White Paper on Environmental Management, the amended 2003 National Environmental Act, the amended 2003 Environmental Conservation Act, White Paper on Conservation and sustainable use of Biological Diversity, the 2003 National Environmental Management: Protected Areas Act, the 2004 National Biodiversity Act, and the 2006 National Biodiversity Strategy and Action Plan (Steyn & Spencer, 2011).

The two prominent policies are the Protected Areas Act and the Biodiversity Act which guide the establishment of South African National Parks (SANParks) Management Plans for individual protected areas, and state that the management of protected areas should be in consultation with host communities (Paterson, 2009; SANParks, 2016). Accordingly, SANParks has devised a stakeholder consultation process that park management following in managing natural resources in a manner that also preserves the cultural values (Paterson, 2009). With regards to tourism, the political transformation of South Africa led to the establishment of policies that aim to grow and develop a sustainable and inclusive tourism sector. These policies include 1996 White Paper on the Development and Promotion of Tourism, the National Tourism Sector Strategy, the 2003 Tourism Act, and the Tourism Black Economic Empowerment (BEE) Charter (Steyn & Spencer, 2011). These policies were established to create opportunities for the private sector, host communities and the national government to capitalise from this economic sector (Manwa & Modirapula, 2019; Strydom et al., 2019). Additionally, the amended 1994 Restitution of Land Act played a vital role in helping communities reclaim their land from which they were removed from during the colonial period of South Africa.

This Act is especially relevant to the present study as it enabled the Mier and San community to own land segments inside the Kgalagadi Transfrontier Park, as well as enabled the establishment of a forum from which the communities can participate in the management and development of wildlife tourism and conservation in the Kgalagadi Transfrontier Park. Similarly, Botswana has sets of policies and strategies for tourism and conservation. Tourism development in the country is guided by 2000 Botswana Tourism Master Plan, the 2001 Tourism Development Framework, the 2002 Botswana National Ecotourism Strategy (NES), the 1992 Botswana Tourism Act and the 1994 Botswana Tourism Regulation (Basupi et al., 2017). These policies were drawn from the realisation of the growing importance of tourism to the national economy and lack of policy framework to govern and grow the sector (Basupi et al., 2017). In 1997, the Community Based Strategy was established to promote community participation and the building of local institutions at the community level in tourism (USAid, 2016). These policies, in particular the NES, aimed at including the community within tourism development in the country. In terms of conservation in protected areas, the Wildlife Conservation Policy, the National Policy on Resources Conservation and Development, the Wildlife Conservation and National Parks Act and the National Conservation Policy created a framework from within which the protection of the natural environment can be guided by stakeholders such as the community (Jones, 1999; Moswete et al., 2012).

These policies additionally highlight the significance of the protected areas to the livelihoods of the communities, acknowledging that communities should derive benefits such as job creation and sustainable livelihoods. Essentially, many studies accentuate the importance of viewing protected areas alongside their cultural and social ties to the host communities, delineating the change to including communities' views and opinions in the planning and management activities regarding the protected areas (Mellon & Bramwell, 2016; Sabuhoro et al., 2017; Zanamwe et al., 2018; Atanga, 2019).

This collaborative and decentralised approach to wildlife tourism and conservation in protected areas is considered crucial to successful environmental protection and poverty alleviation (Cobbinah et al., 2015; Kossoman et al., 2016; Roy, 2016; Soe & Yeo-Chang, 2019). Collaborative management emphasises the importance of every tourism stakeholder, irrespective of their level of power, in achieving sustainable growth and conservation (Kossoman et al., 2016). Moreover, this form of managing protected areas paves way for amalgamation of traditional systems and beliefs and modern scientific principles of conservation (Aswani et al., 2017). On the side of the communities, the success of collaborative management lies in communities' level of social capital, which is most evident in their community based natural resource management (CBNRM) programs such as community-based organisations (CBOs), Community Trusts, and Communal Property Associations (CPA).

STUDY CONTEXT

Formally established in 1999 by Botswana and South Africa, the Kgalagadi Transfrontier Park is the oldest Transfrontier protected area within the SSA continent (Moswete & Thapa, 2018). The Park is situated southwest of the southern African region (Thondhlana et al., 2015) (see Figure 1). The existence of the park predates years before its formal declaration as a protected area, as the two countries have been unofficially collaborating on conserving the unique biodiversity of the Kgalagadi for approximately over a decade before the official agreement (Botswana Tourism, 2015).

The Kgalagadi Transfrontier Park was formed from the merger of the South African Kalahari Gemsbok National Park and the Botswana Gemsbok Park and estimated to be 38 000km² (SANParks, 2015). The initial agreement pointed to SANParks governing the South African side of the park and the Department of Wildlife and National Parks to govern the Botswana side of the Transfrontier Park (Moswete et al., 2012). In allowing the free movement of wildlife, the Kgalagadi Transfrontier Park has no borders or fences within, so as to ensure the migration route of wildlife necessary to their survival (Botswana Tourism, 2015).

According to Moswete et al. (2012), the objectives formed between the two countries upon the establishment of the single collaborative entity entailed:

- protecting the unique Kgalagadi region biodiversity,
- realizing the economic potential for the communities residing adjacent to the park
- maximizing the potential of tourism within the protected area and surrounds



Figure 1. Map of case study sites

As the present study sought to understand the manner in which national governing policies and institutional structures influenced the ability of the community to participate in wildlife tourism and conservation in the Kgalagadi Transfrontier Park, the study focuses on two case study sites, Askham (in South Africa) and Tsabong (in Botswana). The Askham community comprises of the Mier and San communities. These two communities were displaced from the land, and resources, in the Kgalagadi Transfrontier Park years after the establishment of the Kalahari Gemsbok National Park in 1931 (Peace Parks Foundation, 2019). In 1999, the two communities won the land claim and collectively own 50 000ha of land inside the Kgalagadi Transfrontier Park and 80 000ha of land outside the park (Thondhlana et al., 2015). The South African government built a lodge. *Xaus Lodge*, inside the park as a means to involve the communities in wildlife tourism (Dikgang & Muchapondwa, 2016). Tsabong is a transit site for tourists visiting the Kgalagadi Transfrontier Park on the Botswana entry (Manwa et al., 2017). The village is also the administrative capital of the Kgalagadi district and holds the most developed tourism infrastructure, such as telecommunication, electricity, accommodations and airstrips (Saarinen et al., 2012). Further, the Botswana Tourism Organisation (BTO) partnered with the Tsamama Community Trust, which includes the Tsabong community,

to establish the Camel Park as a link to the Kgalagadi Transfrontier Park and enhance wildlife tourism in the community (Manwa et al., 2017). The two case study sites were selected as both communities are interlinked with the Kgalagadi Transfrontier Park and wildfire tourism from the park is a vital economic sector in the two local economies.

MATERIALS AND METHODS

The present study utilized a qualitative research approach, as the nature of the study intends on exploring the manner in which communities are affected by tourism and conservation policies from the Kgalagadi Transfrontier Park. The present study focused on the lived experiences and understanding of the communities' reality, requiring a naturalistic and interpretative approach (Babbie, 2013). The study population consisted of two groups, tourism stakeholders and community members. The purposive sampling design was selected, allowing the inclusion of individuals with relevant knowledge and experience in wildlife tourism in the Kgalagadi Transfrontier Park and the inclusion of host communities involved within wildlife tourism and informed on community involvement within the Park. Two data collection tools were utilized in accordance with the study population groups. Semi-structured interviews were held with tourism stakeholders. Specifically, the tourism stakeholders included the formal and informal business owners or managers, representatives of tourism marketers, conservation agencies and CBOs. Open-ended questions were posed to this study sample so as to allow for explorative discussions and probing. In total, 17 interviews were held with tourism stakeholders, 8 in Askham and 9 in Tsabong. Focus group discussions were held with community representatives. Members of the focus group discussions consisted of community members employed in tourism, community leaders, as well as members of the community who had longer length of residence. These community members were postulated to have an understanding of the complexities between wildlife tourism, the community and the Kgalagadi Transfrontier Park. The study held focus group discussions in the case study sites, comprising of 10 participants each. The questions presented to the focus group and interviews pertained to understanding the nature of governing policies of the Kgalagadi Transfrontier Park and their influence of the communities deriving the livelihood needs from the protected area. The data used in the present study were collected during the month of May 2019. The researchers followed the correct ethical procedures which included providing information regarding the study before the commencement of the interviews and focus groups, asking for permission to record the sessions and assuring the research participants that their personal details will remain anonymous. The interviews and focus group discussions were recorded, transcribed and loaded on to Atlas.ti version 8. The qualitative data analysis software enabled the interpretation of the data through the use of codes and family codes. The family coded generated enabled the data to be analysed and discussed thematically, as can be evident in the following section.

RESULTS DISCUSSIONS Guiding policies

The political nature often interlinked with Transfrontier Park has placed the protected areas under question, particularly regarding the extent to which communities are able to participate in the collaborative management of the park so as to derive the promised livelihood benefits from wildlife tourism. The Kgalagadi Transfrontier Park, in particular, holds a history of community marginalization and separation from the protected area. However, the development of national policies governing conservation,
tourism and rural development, in both South Africa and Botswana, point to the significance of community consultation and inclusion in planning and development activities within their localities. The literature review illustrated the national South African policies guiding wildlife tourism in the Kgalagadi Transfrontier Park to be conducive for community participation in the sector. Many respondents in the Askham community were generally positive towards the policies guiding wildlife tourism and conservation in the Kgalagadi Transfrontier Park. Some respondents noted the change brought forth by the inclusive policies, explaining that the policies aided in transforming the previously antagonistic relationship between the community and the management of the Kgalagadi Transfrontier Park. One community leader stated:

So the relationship with the park and the community has changed over the years. Last year the community was recipient to the SANParks award that honoured the community for having the best relationship with SANParks in the whole of South Africa. This was because of the efforts on both sides, that is, the community and also top management at SANParks starting to understand that conservation includes the people and not only wildlife. They then recognize that the park is part of the community's cultural footprint.

Such findings reveal the importance of the community being recognized as a central component in the management of the Kgalagadi Transfrontier Parks. One prominent feature in the conflict between host communities and protected area management stems from the marginalization of these communities in the development and promotion of wildlife tourism in the protected areas, resulting in feelings of resentment (see Cobbinah et al., 2015; Thondhlana & Cundill, 2017). The community representatives have therefore highlighted the significance of showcasing community inclusion and recognizing their ownership in the Kgalagadi Transfrontier Park. Further, this additionally emerges from their community having known their legal rights inside the park, with one representative of the CBO on the side of South Africa stating:

SANParks also have a legal requirement to include community participation, especially for any developments inside the Kgalagadi Transfrontier Park, that's a legal requirement in South Africa. So if SANParks decide to change the gateway inside the park, that's going to have a huge impact in the community, especially because the community has legal rights within the park. They have to carry out a full consultation process, not only at committee level but at the community level, it is part of the management plan that they develop for 5 years.

The above assertion collaborates with the 2016 – 2026 Management Plan of the Kgalagadi Transfrontier Park as complied and adhered to by SANParks. This consultation process clearly stipulated in the Management Plan is also a requirement specified in the Protected Areas Act. The above quotations thereby indicate the national governing tourism and conservation policies are not only supportive of community ownership and participation in the management activities of the Kgalagadi Transfrontier Park, but mandatory. The inclusion of the two communities is particularly important as it enables the realization of the Park objectives that intends to contribute to economic development of the host communities owing to that the community cannot derive consumptive uses from the Kgalagadi Transfrontier Park (as it is a protected area) leading to wildlife tourism being the primary means that community can gain a sustainable livelihood from the park. The increased importance of collaborative management within protected areas

in southern Africa emerges from the realization that the traditional approach to conservation, characterized by displacement, community loss of access to natural resources and centralized planning, not only failed to protect biodiversity but additionally led to the further impoverishment of indigenous communities (Mbaiwa & Stronza, 2010; Parker et al., 2015). Collaborative management of the protected areas in SSA is therefore heavily advocated for, in ensuring the sustainability of wildlife tourism and conservation but additionally, that benefits of the sector are equitably distributed amongst stakeholders, particularly the host community. In achieving this collaborative management in the Kgalagadi Transfrontier Park, one of the requirements in winning the land claim, was the establishment of the community forum from within which the community can be involved in the collaborative governance of the park. One respondent, a representative of the local Mier Municipality stated:

There is a forum that has been established. And in the forum, there are some of the Khomani San people, some of the Mier area people and also people from the park are in that committee. So they use that vehicle to communicate with the different communities. And sometimes, they use other means, in which they come to the offices, like this office here. The community office. They come to the Khomani San office the other guys are and they will hand out information there. But vehicle which they use to communicate with the community is the steering committee.

Evidently, the forum has developed to be a means of ensuring that all communities adjacent to the Kgalagadi Transfrontier Park are well informed on park matters, as well as providing the opportunities for the community to express their views on matters regarding tourism development and conservation. The above quotation further sheds light on the importance of information dissemination to the host communities. The forum, as well as the CPA and Mier Municipality, enable information sharing between the communities and the Kgalagadi Transfrontier Park management. Several studies have noted that one aspect of community marginalization in protected area management is through lack of information sharing (see Moswete et al., 2012; Thondhlana & Cundill, 2017; Harilal & Tichaawa, 2018). One respondent, a member of the Khomani San CBO, clarified:

I think what is different with our community is the way information is given to the community, so we understand our role in wildlife tourism. I won't say it is perfect, especially because of the way information is sometimes given to communities, it makes it difficult for them to really understand. But what I explained to these organization is, how absorbable this information that they are passing on to the community? Because you can have the correct information, but if people on that level don't understand or grasp what that information is about, they will still say that they still don't understand.

The above statement delineates the importance of not only information sharing but rather the importance of taking account that communities are not widely knowledgeable on wildlife tourism and conservation. Rather, in ensuring that decisions taken reflect the actual views on community, more emphasis should be on how information is disseminated to communities. In this regard, the CPA plays a crucial role in ensuring community involvement in the park decisions by bridging the gap between the community and the Joint Management Board and the Park management. On the side of Botswana, the responses on policies were not as acknowledged, on the count of that wildlife tourism is a newly emerging economic industry in the community. A few respondents recognized the increasing focus on developing wildlife tourism in the community, with the Camel Park being frequently mentioned in interviews and focus groups. One respondent, the CBO representative, outlined that "We are still at an early stage but the mandate of the park is to help the community". The Camel Park was established to encourage community-based tourism in Tsabong, and part of the regional development plan to harness the tourism pull from the Kgalagadi Transfrontier Park (Government of Botswana, 2003; Moswete et al., 2012).

Specific Kgalagadi Transfrontier Park policies

Interestingly, the study found that national governing policies on tourism and conservation were well received within the focus group discussions. Rather, the specific management policies on the Kgalagadi Transfrontier Park were found to be a source of contention in the study. In Askham, many of the respondents were of the view that Kgalagadi Transfrontier Park management placed a higher value on conservation, as compared to wildlife tourism. Some respondent specifically mentioned the difficulty faced when inside the park. One respondent, a member of the community, stated:

The park rules definitely impact wildlife tourism and the community. For example, we have the right to hunt traditionally in the park, we have the right to live traditionally in the park, and we have the right to harvest medicinal plants and other stuff within the park, in our land there. But when we try to live traditionally within the Kgalagadi Transfrontier Park, the park managers come forward with certain rules, with regards to the predators within the Kgalagadi Transfrontier Park, and they tell us not kill certain kinds of poisonous insects and reptiles within the Kgalagadi Transfrontier Park. Those rules and laws are preventing us from living the way we want to live within the Kgalagadi Transfrontier Park and prevent us from taking tourists within the Kgalagadi Transfrontier Park.

The above statement signifies the strain on the park management policies not only on the rights of the communities, rather on their ability to partake in some wildlife tourism activities. The statement may additionally question the extent to which indigenous knowledge is included in the conservation activities of the Kgalagadi Transfrontier Park, as the respondents showed frustration in the warnings against specific hunting activities, stating '... any traditional group knows how to handle certain poisonous reptiles and so on. They know how to find their way around predators.' The inclusion of indigenous knowledge in conservation policies has been widely debated in literature (see Mbaiwa & Stronza, 2010; Pienaar et al., 2013; Strickland-Munro & Moore, 2013; Parker et al., 2015; Thondhlana & Cundill, 2017; Mbaiwa, 2018; Stone & Nyaupane, 2018). The aforementioned studies argue for the inclusion of the indigenous community's knowledge in modern conservation principles. The argument stems from the dissention that current conservation practices are largely guided by Western principles, calling forth the need for more native knowledge. On the side of Tsabong, interviews with representatives from tourism marketing organisations highlighted some frustration on the specific policies that point to the tourism use of the park.

There are rules that are going to be a hinder for tourism developments. For example, in South Africa you can do the game drive with any type of a vehicle, whether you can take a corolla, a small car and do the drive. But with us you are not allowed small cars. With the Botswana side of the park, you need a specific type of car to do the game drives. Some of the governing rules that we have would hinder some of the desires of the companies that would actually want to do business this side. In the Botswana area. The policies within the Kgalagadi Transfrontier Park are noted to affect the growth of community-led wildlife tourism on both sides of the transboundary protected area. However, as the Kgalagadi Transfrontier Park is a protected area, the primary mandate of the park is to conserve biodiversity, which means placing certain restrictions that conflict with some objective of tourism stakeholders, for example, one tourism business owner noted:

They only allow a certain amount of day visitors, per day. So it stops you from expanding, I'm not going to build another 10 chalets

The Kgalagadi Transfrontier Park is a low impact park, resulting in the restrictions on daily visitors. This necessitates deliberate attention on harmonising the management of the Kgalagadi Transfrontier Park and the wildlife tourism development of the host communities, on both sides of the protected area. Both stakeholders in wildlife tourism and conservation need to be aware of the ecological importance of the park, but additionally recognise that the park is a crucial livelihood source for a large portion of communities residing in the Kgalagadi region of both countries.

Effects of institutional structures

Transfrontier parks, as political entities, involve a number of stakeholders and management bodies in harmonizing the conservation and development of the park in accordance of national policies as well as to satisfy the socio-economic development objectives of the parks. On the side of Askham, the community was generally positive towards the institutional arrangements existing within the Kgalagadi Transfrontier Park. One respondent, a representative of the Mier community, noted:

Every conservation activity that they [Kgalagadi Transfrontier Park] need to make, they need to discuss that on the Joint Management Board [JMB] level. The JMB then brings this information down to the community and the community needs to absorb this and make decisions on it. So the representatives on the JMB are not necessarily decision makers, they come to another body which is the CPA, and the CPA representatives are responsible to get the information out to the community, because they are dealing directly with the community, they are also not supposed to make any decisions. They need to take the decision from the community, especially park related, and the representatives of the JMB needs to make sure that the decision of the community are going to be implemented.

The existence entities such as the JMB and CPA therefore ensure that the views of the community are included in the management and governance activities of the Kgalagadi Transfrontier Park. These entities may additionally facilitate the collaborative management of the park by easing the communication channels between the park managers and the host communities. This strongly results in positive working relationships between park managers and the community, enabling the achievement of each stakeholder's goals, as well as complying to the law. The study therefore finds a much more positive relationship between a host community and protected area management, as many of similar relationships are often characterized by hostility, conflict and resentment, emerging from the difficulty in involving the host communities. An additional feature evident in the Kgalagadi Transfrontier Park is the appointment of a liaison officer, an individual communicating with the various wildlife tourism businesses and organisations such as the Red Dune Route, a collection of tourism businesses offering wilderness experiences in the Kgalagadi region. Evidently, the structures present in the Kgalagadi enable collaborative partnerships with the host communities. Much contention seen in the focus group discussions arose with the management structure of SANParks, where majority of participants expressed feelings of frustration over the long management structure of SANParks that does not take account of the local context in planning and decision making. One respondent, a representative of the San CPA, noted:

SANParks is working from a high level of decision making and the decisions taken are implemented on a smaller scale. You have the head office of SANParks in Pretoria, then you have your Arid region manager who is responsible for the different parks falling under Arid region. Then you have your local park manager. So the local park manager relies on the decisions that come from the Arid manager, and the Arid manager implements decisions from the overall manager of SANParks. So by the time the decision is scaled down to the local context, the host community basically don't have any say on the decision that has made at the higher level.

Discussions on sustainable tourism urge more considerations of the local context of the host communities. Particularly in the case of protected areas, the exclusion of this local context may seemingly marginalize communities, bringing forth emotive experiences from past displacement and separation when the protected area was first established (Thondlhana & Cundill, 2017). Long management structures are often criticized for their inability to be complementary and reflective of the host communities, holding the risk of developing wildlife tourism and conservation that is not complementary to the host community. Such findings are particularly significant as they may suggest that the more important decisions are taken at the higher institutional level, and discussions are not concluded with the aid of the communities, thereby explaining community perception of conservation having more precedence over tourism development in the Kgalagadi Transfrontier Park. Further consideration should be placed on that much of the livelihood activities of the communities in the Askham is reliant on the Kgalagadi Transfrontier Park, the protected area is positioned to bring forth economic development in the adjacent communities owing to the lack of mainstream economic activities communities can partake in. This may make it more important to ensure that wildlife tourism and conservation decisions taken in SANParks are more complementary to the host communities and setting. In broadening the discussion, one respondent, a representative from the Mier Local Municipality, stated:

It is a lot of structures that you have to go through in SANParks, because sometimes they [SANParks] do not seek prior consent for something 'small'. Now they can see it as something small, the community sees it as huge because maybe it had to do with some structure that is formed close to the heritage site, which they do not feel comfortable with. SANParks now may not have understood exactly why the community felt that way. And this is because they were thinking from a conservation management principle and not from an overall management system.

The above statement thereby indicates the challenges faced by the host communities in the management of the Kgalagadi Transfrontier Park, calling forth a more comprehensive perspective to be taken in all park related decisions. This additionally supports the aforementioned discussion on the inclusion of indigenous knowledge in park related decisions, as SANParks take may seemingly minor impact decision only for those decisions to have a significant impact on the community. This highlights the transformation of protected areas, from being a mode in conservation to carrying both ecological and social responsibility (Kossoman et al., 2016; Makindi, 2016). Protected areas must be viewed alongside the host communities, and therefore their cultural ties to the protected area should be respected in the planning and development of wildlife tourism and conservation. Another obstacle faced by the community is the matter of additional institutional structures within the Kgalagadi Transfrontier Park as a result of the inscription of the World Heritage Site. This brings forth more considerations in the planning and development decisions of the protected area in itself. Some respondents felt that this may lead to more planning decisions, that although are conceptualized to be inclusive of the San community, may need more and deliberate efforts to ensure more than adequate information sharing. For example, one community leader stated:

But what also comes into consideration, is this new heritage site. The entire Kgalagadi park is a World Heritage Site, so that comes with a new technical committee that is a different form of decision making and information sharing that has to be included in the institutional arrangements in the area. So in our community perspective, there is a lot of developments and that's based on decision making processes that sometimes does not have enough time to properly get to the stage where the community can properly, completely understand what is going on. So it is about sharing the basics constantly.

The existence of numerous structures within wildlife tourism and the host communities may prove to be challenging for collaborative management. For the Khomani San community, the CPA enables them to be involved in park decisions as well as decisions regarding the heritage site. This is extremely important as Transfrontier conservations are already criticized for their likelihood of marginalizing communities owing to number of stakeholders involved in both countries. The addition of the heritage site adds a new set of management principles in accordance to UNESCO, calling on more collaboration. The CPA shows high levels of social capital in embedding within the various institutional structures to ensure the Khomani San community is included in all that occurs in the Kgalagadi region of South Africa. This was evident in one respondent mentioning that "*The Khomani San have very big influence in what is happening in the surroundings*" highlighting their prominence in the region.

On the side of Tsabong, the study found many of the community respondents being of the view that wildlife tourism and conservation were isolated from the community, in that the wildlife tourism structures had not fully integrated with the local traditional structures. Some respondents in the focus group discussions pointed out that these wildlife tourism structures were stand-alone entities, and not collaborating with the community development entities such as the Village Development Committee (VDC). For instance, one respondent, a VDC representative presented:

We, as the VDC, are responsible for the development projects in Tsabong. Now since [the department of] tourism has entered Tsabong, we know nothing about it. You see with agriculture and other sectors we know a lot about it because these are the community projects that we usually assess and help. They [Department of Tourism] are the ones who are supposed to come to the VDC to tell us how they help the community and we advise them how they can go about this.

This finding was supported with the focus group responses where the majority of the community leaders strongly expressed their lack of knowledge on wildlife tourism in the community, besides the sector's existence. This may be to the disadvantage of both wildlife tourism and conservation structures, as well as the community as Pansiri (2013), viewed networks as essential component within wildlife tourism and host communities, in that networks enabled the various tourism stakeholders to work collaboratively to achieve similar collective and individual objectives. The lack of collaboration on wildlife tourism and host communities may delay the attainment of the conceptualised benefits of the economic sector. Moreover, one respondent, a community leader, supported:

Really we don't know much about them [wildlife tourism institutions]. Because from our side, they haven't come and taught us anything about wildlife tourism, so we can understand it. So we as the community leaders don't know them.

These findings corroborate with the findings of Moswete et al. (2012) where communities expressed disconnect from wildlife tourism and the Kgalagadi Transfrontier Park. This can be rather challenging to wildlife tourism, as the sector is aimed to encourage the protection and change to positive attitudes towards the natural environment. The lack of community engagement may lead to not only the failure to include the community in conservation of the environment but that the sector may not achieve what it has sought out to do, being to induce socio-economic development in the village. Community organisations such as the VDC and the Kgotla may be very influential in galvanising community members to participate in wildlife tourism. Moreover, should such occurrences of separation continue, this may lead to negative perceptions from the community towards wildlife tourism.

However, one reason for the lack of community collaboration with wildlife tourism may be a result of that communities can only take part in wildlife tourism, by the utilisation of natural resources, through CBOs. CBOs are a legal requirement to community participation in wildlife tourism, thereby pointing to that the wildlife tourism institutions may be closely collaborating with the Tsamama CBOs, and rather only exchanging information with the local traditional structure.

Interestingly, although the community strongly asserted their disengagement from wildlife tourism management and development in Tsabong, the interviews yielded a contradictory response. The interview respondents affirm their inclusion of communities in their planning and development decisions regarding wildlife tourism and conservation in Tsabong. One respondent, a conservation agency representative, named the kgotla, the traditional community structure, as one way of exchanging information with the community regarding new developments.

The kgotla is the main medium we use to communicate with the community because that way you cover all the structures of communication, so kgotla is the main one. But also the institutions such as the trusts system and CBO systems have so grown that much that they are taking the lead in natural resources management. But they [CBOs] are still using the same medium as the kgotla.

Additionally, from the side of wildlife tourism institutions, one respondent clearly stated their incorporation of community views with regards to decisions involving their natural resources and new developments, for example:

Yes, communities are consulted for their views before decisions are made, and impacts are discussed. If I can give you an example, a conservation area by Khawa, is going to be privatized. Consultation was had with the community, by my view, the community members were happy as their children and them were going to be hired. Consequently, these respondents wholly differ from the responses received from the community focus group discussions. This may be a consequence of the fact that these stakeholder groups are at two ends of the Kgalagadi Transfrontier Park spectrum, where one group is responsible for the management and governance of wildlife tourism and conservation activities and the other is on the receiving end in that wildlife tourism is an occurrence in their locality. These findings built on those of Moswete et al. (2012) and Schoon (2013) in that wildlife tourism may not have made great strides in their collaboration with host communities, however, they have made some progress in involving the community in their own development.

CONCLUSION

The present study examined the political and institutional nature of the Kgalagadi Transfrontier Park with regards to the facilitation of community participation in wildlife tourism. Based on the study findings, it can be concluded that much strides have been taken to include the Askham and Tsabong communities in wildlife tourism and conservation from the Kgalagadi Transfrontier Park. Policies of both countries are supportive of communities taking centre role in the management of protected areas, so as to derive socio-economic benefits. The study found institutional structures posing a strong barrier of meaningful community participation in wildlife tourism on both case study sites. The study augments the discussion on the disparities between the good conceptualisation of policies and their actual implementation. Although the study cannot be generalised to other Transfrontier parks in southern Africa, it may be informative regarding the effects of institutional structures on enabling the development of tourism to encompass with the local context of the host communities.

The study additional implies the need to address the rift between tourism and conservation goals between protected areas, educating communities on the importance of conservation as the chief objective while creating positive conditions for the community to derive wildlife tourism related uses from protected areas.

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THE ROLE OF ORGANIZATIONAL JUSTICE IN RELATIONSHIP BETWEEN LEADER AND MEMBER (LMX) IN THE SERVICE SECTOR

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Abstract: This research examines individual and organizational qualities in the relations of leaders and followers and their perception of the dimensions of organizational justice. Past results of various studies have shown that organizational justice has a positively influences LMX realities, but also that it is a predictor of the quality level of LMX. The analysis covered 200 respondents in the service sector in Serbia, and correlation and regression were used to achieve the research objectives. This study showed that from demographic characteristics, only certain age groups were different in the perception of distribution and procedural justice. The findings can be used to implement new techniques in an organizational context, i.e. the introduction of new "tools" by the leaders.

Key words: Organizational justice, LMX, Sector, Service

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INTRODUCTION

The concept of fairness and justice is becoming an increasingly important construct in behavior and organizational management for a number of consequences that can produce (personal and organizational). In recent decades, the concept of justice and fairness studied by many researchers. Justice was investigated by examining the reactions of individuals to decision-making, procedures, and the relevance of their superiors.

Many studies have shown that the perception of feirness is differs from the feeling of favorable outcome or satisfaction with the outcome (Colquitt, 2012). Organizational justice is a term used to describe the role of justice, and deals with the ways in which employees in the organization are treated. Employee organizations are influenced by the perception of fair treatment in several ways (Srivastava, 2015). According to Cropanzano with associates (2007) justice defines the very essence of the relationship of the individual towards the management, creating significant mutual benefit. In other words, the perception of justice refers to the leadership that most often has the assumption that justice in the heads of employees means only to obtain desirable results, but do not distinguish the outcome of the benefits with the outcome of justice.

LITERATURE REVIEW Organizational justice

The fairness of the impact assessment has been identified as an important criterion for assessing its efficiency and utility for organizations (Erdogan, 2002). In the literature, organizational justice in which the center of equity is distributed and the procedure for the distribution of outcomes-the fairness of the decision-making is called distributive justice (Adams, 1965). The second dimension is named after Thibaut and Walker (1975) where the fairness of the decision-making process is called procedural justice. The third dimension was noticed by Bies and Moag (1986) in the context of employment, that the decision-making process itself has three aspects: procedure, decision and interpersonal interaction. From this, the term interaction justice emerged. Some authors have agreed that interaction justice is an extension of procedural justice (Niehoff & Moorman, 1993), while others have accepted a three-dimensional model of organizational justice.

encers for observed series (bata source. cropanzario et al., 2007)				
Distributive justice	Procedural justice	Interactional justice		
The suitability of the outcome	The convenience of the distribution process	The convenience of treatment that one receives information from superiors		
 Awarding employees on the basis of their contribution; Submit every employee with a balanced remuneration; Providing help on the basis of personal requests. 	 All employees are treated the same, without the separation of individuals or groups; References are based on accurate information and all have the necessary information; There are complaints processes or other mechanisms for error correction; Norms of professional behavior are respected. 	 Treat the employee with dignity, kindness and respect; Exchange relevant information with employees. 		

Tables 1. Basic statistics and scaling factors of seasonal effects for observed series (Data source: Cropanzano et al., 2007)

In his research, Greenberg (1993) separated intrecation justice into two components, interpersonal justice (treatment of respect and dignity by the superiors) and informational

justice (the accuracy and completeness of the information the superiors collect). Research has shown that employees evaluate the three dimensions of organizational justice, outcome justice (distributive justice), the justice of the formal distribution process (procedural justice) and justice for interpersonal relations (interaction justice).

Distributive justice refers to the perception of the fairness of the outcome that an employee receives in the organization. Outcomes can be distributed on the basis of equality (impartiality), need and individual contributions to the fairness of distribution by comparison with others (Adams, 1965). The diversity of distribution results in perception perceived by employees that they are not treated equally, and distribution justice is a predictor associated with reactions (cognitive, affective behavioral responses) to certain results (Cohen-Charash & Spector, 2001). In an organizational context, fairness tends to provide individual awards for a well-accomplished work assignment, and equity tends to build lovalty in the organization (Cropanzano et al., 2007). Employees react to the outcome of the allocation, comparing their outcomes with respect to others, if those relationships match, the employee feels equity (Colquitt, 2012). According to the same researcher, distributive justice was defined as the degree to which the corresponding distribution rule was followed in the context of decision making. In addition to Thibaut and Walker's (1975) equity in the adoption process, many authors considered Leventhal's (1980) procedural justice in the context of resource allocation decisions (Greenberg, 2000; Cohen-Charash & Spector, 2001, Cropanzano et al., 2007, Colquitt, 2012). Leventhal (1980) argues that the distribution process can be regarded as fair when several rules are respected, including consistency, impartiality, accuracy, correctness and ethics. Procedural justice is a measure of assessing whether the adoption process is fair, it does not imply the results itself, but rather determines certain principles, regulating the roles of employees in the decisionmaking process (Cropanzano et al., 2007). If employees have the perception that the decision-making procedure is favorable, and the researchers call it a fair process, employees show greater loyalty and contribute to the interests of both leaders and organizations. Interaction justice is defined as the quality of interpersonal procedures during the adoption of organizational procedures (Bies & Moag, 1986).

In the case of interaction justice there are different opinions of the researchers. The mentioned Bies and Moag consider it to be the third dimension of organizational justice from the perspective of personal relationships, not in the context of the decision makers (superiors). However, Cohen-Charash and Spector (2001) estimated that there is a high correlation between procedural and interaction justice. A different concept was introduced by Greenberg (1993), looking at interaction justice from the point of view of interspersal and informative justice. Interaction justice as a third dimension is important because the focus is on interpersonal relations both with the employee and the superior, and the superior's treatment of employees (Cohen-Charash & Spector, 2001). As a four-dimensional construct: distribution, procedural, informative and interpersonal justice was presented by Colquitt et al. (2001) (read more in this study).

The importance of fairness of procedures is reflected in enabling individuals to control the results. If the importance of the group is valued, Lind and Tyler (1988) have indicated that individuals have a desire to be worthy members of the group, and the fairness of procedures are desirable as they indicate that individuals are valued. The last three decades of studies of procedural justice and interaction justice were investigated from two ways, the entire organization and supervisor. Moorman (1991) distinguishes procedural and interaction of justice by assuming that superior behavior can only affect interaction with justice, but not procedural justice. In support of the above, Masterson

and associates (2000) point out that procedural justice is the fairness of the organization, and interaction justice is the justness of the superiors. This definition equates the direction (control vs. organization) and the type (procedural versus interaction) of justice, which can cause problems in assessing performance (Erdogan, 2002). It is assumed that evaluates the effect, and if it does not apply the set of organizational criteria, the procedure itself is not fair and the results of the work are not positive. Interaction justice is defined as the equity of interpersonal relationships where employees expect to be treated with respect. However, interaction justice evaluates the flow of the procedure, and in interaction justice the way of communication is assessed. Since distributive justice is based on equality, it is not possible to determine the differences between different types of inequality (Erdogan, 2002). Cropanzano et al. (2007) points out that we can distinguish three distribution rules that can lead to distributive justice if applied: equality (for each one), impartiality (for everyone in accordance with contributions) and needs (for each in line with priorities).

LMX

The quality dimension LMX points to attitudes that are present in the exchange of relationships (loyalty, support and trust among members of the diads), while the dimension of the oriented binding behavior (influences, freedom and innovation). The LMX model is based on the concept of a different quality of the leader and followers, or that the leaders within the organization form two groups of followers, depending on how they treat them (Dansereau et al., 1975; Grean & Scandura, 1987).

This differentiation within the organization increases the time limit for the realization of work tasks, with which all the leaders face the job (Graen, 1976). Due to constraints, the leaders develop close relationships with only a few employees, while with the rest of the group they have a formal authority.

The members of the group are characterized by high quality exchange with the leader, high degree of mutual trust, respect and commitment. Out-group members have a low level of exchange with their leader, where operational performance down to the basics of the activity given a description of their work (Graen & Uhl-Bien, 1995). It is the leader who decides which trainees are placed in which group based on the values, behavior, age and gender structure, level of education and expertise, feelings and other characteristics of the follower. With an in-group leader, there are significantly stronger connections than with out-group members. In-group followers have a greater degree of responsibility, they are committed to the leader and organizational goals, invest more effort and are generally in higher positions directly to the leader.

Out-group members are only executors of work tasks and are characterized by a very formal relationship with the leader. An important factor that can affect the perception of fairness in the organization is the quality level of LMX. The high level of exchange is characterized by a high degree of mutual positive influence, loyalty, contributions, but also the obligation to exchange professional respect and trust, while otherwise low LMX quality is observed, often describing the conditions of the "out-group" (Dienesch & Liden, 1986; Liden & Maslyn, 1998; Schriesheim et al., 1999). Different perceptions of justice are very important for the development of a quality relationship within the organization (Cropanzano & Byrne, 2000). If the shared obligations and trust came from justice, the result is a high level of LMX. Exchange of Leaders and Followers - LMX has a dyadic relationship between the presumed and employed, and the higher quality of these relationships improves the organization's efficiency.

Organizational justice - LMX and sector services

One of the important consequences of the high level of organizational justice is commitment to the organization, one of the consequences and a high level of services provided (Nicolaides, 2008). That is, it enables an organization to have an important competitive advantage in the service market, but it is also an important factor in assessing the quality of the services provided. On the one hand, interactive and distributive justice are most relevant for the development of interpersonal relationships, while procedural justice is more relevant in the development of employee and organization relationships (Masterson et al., 2000). Justice is an important factor that affects the behavior of employees, so equity is necessary in every aspect of the organization, because it affects the performance of an organization. A significant number of research is focused on organizational structures and organizational behavior in the service sector, due to the importance of the human factor in business outcomes. The perception of organizational justice in the work environment can be explained as a trust in the organization with satisfaction of the job and belief in the existence of reasonable (fair) behavior, and it represents the relationship between the employee and the organization. Scandura (1999) pointed out that in-group members perform higher-level jobs if they estimate that the leader was honest in procedures, or that a lack of effective communication between the leader and a member in the perception of organizational justice can slow down the development of high quality LMX. During his research of organizational justice Lee (2001) emphasized the key role of communication in shaping the perception of justice, where employees have lower perceptions of procedural justice, have lower exchange, but also less exchange information, ideas and resources. Also, Cropanzano et al. (2002) found that interaction justice is a larger predictor of LMX, than procedural justice, because procedures in the process of procedural justice offer employees control over the results they have received, but also whether the outcomes are fair. Interaction justice is often associated with results on a personal level (Cropanzano et al., 2002) and with satisfaction with work. In the analysis (Dulebohn et al., 2012) procedural and distributive justice are treated as perceptual outcomes of LMX. Employees whose perception is "weak" in interaction justice, manifested through communication with their superiors, recorded a lower quality of LMX (Williams et al., 2016), because interaction justice is more closely related to the dynamics of relationships within the leader-member relationship.

*H*¹ - All three dimensions of organizational justice are in a positive correlation with the LMX construct.

H2-Predictors LMX are all three dimensions of organizational justice.

METHODOLOGY

Sample and procedures

The questionnaire was received by 270 employees from the service sector (tourist agencies, hotels, restaurants, cafes - bars, public companies, city administration) and 200 questionnaires returned full (74%). Distribution of questionnaires was done electronically and analogously on the territory of Serbia. The questionnaires have been translated from English to Serbian. The sample includes 64% of women and 36% of men, the average age of life is 38.2, or 47% of the respondents are from the age group "30-44". Out of the total number of questionnaires received, 8 respondents did not complete the age of life (4%). The university degree had 111 respondents (55.5%), followed by high school 31 participants (15.5%). The average years of service are 7.85 years, or the most represented is the group of year of service "6-10" from 29%. Demographic characteristics of the sample are given in Table 2.

	Ν	%
Gender		
Male	72	36.0
female	128	64.0
Age		
18-29	43	21.5
30-44	94	47.0
45+	55	27.5
Education		
Primary school	1	0.5
Secondary school	31	15.5
College	28	14.0
University	111	55.5
MSci	21	10.5
PhD	8	4.0
Length of services		
Up 5	93	46.5
6-10	58	29.0
11-15	25	12.5
16-20	12	6.0
21+	11	5.5

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Measurements

Organizational justice (OJ) - was measured using Niehoff and Moorman (1993) construct in three dimensions. The questionnaire contains 20 observations measured by Likert scale (1 - generally I do not agree to 5 - completely agree).

- Distribution justice was measured with 5 observations;
- Procedural justice was measured with 6 statements and
- Interaction justice was measured with 9 statements.

Leader member exchange Questionnaire (LMX-7) - Measuring the quality of employee relationship with the superiors according to Graen and Uhl-Bien (1995) is most often used to research theoretical issues, and is filled in by leaders and followers.

The quality of the leader and successor exchange was measured by the LMX-7 questionnaire with a standard five-step Likert scale (I do not agree at all - I completely agree). Respondents were offered seven statements (ajtemma). The questionnaire is homogeneous and has one dimension. Results obtained by LMX-7 have the following meaning: very high of 30-35, high 25-29, medium 20-24, low 15-19 and very low 7-14. The results in the upper range indicate stronger, better exchanges of leaders and followers, and the results in the lower ranges indicate a lower quality exchange. Control variables - half, years of age, years of service and level of education were used, because demographic characteristics can influence the perception of justice (Cohen-Charash & Spector, 2001).

Data analysis

Distribution, procedural and interaction justice was used in this study for predictor variables. The criterion variable is LMX. All demographic-control variables, half, year of life, year of service and level of education, were used to determine whether there are significantities. The study data was analyzed using descriptive statistics, correlations, regression multiple analyzes, and genrectoral variance analysis. Pyrson's correlation coefficient is the established relationships / relationships for the indicated variables, while by regression the contribution of each predictor of variable in the explanation of the criterion of the variable was tested. Anova was used to determine whether there were differences between control variables, LMX, and three dimensions of organizational justice.

RESULTS

The average overall response for the LMX-7 construct is 22 and concluded that the relationship between the leader and the followers in the service sector of medium quality. Descriptive statistics and correlation of variables are presented in Table 3. Employees in the service sector assessed the procedural justice as the lowest. The decision-making procedure, information collected by the superiors, but also the consistency of the implementation of decisions on all employees is not at a significant level. At the examined sample, interaction justice is at the most important level, because the focus is on interpersonal relations - the interaction between employees and the client, as well as all employees within the organization. The correlation between the level of exchange of leaders and followers and all three dimensions of organizational justice is significant. Pearson's correlation coefficient revealed the following:

a weaker link between LMX levels and distributive justice (r (200) = .56, $\rho < 0.01$);

a moderate correlation between the level of LMX and procedural justice (r (200) = .74, ρ < 0.01) i

high linkage between LMX levels and interaction justice (r (200) = .80, $\rho < 0.01$)

The results showed that there is a significant connection between all three dimensions of organizational justice, and the weaker connection (r (200) = .50, $\rho < 0.01$) between procedural and distributive justice, then a weaker connection (r (200) = .53, $\rho < 10^{-10}$ 0.01) between the interaction and distribution, while the high correlation between interaction and procedural justice was observed (200) = .83, $\rho < 0.01$.

Variables	Μ	SD	1	2	3	4
DJ	3.27	.83	(.74)			
PJ	3.06	.81	.50**	(.70)		
IJ	3.36	1.08	·53 ^{**}	.83**	(.97)	
LMX	3.14	1.04	.56**	·74 ^{**}	.80**	(.94)

Tables 3. Mean, standard deviation, correlation among variables

N=200; **Correlation is significant at the 0.01 level; M-mean; SD-standard deviation; ()-Crombach alpha; LMX-Leader-member exchange; DJ-Distributive justice;

PJ-Procedural justice; IJ-Interacional justice.

Tables 4. Multiple regression model						
Model	R	R ²	Variables	β	t	ρ
			DJ	.12	2.55	.01
SS	.82	.67	PJ	.22	3.01	.00
			IJ	.55	7.24	.00
Note: Dependent veriable is LMX: SS service sector: significant at the 0.05 level:						

R²-coeff. determination; ρ -value < .05; β -beta standard regression coeff.

The coefficient of multiple correlation (Table 4) is R = .82, while the prediction criterion describes about 67% of the variability of the criterion variable. Based on the results obtained, it can be said that there is a high level of correlation between the criteria and the predictor variables. Statistically significant beta coefficient with a criterion variable have all three dimensions of organizational justice, distribution, procedural and interaction justice ($R^2 = .82$, F (3.196) = 134.29, $\rho < .05$), that is, the higher β coefficient, in so far as the intensity of the prediction more significant. The obtained results show that the perception of justice in the service sector significantly influences the quality of the level of exchange of leaders and employees.

Analysis of the variance (Tables 5 and 6) shows that the main effect of the dimensions of organizational justice and the group of years of life is F (3, 196) = 3.17, ρ <.05, for distributive justice it is $\eta\rho^2$ = .033, that is, for procedural justice $\eta\rho^2$ = .032. Post-hoc analysis by Dunnett's test shows differences in age group "18-29" and group years "45+" (ρ = .04) in distributive justice, while the difference in age group "30-44" and group years "45+ "are significantly different (ρ = .05) for procedural justice. The effect of size (η) for groups of years in both dimensions of justice is small.

		Sum of Squares	df	Mean Square	F	Sig.
DJ	Between Groups	4.30	2	2.15	3.17	.04
	Within Groups	128.15	189	.68		
	Total	132.45	191			
PJ	Between Groups	3.82	2	1.91	3.15	.05
	Within Groups	114.78	189	.61		
	Total	118.60	191			
IJ	Between Groups	4.87	2	2.43	2.11	.12
	Within Groups	217.70	189	1.15		
	Total	222.56	191			

Table 5. One-way ANOVA between dimension of organizational justice and age groups

Table 6. Multiple comparisons	between dimension of	f organizational	justice age groups
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Dependent	nt (J) Mean Std			(1)	(I) Mean Std		95% Confide	nce Interval
Variable	(I) age	age	Difference (I-J)	Error	Sig.	Lower Bound	Upper Bound	
DJ	18-29	45+	.40*	.17	.03	.03	•77	
	30-44	45+	.08	.14	•77	23	.39	
PJ	18-29	45+	.33	.16	.07	02	.68	
	30-44	45+	$.30^{*}$.13	.04	.01	.60	
IJ	18-29	45+	.34	.22	.21	15	.82	
-	30-44	45+	.36	.18	.09	05	.76	

Note: *The mean difference is significant at the 0.05 level;

Dunnett t-tests treat one group as a control, and compare all other groups against it.

The demographic characteristics of the respondents, such as gender, years of service and level of education, do not have significant differences with the perceptions of all three dimensions of organizational justice, nor with the dimension of LMX.

DISCUSION

The relationship between the dimensions of organizational justice can be interpreted to mean that, although it is a service sector, the structure of the organization, as well as their appearance on the market, is different. In organizations that are market-oriented (tourist agencies, hotels, cafes, restaurants, etc.), all three components of justice are important because it is an important client, as well as profit.

On the other hand, public organizations (public companies, administration, etc.) that are not profit-oriented, an important dimension of justice is interactive because

they depend on good interpersonal relationships. The perception of organizational justice has three aspects of procedure, decision and interpersonal relations. All three dimensions of organizational justice are in significant correlation with the level of exchange between leaders and followers in the service sector. Recent LMX quality studies have shown that in-and out group members can influence the perception of all three dimensions of organizational justice, but individually (Scandura, 1999; Jackson, 2008). As already highlighted in the work, high quality of exchange of leaders and followers is accompanied by trust, commitment and respect, which is associated with procedural and interaction justice. In contrast, the low quality of LMX can be described by the care of an individual for himself, as well as the care for his own outcomes, which is reflected in the weaker perception of distributive justice.

If members of the group consider their superiors to have equal relations with them, according to the implementation of procedures, the distribution of information, then members of the group will share the same perceptions about the justice of the leaders (Colquitt et al., 2001; Mayer, 2004; Colquitt et al., 2005). Such findings were obtained on a sample of a smaller scale and demographically homogenous, as is the case in this study. However, Erodgan et al. (2006) commented that the relationship between LMX and procedural justice is possible if leaders are empowered to devise a process flow, that there are conceptual overlaps of procedural and interaction justice that complicates research within a single study. In the last decade, the role of intermediaries (mediators) in the dimensions of organizational justice between LMX and other constructs, such as job satisfaction, organizational behavior, dedication, etc., was the most explored. H1 hypothesis is fully confirmed.

Although the assumption that the dimensions of organizational justice are predictors of the LMX level, the obtained results confirm the hypothesis H2. LMX level quality predictors are all three dimensions of organizational justice, that is, employees perceive righteousness and influence the quality of relationships with their superiors. According to Masterson and associates (2000) interactive justice is a powerful predictor of the LMX level in relation to other dimensions of organizational justice, which was confirmed on the sample tested. By looking at the service sector, leaders treat their employees appropriately, and the decisions they make are expected, and therefore affect the quality of exchanges between leaders and followers, as beta coefficients are significant. Although this is not the case in all service subsectors, most of the examined questions of relations with their superiors are assessed by interpersonal relations.

Characteristics such as gender, age, year of work and level of education in relation to the dimensions of organizational justice and LMX, in this study have different results. Significance was recorded only between years of age in distributive and procedural justice. The analysis of the variance showed that other characteristics of the examinees have no significant relationship with interaction justice and LMX.

CONCLUSION

A quality relationship between leaders and followers produces a series of consensus, such as a positive relationship with job satisfaction, organizational attachment and excellence, and reduces the intention of employees to change or leave the organization. Resources (people and money) in today's business environment have a crucial importance for the survival of the organization on the market in the service sector.

The perception of justice is seen by employees through an exchangecommunication, primarily with their superiors, but also with associates. In the service sector, an indicator of the level of exchange between managers and employees are all three dimensions of organizational justice, distribution, procedural and interaction justice. Regardless of the fact that the services are the main "product" of this sector, the functioning, and the very organizational outcomes themselves are significantly related to organizational justice. If employees see themselves as part of an organization, they are likely to manage successes and failures with the organization. In such an environment, management plays an inescapable role. Researchers have opinions on justice, that it does not fully allow for the concept of organizational justice to be perceived as there is no concrete measure to assess the contribution of employees in the organization, and that it is therefore difficult to give a concrete answer to justice (Cropanzano et al., 2001).

LIMITATIONS

This study examines the relationship between organizational justice and LMX in the service sector. The sample taken is relatively small, so the group is homogeneous, only one sector is tested. The results obtained should not be generalized, but the number of samples and constructs should be increased, in order to examine relations more closely.

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PRO-ENVIRONMENTAL BEHAVIOUR OF ATTENDEES AT A MAJOR SPORT EVENT IN CAMEROON

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Abstract: This study sought to examine the pro-environmental behaviour of attendees at a major sport tourism event in Cameroon. Through a mixed-methods research technique involving face-to-face surveys with n=759, the key findings of the study were that the event attendees displayed inconsistent behaviour while at home, versus while being at the event. The study found that the attendees were more pro-environmentally friendly during the event than they were when they were at home. This was mainly triggered by the emphasis on environmental initiatives and messages conveyed during the event. The study concludes that, since the event attendees are likely to be more pro-environmentally friendly during the event, such events are critical as avenues to creating a lasting impression on the attendees that could address their behaviour during the event, and encourage them to continue thereafter. In this sense, the learning provided through initiatives and branded messages during the event is very important.

Key words: Pro-environmental behaviour, attendees, major sport events, Cameroon

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INTRODUCTION

Every human activity has an impact on the environment, as do tourism and sporting events. Environmental consciousness and the complexity of the engagement of various strategies taken both independently and unanimously by the affected stakeholders in the sport events industry has, in the past few decades, been accorded ample scholarship by a number of sports tourism scholars (see Wernerfelt, 1984; Oliver, 1992; Hart, 1995; Hart & Milstein, 2003; Russo & Fouts, 2007; McCullough & Cunningham, 2010). A key issue that continues to echo in the literature of sport tourism is that all of the many typologies of sport events generate environmental issues and subsequently call for the need to evaluate human behaviour regarding the sport event environment (Thibault, 2009; Pfahl, 2011; Trendafilova et al., 2013). Collins et al. (2009), in particular, highlight that the communities, situated in the private and public sectors where the sport events (big and small alike) are staged, have come to recognise the

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significance of the sustainable usage and protection of the environment for sports, and that the environmental consequences of human behaviour, in this regard, command intensified courtesy. The increased amount of attention given to the environmental consequences of sport events is neither new to the present generation, nor confined to any economic system, political climate or social dynamic, but rather, the issues are a result of human nature, thereby requiring global attention (Prizzia, 2007; Suzuki, 2007; Foss, 2009). In the above regard, sport organisations, globally, have come to acknowledge the environmental consequences of fans' and participants' environmental behaviour at major sporting events (Inoue & Kent, 2012; Pfahl, 2013), and are actively involved in efforts to address such (Collins et al., 2009). The United Nations Environmental Programme [UNEP] (2009) and McCullough et al. (2016, p. 1042) propose the Olympic Games in Beijing, China, as an example of the above, in terms of which the Games organisers "spent over US\$17 to address environmental issues" of sport events between 2001 and 2007. In another example, according to the Fédération Internationale de Football Association [FIFA] (2013), the Green Goal programme was implemented for the soccer World Cup staged in 2006 in Germany, aimed at reducing the major soccer event's impact on the global climate to the absolute minimum (FIFA, 2013).

Following the successful implementation of the Green Goal programme in 2006, other soccer World Cup bidders, such as South Africa committed themselves to, and adopted, the Green Goal initiative for the hosting of the 2010 event. Such initiatives are particularly useful in managing, or minimising the associated impacts.

Some scholars (see for example Cantelon & Letters, 2000; Jones, 2008; Collins et al., 2009) have argued that major sport events impact upon the local ecosystems, utilising reserves of irreplaceable natural capital, and contributing to carbon emissions related to climate change and pollution, as well as promoting irresponsible behaviour towards the environment (Han et al., 2015). While the major sport events organisers are increasingly becoming more environmentally sensitive in their planning and hosting of such events, the pro-environmental behaviour of the events' target groups, fans/supporters and participants remain a major concern (Tolkes & Butzmann, 2018). The current research endeavour was motivated by calls made by some authors (see Mair & Laing, 2013; Tolkes & Butzmann, 2018; Macintyre et al., 2019) continuously to examine the environmental consequences of events holistically, with a focus on the different sport events hosted in various geographical contexts. Such an examination, they posit, should deepen the understanding of how the impacts of the events on the economy and society, as well as, most importantly, on the environment, are viewed and attended to. The present research considered the pro-environmental behaviour of the attendees of a major sport event in Cameroon. The study examined the behaviour of the international visitors who attended the twelfth edition of the Africa Women Cup of Nations in 2016. The above was done by considering their environmental behaviour, both at home and during the event.

ENVIRONMENTAL SUSTAINABILITY AND MAJOR SPORT EVENTS

The sport event industry has achieved substantial growth over the last few decades, with Schimmel (2012) attributing such growth to the much-publicised economic, social and symbolic significance of major sport events (Turco et al., 2012; Tichaawa & Bob, 2015; Tichaawa et al., 2015). The hosting of major sport events has been intertwined with leveraging the inherent socio-economic, urban regeneration and tourism benefits (Bohlmann & Van Heerden, 2005; Tichaawa, 2015; Davies, 2016; Xue & Mason, 2017; Hemmonsbey et al., 2018; Hemmonsbey & Tichaawa, 2018a,b; Tichaawa et al., 2018; Hemmonsbey & Tichaawa, 2019). As a result, an increasing number of countries are seeking to host large-scale sport events, with the impacts of major sport events having

come under scrutiny, specifically regarding the realisation of the promised benefits (see Davies, 2010; Taks, 2013; Adams & Piekarz, 2015; Taks et al., 2015; Bell & Daniels, 2018). Increasingly, sport event sustainability has gained much prominence in the scholarly literature (Sotiriandou & Hill, 2015). Sustainability in events, in the context of the present study, refers to the triple-bottom-line, in terms of which the related economic, social and environmental concerns are posited as being of equal importance and thereby as deserving of equal consideration in the planning and management of sport events (Fyall & Jago, 2009). The growing interest in sport event sustainability arises from the industry trends, including the globalisation of sport, which attracts substantial numbers of attendees to hosting destinations, the increase in the strategic leveraging of major and mega sport events, the global movement towards sustainability and subsequently the inclusion of sustainability principles in the bidding and hosting requirements of mega and major sport events (Dolf & Teehan, 2014; Pereira et al., 2014; Han et al., 2015; McCullough et al., 2015; Boggia et al., 2018; Casper et al., 2019).

Predominantly, most academic research examines the economic and social sustainability of sport events (see Smith, 2009; Balduck et al., 2011; Li & Jago, 2013; Taks, 2013; Ramchandani et al., 2014; Diaballah et al., 2015; Han et al., 2015; Schnitzer et al., 2017), so that, only recently has the inquiry into the environmental sustainability of sport events grown. Environmental sustainability can generally be understood in terms of the sport event industry, as consisting of the organisers involved striving to attain minimal impact on the natural environment in the hosting of such an event (Mair & Laing, 2013). The present study extends the understanding of environmental sustainability by including consideration of the actions and behaviours of sport event attendees. The environmental sustainability of major sport events has become of importance to a number of stakeholders, ranging from sport event organisers and sponsors, to policymakers and sport event attendees (Bama & Tichaawa, 2015; Han et al., 2015; Boggia et al., 2018; Habitzreuter & Koenigstorfer, 2018; López-Bonilla et al., 2018; Minoli et al., 2018; Alonso-Vasquez et al., 2019; Casper et al., 2019; Chirieleison et al., 2019). McCullough and Kellison (2016) opine that an inquiry into environmental sustainability emerges from the inevitable impact of sport events on the natural environment, ranging from the construction of sport event facilities and stadia, as well as the subsequent operations, through to the travel-related implications of sport event attendees for the natural environment (Dolf & Teehan, 2014; Fekry et al., 2014).

McCullough et al. (2015) reason that environmental sustainability is no longer a pressing concern for policymakers, but that it should rather be of urgent interest to the industry as well. Achieving environmental sustainability in sport events has grown to be a widespread objective, in relation to which various approaches have been taken by the different stakeholders concerned in addressing the matter. According to Sotiriadou and Hill (2015), the sport event industry, specifically sport event organisers, have been the first stakeholder group to direct the development of environmentally sustainable sport events. The most prominent examples are those that are concerned with the hosting of mega sport events, owing to their size and international spectacle.

For instance, the International Olympic Committee (IOC) took the lead in addressing environmental concerns, with a noticeable example being the formulation of the Olympic Games Global Impact (OGGI) study in 2003, which in addition to identifying possible legacies and establishing a benchmark for future Olympic Games, conformed to the stipulation for environmental protection (Mallen et al., 2010). An additional noteworthy example emerges from the 2006 FIFA World Cup, held in Germany, which was the first of its kind to address environmental concerns (Sotiriadou & Hill, 2015). The Organising Committee having learned from the 2000 Sydney Olympic Games included a

chapter concerning the issue of environmental sustainability, before the undertaking of an environmental assessment became a requirement for FIFA (Sebake & Gibberd, 2008). The mega sport event concerned established environmental sustainability programmes, including the responsible use of energy resources and water, a waste disposal strategy, and encouraging the use of public transport to reduce the carbon footprint left by the sport event attendees (Mallen et al., 2010). The aforementioned mega sport events set a precedent for the future hosting, and planning, of sport events. The above is supported by the international sport event organisers, like FIFA, the IOC and UEFA, enforcing the significance of environmental sustainability within the bidding process, as well as strongly encouraging the organisation of green events (Collins & Flynn, 2008; McCollough et al., 2015). Similar trends have been identified in relation to other major sport events.

For example, the Fédération Internationale de Motocyclisme (FIM), in Switzerland, implemented their environmental code in partnership with the UNEP in 2006, with it focusing on minimising pollution (noise and ground), as well as on incorporating contractual requirements for the conducting of environment-friendly procedures by the event caterers (Mallen et al., 2010). Additionally, the World Championships of the International Amateur Athletics Federation (IAAF), held in Helsinki, Finland, ran the 'Ecomass' programme, which focused on managing the carbon footprint of the event, as well as on minimising its environmental effects (Mallen et al., 2010).

Moreover, the sport event organisers, within the different hosting destinations, have established environmentally responsible measures, such as recycling systems and waste management and environmental campaigns in the hope of encouraging proenvironmental behaviour from the sport event attendees (Han et al., 2015). McCullough and Kellison (2016) further mention the fan engagement activities that form part of the corporate social responsibility of the sport event organisers and sponsors in an effort to encourage sustainable attendee behaviour. Fan engagements that are environmentally driven are motivated by a number of reasons, including the need for the increase in fan identification, cost-saving, the promoting of positive environmental behaviours, and the increasing of the positive perceptions of the sport event organisers (Casper et al., 2019). Reaching out to the sport event attendees has, thereby, become a part of the organisations' contribution towards environmental sustainability, with the objective being to instil pro-sustainable behaviour in the attendees (Kellison & Kim, 2014; McCullough & Kellison, 2016; Casper et al., 2019). In agreement with the above, McCullough and Kellison (2016) caution that sport event organisers and sport organisations can strategically leverage their brands so as to promote sustainable behaviours by the sport event attendees. A number of challenges exist in terms of promoting pro-environmental behaviours in sport event attendees, with McCullough and Kellison (2016) suggesting that a major challenges in engaging sport event attendees in sustainability initiatives being that the attendees are primarily concerned with consuming the sport event experience, so that the sport event organisations find it challenging to enforce sustainability, as there is a risk of alienating their fans. As such, a few studies have endeavoured to assess the factors influencing the pro-environmental behaviour of sport event attendees.

Pro-environmental behaviours and attitudes

Sport event organisations are noted as having increased their efforts to encourage pro-environmental behaviour among attendees, including embarking upon green event strategies and campaigns (Casper et al., 2016; McCullough & Kellison, 2016). Proenvironmental behaviour has been defined as being the conscious behaviour that aims at minimising the adverse impacts of the natural environment (Kollmuss & Agyenan, 2002). The authors note that understanding what constitutes pro-environmental behaviour among sport event attendees is complex. In an attempt to understand their proenvironmental behaviour, Mair and Laing (2013) point to the social psychological theory that explains human behaviour as being determined by the individual, as well as by external environmental factors. Similarly, Miao and Wei (2013) posit that, due to the influence of contextual circumstances, people tend to display certain behaviours, depending on the specific setting concerned. Numerous departure points have evidently been set for understanding the phenomenon, with some studies having found that social norms and social identity tend to influence the environmental behaviour of attendees.

For example, Han et al. (2015) found that the attendees' belief in what constitutes acceptable behaviour forms a powerful agent in relation to individual behaviour. Additionally, studies have alluded to the inconsistency found in environmental behaviours at the different sport event destinations, and in the daily life of the sport event attendees (Mair & Laing, 2013; Miao & Wei, 2013; Han et al., 2015; Casper et al., 2019). For instance, the findings by Dolnicar (2010) show that many individuals display differing environmental behaviours at the tourism destination, as well as in their daily life at home, where they may be pro-environmental in their region of origin, but less so in the host destination, with the opposite also possibly being true. Moreover, Han et al. (2012) warn against viewing sport event attendees as a homogenous group, as pertaining to environmental behaviours and travel characteristics. Instead, the scholars posit that environmental behaviours tend to differ according to attendee type.

Sport event attendees' behaviours at home and at the host destination

The environmental behaviours of event attendees at home and at the host destination have come under investigation in recent years (Mair & Laing, 2013; Han et al., 2015: Viviers et al., 2019). Pro-environmental behaviours at home refer to the pattern of activities that individuals perform to benefit the environment (Whitmarsh & O'Neill, 2010: Muster & Schrader, 2011; Viviers et al., 2019). Examples of such activities include minimising food and water waste, recycling, switching from the use of plastics to paper or other alternatives, efficient energy usage, and using greener transportation options and more environment-friendly products than before (Viviers et al., 2019). Such proenvironmental behaviours are ascribed to attitudinal and emotional aspects, with those concerned having a positive attitude towards the natural environment and therefore. acting in a manner that seeks to minimise the adverse human impact on the environment (Viviers et al., 2019). Some studies opine that adopting green attitudes, and engaging in pro-environmental behaviours, at home should influence the manner in which the attendees engage in pro-environmental messaging and behaviours at the tourism destination (Whitmarsh & O'Neill, 2010; Muster & Schrader, 2011). In contrast, other studies warn against the general assumption that environmentally aware individuals will practise pro-environmental behaviours at a destination, as such a relationship has not yet been conclusively proven (Lopez-Bonnilla et al., 2018).

A number of postulations have been projected as accounting for the inconsistencies between event attendees behaviours at home and at the destination. Increasingly, host event destination managers and event organisers have begun to incorporate proenvironmental messaging in the organising and hosting of sport events (Han et al., 2015; Lopez-Bonilla et al., 2018; Viviers et al., 2019). The above emerged from the realisation that those who are keen on destination environmental sustainability should not solely focus on incorporating environmental operations, like waste management systems and energy efficient facilities in their planning but rather, they should place additional focus on engaging with other stakeholders, such as the local community, to promote proenvironmental behaviours (Dolnicar & Grun, 2009; Dolnicar, 2010). Han et al. (2015) opine the above as being the pro-sustainability information that should be shared with the sport event attendees. Additionally, emphasis has been placed on creating an environment that encourages pro-environmental behaviour, particularly in the stadia and sport facilities, as such action would serve to enforce the social norms governing behaviour. For instance, an individual would find it challenging to litter in an environment that is clean and evident of trash disposal (Miao & Wei, 2013). Evidently, such studies suggest that individuals might behave more environmentally responsibly at a destination, owing to the influence of the pro-environmental message that is in place. Moreover, although in their study, Han et al. (2015) found environmental behaviour to decrease from that in their everyday life to that at the host event destination, the study argues that the inconsistency in environmental behaviour is, in part, determined by the environmental role played by the destination itself. Furthermore, in relation to the inconsistencies in environmental behaviours, between when those concerned are at home or at the host destination, the study by Lopez-Bonilla et al. (2018) is of interest. Lopez-Bonnilla et al. (2018), having examined the pro-environmental behaviours acted out at a golf destination, concluded to two factors having influenced the sustainable behaviours of the attendees at the golf resort, being that they would engage in pro-environmental behaviour if they already possessed a positive environmental attitude, and if the environmental behaviour was easy and convenient to perform.

The Transtheoretical Model

Originally developed within the discipline of psychology, the transtheoretical model (TTM) of change has increasingly been used to explain changes in health behaviour, particularly when engaging in sport and exercise, as well as the understanding of pro-environmental behaviours (Tolkes & Butzmann, 2018). While the use of TTM in tourism and hospitality is gaining prominence, only a few studies have used the model to analyse the environmental behaviour of sport event attendees (see Musgrave et al., 2019; Ramchandani et al., 2019). The core premise of the TTM states that individuals go through a series of five stages in adopting voluntary change in their daily life (Mair & Laing, 2013; Tolkes & Butzmann, 2018). The stages concerned are pre-contemplation, contemplation, preparation, action and maintenance (Musgrave et al., 2019).

Ramchandani et al. (2017) describe the stages as representing a spiral, with people starting at the bottom (in pre-contemplation), and moving through the different stages as they change their behaviour. In the pre-contemplation stage, individuals are unaware of any problem in their behaviours, and they, therefore, do not see themselves as possessing the need to alter, or change, their life in any way (Ramchandani et al., 2017; Musgrave et al., 2019). Only during the contemplation stage do the individuals become aware of the issues that require change, whereupon they start to analyse the pros and cons of changing their behaviours to the desired form, which, in the present context, constitute pro-environmental behaviours (Ramchandani et al., 2017). The model suggests that individuals become more open than before to persuasive messages that reinforce their intended behaviours, and that support their motivation, in becoming proenvironmentally conscious (Tolkes & Butzmann, 2018). The first steps towards the performance of pro-environmental behaviour start in the preparation stage, while, in the action and maintenance stage, the individuals perform the desired behaviour, taking prosustainable action, but requiring help and support to continue to do so (Mair & Laing, 2013; Tolkes & Butzmann, 2018). The TTM additionally details the processes of changes, which identify how the change occurs (Musgrave et al., 2019; Ramchandani et al., 2019).

Mair and Laing (2013) point to the processes of change as being closely linked to the progression from one stage to the next. Of the ten processes of change, the first five, which are classified as experiential, are associated with the pre-contemplation, contemplation and preparation stages (Ramchandani et al., 2019). The experiential processes consist of consciousness-raising, dramatic relief, environmental re-evaluation, self-evaluation and social liberation (Ramchandani et al., 2019, p. 9). The last five processes of change are classified as behavioural, with them usually being associated with the action and maintenaGeography Bulletinnce stages (Ramchandani et al., 2019). The behavioural processes include self-liberation, reinforcement management, counter-conditioning, stimulus control, and helping relationships (Musgrave et al., 2019).

The model is often used for its dynamic approach to behavioural change, in that the model clearly delineates that the individuals concerned may move forward and backwards throughout the stages and processes of change (Tolkes & Butzmann, 2018). The model thereby accounts for the individuals who might achieve certain changes but who are at other stages in the model, and for those who regress to the precontemplation and contemplation stages (Tolkes & Butzmann, 2018). Additionally, the model recognises that moments might occur where the individuals are stuck in one stage of change (Mair & Laing, 2013). The strength of the model essentially lies its ability to consider the motivations, emotions and cognitions of the individuals (Mair & Laing, 2013). While the TTM has only, so far, been scantily applied to tourism and sport events, the relevance of the model to the present study lies in its investigation of the attitudes of individuals, with it being postulated to be particularly useful in reaching an understanding of the engagement of sport event attendees, in terms of their proenvironmental behaviours at home, and at the destination (Tolkes & Butzmann, 2018).

With some studies having found certain inconsistencies between the environmental behaviours at home and at the destination, the model aids in gaining an understanding of the pro-environmental behaviours of the attendees, in the context of female sport events. Additionally, the model can be applied to a wide array of behaviour change settings, as the constructs that it uses are of a global nature (Ramchandani et al., 2019). The present study therefore adopted the model to analyse the pro-environmental behaviour occurring at a major sport event hosted in Cameroon.

MATERIALS AND METHODS

The focus of the study was the twelfth edition of the Women Africa Cup of Nations, which was hosted in Cameroon in 2016. The event which is held every two years is managed by the Confederation of African Football (CAF). Since its inception in 1991 in response to the development and promotion of women's football on the African continent, the tournament has grown to become a major international sporting event, which can be likened to the men's tournament. The event has grown in stature, attracting major international sponsorship, and receiving increased media coverage, which augurs well for sport tourism in Africa. Regrettably, research into the cause and effects that are associated with the event on the continent has largely been neglected (see Achu, 2018).

Thus, the focus on the event, so as to examine the pro-environmental behaviour of the event attendees sheds more light on the sport tourism literature from an emerging destination context. The study was conducted in Yaounde and Limbe, which were the two host cities of the event. The researcher employed a mixed-methods research technique to collect the required data. Semi-structured questionnaire surveys were used to target the event attendees during the course of the event in both cities. The sample for the survey in both cities, was drawn using a sample calculator that was conceived for determining how large a randomly chosen sample from a given finite population of n cases should be, such that the sample proportion p would fall within .05 of the population proportion, meaning p with a 95% level of confidence (Isaac & Michael, 1981). Consequently, the stadium capacity (42 500 for Stade Ahmadou Ahidjo in Yaoundé, and 20 000 for the Limbe Omnisport Stadium in Limbe) determined the sample size to be n=759. To obtain valid responses from the attendees during the event, the researcher employed the assistance of

fieldworkers. The fieldworkers were chosen for their ability to communicate effectively in both English and French, given that the survey which was developed in English was also transcribed into French (with the two languages both being the official languages of Cameroon). The fieldworkers were trained to target the non-local event attendees.

The surveys were conducted on a face-to-face basis with the respondents at the entry/exit points of the stadia, so as to ensure that every event attendee had an equal chance of taking part in the study. One in twenty attendees was approached to participate in the study. In terms of the attendees' profile, the study focused on the attendees' gender, age, and place of residency, as well as other sociodemographic factors. Their attributes were used to determine their demographic profiles. As indicated in Tables 1 and 2, two main variables were measured in the study, being the attendees' environmental behaviour at home, versus their behaviour during the event. In relation to ascertaining the respondents' environmental behaviour at home, ten variables were assigned, in relation to which they were asked to indicate their level of undertaking of a particular environmental friendly practice on a three-point scale, where 1 = Never; 2 = Sometimes; 3 = Always.

In addition, the researcher also carried out "site observations focusing on the messages that the event was sending to attendees" (Mair & Laing, 2013, p. 1118). The attendees were observed in terms of their activities and behaviour on key aspect of waste management. A total of 758 completed surveys were collected on the given match days for the duration of the tournament (between 9 November and 3 December 2016).

Despite the event being a female tournament, the respondents were found to be largely men (65%) compared to women (35%). They were fairly young, with the vast majority (83%) being in the age range of between 18 and 44 years. Many of the respondents (61%) had attained an undergraduate or postgraduate qualification. They were mainly either employed as businesspeople, or as professionals (71%). In terms of geographical distribution, the majority of the respondents (67%) were domestic tourists from other parts of Cameroon, while many (31%) were from the other parts of the African continent. Interestingly, many of the respondents (78%) travelled in groups, staying at the destination for an average of eight nights.

RESULTS DISCUSSIONS

Environmental behaviour while at home

The respondents were asked to indicate the environmentally friendly practices that they undertook while at home. Table 1 shows that, while the respondents seemed always to dispose of waste (M = 2.23), and to use public transport (M = 2.13), they indicated that they sometimes recycled (M = 1.85), reused water (M = 1.93), harvested water (M = 1.96), bought, or consumed less, water (M = 1.95), purchased green, or fair trade, products (M =1.93), composted home waste (M = 1.96), used alternative energy sources (M = 1.92), and planted trees (M = 1.99). The above could mean that, while they were at home, no strict monitoring of environmental behaviour was taking place, and, hence, they did not always behave in an environment-friendly manner. The result might also have meant that the respondents were aware of their environmental usage, despite their limited full-time environmental-friendly practice at home, which could have influenced their positive environmental behaviour in the host destinations, which required compliance with specific control measures. The assertion is made on the basis of a review of the proenvironmental behaviour literature, which argued that environmental behaviours and lifestyles in the home region largely influence environmental behaviour at destinations (see Mair & Laing, 2013; Marks et al., 2016). Properly disposing of waste could be described as being the most common practice that the respondents described themselves as engaging in "always". The above was closely followed by the use of public

transport, which contributes towards the reduction of the carbon footprint. While most of the respondents described themselves as being advocates for environmental protection, the survey determined, through the open-ended responses that most respondents gave, that they could be relatively cautious in their actions, with them blaming their errant behaviour on such factors as 'lack of time'. The respondents indicated that, due to their busy work schedule, they simply did not have enough time to recycle, or plant, trees. Consequently, most of the event attendees' home behaviour could be described as being characteristic of those in the contemplation stage (see Ramchandani et al., 2017) as the vast majority (92%) mentioned that their behaviour, while they were at home, needed to be changed, and that they were willing to do so.

Variable	Environment-friendly practice at home	Μ	SD
V1	Recycling	1.85	0.636
V2	Reusing of water	1.93	0.623
V3	Proper disposal of waste	2.23	0.676
V4	Water harvesting (storage of rainwater)	1.96	0.665
V5	Buying or consuming less	1.95	0.621
V6	Purchase of green / fair trade products	1.93	0.666
V7	Composting of home waste	1.96	0.706
V8	Use of alternative energy sources, like solar energy	1.92	0.638
V9	Planting of trees	1.99	0.674
V10	Use of public transport	2.13	0.712

 Table 1. Environment-friendly practices in which the respondents

 partook/participated while at home(Data source: based on fieldwork)

M = Mean, SD = Standard Deviation

Environmental behaviour during the event

As shown in Table 2, it was clearly apparent that the respondents' proenvironmental behaviour, while at the event, was different to their behaviour at home. The respondents' responses showed that they mostly: used water sparingly and efficiently, such as drinking tap water and taking showers, rather than bathing (M = 2.06); interacted with, and supported, the locals by purchasing local goods and services (M = 2.04); frequented establishments that used local services and products (M = 2.01); used electricity efficiently, such as switching off the light and appliances when they were not in the room (M = 2.22); used public transport, like buses and trains (M = 2.14); and deposited their rubbish carefully (reducing, recycling and reusing) (M = 2.19). The findings also showed that the respondents only sometimes conserved water by way of reusing towels (M = 1.75) at the accommodation establishment where they staved for the duration of the event; purchased green/fair trade products (M = 1.95); supported green projects that aimed to combat climate change (M = 1.94); and donated to local charities and development programmes that focused on environmental conservation and preservation (M = 1.96). Overall, the results indicated that, during the event, the respondents displayed behaviour that was consistent with those who were at the contemplation stage of the TTM (see Ramchandani et al., 2017; Mushgrave et al., 2019).

A few studies have alluded to the influence of destination environmental responsibility, that is, to clear pro-environmental messaging, aimed at encouraging sustainable behaviours (Mair & Laing, 2013; Marks et al., 2016; Miao & Wei, 2013; Han et al., 2015). The above results might suggest the contribution of the sport tourism industry towards promoting environmentally sustainable behaviours and the positive correlation seen in attendees' behaviour. The results show that the major sport attendees were aware of the environmental consequences of their behaviour, but that they chose which

environmental aspects to observe and which to ignore while they were at home, based on their particular interests. In the case of attending major events, however, the attendees' environmental behaviour around the event areas was guided by the environmental regulations and requirements concerned, as stipulated by the sport organisers and the environmental managers. Han et al. (2015), especially, called for a focus to be laid on individuals' behaviour at home and at the destination, having found that individuals are likely to display less pro-environmental behaviours at the destination, as compared to what they display in their home region. As the above findings highlighted the limited sustainable behaviours displayed at home, the pro-environmental behaviours evident in the destination could have been largely influenced by the destination setting and by the various pro-environmental strategies put in place by the sport event organisers.

	by the respondents during the event (Data source: based on neid	workj	
Variable	Environment-friendly practice during travel	Μ	SD
V1	Conserving of water, such as the reusing of towels	1.75	0.633
V2	Sparing and efficient use of water, such as drinking tap water and taking showers rather than bathing	2.06	0.59
V3	Interacting with, and supporting of, locals by means of purchasing local goods and services	2.04	0.639
V4	Frequenting of establishments that use local services and products	2.01	0.618
V5	Efficient usage of electricity, such as switching off the light and appliances when not in the room	2.22	0.659
V6	Purchase of green/fair trade products	1.95	0.662
V7	Supporting of green projects	1.94	0.682
V8	Donating to local charities and development programmes	1.96	0.679
V9	Use of public transport, like buses and trains	2.14	0.672
V10	Careful depositing of rubbish (reducing, recycling and reusing)	2.19	0.686

Table 2. Environment-friend	ly practices undertaken
the respondents during the event	(Data source: based on fieldwork)

1. .

The above findings point to the environmental behaviour of the major sport event attendees being generally positive both at home and when they attend events. However, there is evidence of consistencies in their environmental behaviour and in their commitment to environmental sustainability. The above confirms the patterns observed in terms of behavioural change in the TTM, which observed that individuals might move forward and backwards throughout the stages and processes of change (Tolkes & Butzmann, 2018). Despite the positive response indicated above, the current researchers wish to encourage the major sport organisers and environmental managers to continue to relook at how environmental strategies and policies are incorporated into sport tourism development, especially regarding the promotion of pro-environmental behaviour.

The current study findings suggest that assessing the environmental behaviour of major sport event attendees should be recognised, with the efforts involved being directed at streamlining environmental sustainability commitments and mechanisms in terms of the vision, mission and strategies of the major sports organisations, and according to the statutes of the public sector and environmental bodies concerned.

With the environmental footprint of sport becoming increasingly significant (Suzuki, 2007; McCullough et al., 2016), the concerned stakeholders in the major sport event planning undertaken by the host destinations should play a role in necessitating a response to environmental issues emanating from the sport fans' behaviour during such events. The above should include such measures as continuing to encourage visitors to utilise public transport when traveling to the stadia and to purchase green/fair trade products during their stay, among other environment-friendly actions. More strategic

environmental impact assessment techniques must be employed than at present, in managing the environmental practices of the event attendees, so that the major sports organisations and policymakers can be supplied with useful information and guidelines regarding environmental management and the monitoring of behaviour.

In a related study by Collins et al. (2009), the Ecological Footprint Analysis and the Environmental Input-Output analysis were proposed as being two of the best approaches that sport organisations can employ to manage the environmental behaviour of stakeholders when attending major sporting events. On one hand, the Ecological Footprint Analysis measures the global impact of environmental behaviour, while, on the other hand, the Environmental Input-Output analysis measures the local impacts made in the above regard. The two techniques are crucial to the implementing of a major football event, because doing an Environmental Input-Output analysis (1) allows for assessing the overall economic and environmental consequences of sporting events for the host region, and (2) evaluates the global impacts of stakeholders' environmental behaviour and resource consumption during a sporting event that has global consequences, in terms of pollution and, ultimately, climate change.

CONCLUSION

Encouraging the pro-environmental behaviour of major sport event attendees is an important component of event sustainability (Mair & Liaing, 2013). The current study focused on assessing the environmental behaviour displayed by event attendees at home and at a major event. The study found inconsistencies in terms of the behaviour displayed at home versus while they were at the event, which triggered academic interest as to how such behaviour could be managed to bring about consistency in the behaviour, irrespective of whether the individuals concerned are at home, or at an event. Typically, since the event attendees were likely to be more pro-environmentally friendly during the event than at home, as the study findings show, such events can be seen as critical avenues to creating a lasting impression on the attendees that could address their behaviour during the event and encourage it to continue thereafter at home. In the above sense, the learning experience provided through initiatives and branded messages during an event can be seen as being very important.

The above could be achieved through adopting a concerted event stakeholder approach, in terms of which all the concerned and affected stakeholders, including sport organisations, the public sector, the environmental departments, the private sector, the non-profit organisations (NPOs) and the host community members, are lured into entering into a symbiotic relationship, where all the decisions made regarding the event in question represent their views and opinions. The above could help with the premonitoring and managing of environmental issues associated with the event.

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THE ROLE OF RELIGIOUS TOURISM IN SUSTAINABLE DEVELOPMENT IN SAUDI ARABIA: EVIDENCE FROM QUANTILE NON-CAUSALITY TEST

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Abstract: This paper empirically examines the role of religious tourism in sustainable development to the projection of Saudi Arabia 2030. This study observes the causal relationship between hajj pilgrims and economic growth in the KSA by conducting a quantile Granger non-causality test. We show that the causal relationship between hajj pilgrims and economic growth strengthens when a quantile Granger non-causality test of Chuang et al. (2009) is considered. This finding implies that the hajj pilgrims could provide the incremental predictability for the sustainable development in KSA, and hence, results from linear Granger causality tests cannot be considered robust.

Key words: Religious tourism; Economic growth; causality in quantiles; nonlinear dependence; development of the Saudi Arabia territory

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INTRODUCTION

The primary form of tourism is the religious tourism, and the religious pilgrimage dates since the dawn of human history. A pilgrimage has been defined as, "A journey resulting from religious causes, externally to a holy site, and internally for spiritual purposes and internal understanding" by Barber (1993). In addition to its spiritual dimension, 'religious tourism' also has a 'cultural aspect' exerted by the attraction of its architectural, decorative and historical heritage. So, there is an appearance of experience from the pilgrimage way, as cultural heritage attraction, in observation of cultural tourism, training to consume experiences. Religion, by means of a tourist experience, grows into part of the representative economy. Therefore, the experience with tourist fascinations derived from the pilgrimage ways has been broadly developed in form of cultural tourism in our time. These tourist fascinations are also identified as cultural heritage attractions, running as the travel motivations of tourist. On other hand, the religious centres become important parts of some economic circles, like in the western

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world, cities such as Jerusalem, Rome, Mecca and Madinah which stay to attract a big number of visitors on a yearly basis. Nowadays, pilgrimage is defined another way, it can be measured a traditional religious or modern secular journey. Digance (2003) presents the singularity of pilgrimage as resurgence throughout the world with venerable memorials still attracting those in search of spiritual realization. However, the latest works presented by Timothy & Olsen (2006) on pilgrimage and religious tourism is motionless fragmented and lacks synthesis and universal conceptualization.

In contemporary years, though, religious travel and tourism has settled into a much larger and more segmented market. According to the Organization for Economic Cooperation and Development (OECD) and the World Tourism Organization (UNWTO), cultural and heritage travel in 2017 represented 45% of all international tourism, compared to 37% in 1995. According to the World Tourism Organization, 37% of international travel is related to cultural tourism in which religious and spiritual aspects play an important role. This form of tourism affects most sectors of the economy. The major objective of the religious tourism is a visitation to a specific holy destination. Religious travel can be the principal reason for a trip but it can also be part of a trip and provide a destination with supplementary attractions.

In several countries, religious tourism is one of the greatest essential and ever growing industries in the western world which creates jobs and revenues. The sacred places situated in certain countries offer a specific occasion to tourism industry to develop toward a sound direction and in a maintainable way. In this reverence, Saudi Arabia has an exceptional location for having Mecca and Madinah in addition to other sacred and historical sites. Nevertheless, preceding studies have given less consideration to the economic aspect of Hajj pilgrimage. To study the Hajj duty from the economic perspective, this work observes the predictability of the non-oil-based Gross Domestic Product (GDP) growth of Saudi Arabia based on the growing number of pilgrims at the three latest decades. In the projection 2030 of Saudi Arabia, the kingdom of Saudi Arabia (KSA) needs to look for other source of non-oil-based Gross Domestic Product (GDP) or to differentiate source of GDP. Indeed, the petroleum sector accounts for approximately 86% of budget revenues, 41% of GDP, and 91% of export earnings in 2016.

So, the interest of Saudi Arabia is to diversify its economy. Indeed, oil prices are experiencing a sharp decline, the largest in 10 years. While it seemed that "the equilibrium price is around 100 dollars", according to the French Observatory of Economic Conjunctures (OFCE), the country has encouraged the fall of this price, which is first dropped below the \$ 80 mark in November 2014 to come down to \$ 40 in mid-2015. Whatever the reason why Riyadh encouraged the decline in oil prices in mid-2014, this did not prevent the monarchy from making massive expenditures. The country's involvement in regional conflicts, its participation in the fight against the advance of the Islamic State and the taste of its population for luxury have been the source of massive spending, that the Saudi budget may not be able to balance. Whatever the outcome of this crisis, many experts believe that Saudi Arabia will have to step down on its hegemonic oil strategy. The Saudi government cannot remain the largest employer in the oil sector.

The role of religious tourism in sustainable development in Saudi Arabia: evidence from quantile non-causality test knowing that the United States became the largest oil producer in 2018, it can no longer rely on large infrastructure projects to grow its economy and it cannot continue to provide subsidies and make public spending. In 2017, Saudi Arabia's economic activity continued to slow due to low oil prices and production, as a result of the country's obligation to limit its production under OPEC agreements. The kingdom managed to reduce its budget deficit (a fall from 17.2% to 8.3%) by drawing on its foreign exchange reserves and issuing bonds. The deficit should be financed by a decrease in assets and by domestic and international borrowing to a level of 1% of GDP by 2022. The extent of this deficit reduction will depend on the implementation of the fiscal equilibrium program (non-oil revenue reforms) and a decrease in spending according to the resolutions of the Office of Rationalization of Expenditures. The kingdom has already reduced its subsidies on water, electricity and oil products, and introduces a value-added tax to reward the fall in oil prices. A vision shared by the International Monetary Fund (IMF), which advised the Kingdom to diversify its revenue sources and no longer rely exclusively on its oil resources in order to maintain an important growth rate.

In the framework of this thematic, our research makes the ``hajj`` as an appropriate opportunity for promotion of economic growth and minimize the part of petroleum sector in GDP. We consider that a pilgrimage is a form of tourism.

Tugcu (2014) considers that the tourism has come to be the world's fourth largest export industry after fuels, chemicals and food. The position of tourism in the world of total merchandise represents 6.8% from service export of international trade in service in the year 2017 (World trade Organization, 2018). Also, tourism represents in the average of 10% of the world of total GDP. Tourism is becoming increasingly important because the numbers of tourists are every year growing. These big numbers of tourists generate jobs and revenues. In this respect Saudi Arabia has a unique opportunity for having Mecca and Medina as source of religious tourism.

The objective of this research is to test the relationship between economic growth measured by GDPNP and tourism pilgrim or more principally tourism religion (hajj pilgrims) in Saudi using a quantile Granger non-causality test developed by Chuang et al. (2009). The causality-in-quantile approach is characterized by the following novelties: Initially, it is robust to misspecification errors by way of it detects the underlying dependence structure between the examined time series; this could prove to be particularly important, as it is well known that GDPNP displays nonlinear dynamics. Then, through this approach, we test for causality that may occur in the tails of the joint distribution of the variables, hence not only for causality in mean. To the best of our knowledge, this is the first study to employ a causality-in-quantiles approach to study the predictability of GDPNP based on numbers of pilgrims and trade¹.

Using annual data for GDPNP of Saudi Arabia and the numbers of pilgrims over the period 1964 to 2017, we find empirical support for nonlinearity and regime changes between GDPNP and numbers of pilgrims, thus, corroborating the applicability of the quantile Granger non-causality test. Our findings show that the trade is a stronger predictor of GDPNP than numbers of pilgrims.

The rest of the paper is organized as follows. Section II surveys a literature review. Section III discusses the empirical methodology. Section IV presents data and the empirical results, and section V concludes.

LITERATURE REVIEW

Table 1 summarises the literature of the relationship between tourism and GDP, we notice that there are a contradictory findings in the nature and significance of this relationship. Some studies like Dubarry (2004), Dritsakis (2004), Lee & Chang (2008) and Massidda & Mattana (2013) have found a significant contribution of tourism receipts to both GDP and economic growth. Contrarians, Jin (2011) and Kouchi et al. (2016) did not confirm the long-run effect and causality between tourism and economic growth.

¹ As second source of GDP

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Studies	Methods	Variables	Results
Dubarry (2004)	Cointegration and causality	GDP, physical capital, human capital, real export of sugar, manufactured exports, real tourism receipts	Existence of a causality relationship
Dritsakis (2004)	Multivariate auto regressive (VAR) and Granger causality	GDP, exchange rate, real tourism receipts earnings	Existence of a bidirectional causal relationship between international tourism and economic growth.
Lee & Chang (2008)	Panel cointegration and causality	GDP per capita, real investment, population and technologies growth rates, capital depreciation rate, international tourism expenditure.	Existence of a causality relationship
Massidda & Mattana (2013)	SVECM	GDP, tourism receipts, total trade	Tourism and trade variables react rapidly to real GDP shocks.
Jin (2011)	Impulse response functions	GDP, tourism receipts, exchange rate, capital, labour, openness	Only short run, but not long-run.
Kouchi et al., (2016)	ARDL-UECM	Numbers of pilgrims, Investment in Hajj sector, GDP	Non-existence of long- run Granger causality among the variables
Hüseyni et al., (2017)	Co-integration	GDP, tourism receipts	Existence of a causality relationship
Selimi et al. (2017)	panel regression econometric techniques	income per capita, tourist arrivals, tourism receipts, FDI stock, exports and government expenditures	tourism has a positive and significant impact on economic growth in the Western Balkan countries
Suhel & Bashir (2018)	Granger causality model	number of tourists, tourism investment, government tourism spending, and economic growth	tourism sector affect economic growth

Table 1. Studies showing the relationship between tourism and economic growth

Indeed, from an empirical perspective, Lanza and Pigliaru (2000) were the first to investigate the relationship between tourism and growth in some Islamic and non-Islamic countries. In 2004, Dritsakis (2004) studied the same hypothesis for the item of Greece between 1960 and 2000. By applying cointegration test suggested by Johansen and Granger's causality test the author proves the existence of relation of cointegration, then he applies an error-correction model, the author shows confirmation of a bidirectional causal relationship among international tourism and economic growth.

In addition to these studies, we can find a series of studies during 2010 and 2011 that analyses the same problem from different methodological perspectives. Taking again Turkey as a reference, Gocovali (2010) calculated the contribution of tourism to the economic growth of the country between 1985 and 2005 and their estimation of the elasticity of tourism was 0.53. Arslanturk et al. (2011), who also focused on Turkey, compared the results obtained by applying two different methodologies, because they believed in the need for taking into account the effects of certain factors, such as political or institutional changes, on the causal relationship between tourism and growth. Thus, the authors observed that, when they applied the error-correction model, the results indicated there was no causality between the series of variables.

Following this line of analysis, Massidda and Mattana (2013) analysing the causality between tourism, trade and growth, and also shock transmission mechanisms. With this purpose in mind, they used a structural vector error model for the case of Italy. The findings revealed that tourism and trade variables respond quickly to real GDP shocks, nonetheless that a considerable longer time lapse is required for the real GDP to stabilize next a shock in the other two variables. During 2012 and early 2017, further works have been made for the intention of contributing further evidence to the verification of the TLG hypothesis. Among the studies which confirm the hypothesis, those by Arslanturk and Atan (2012) for Turkey, Tang & Abosedra (2014) for Lebanon and Surugiu and Surugiu (2013) for Romania are particularly worth noticing, Ohlan (2017) for India, Shahzad et al.(2017) for China, France, Germany, Italy, Mexico, Russia, Spain, Turkey, the United Kingdom, and the United States.

Now, we investigate in the short reviews of literary research showing the economic aspect of Hajj that has been given less attention, and there is a pressing need to fill the gap. This section briefly concentrates on studies conducted about economic issues related to Hajj. Turner (1973) examined the influence of Hajj on Saudi Arabia's economic growth. In his research, he points to the essential nature of Hajj with the hardships and difficulties that pilgrims go through. He differentiates between tourism and pilgrimage and announces that it is hard to state that pilgrims seek the pleasure. By adding restraints, he reflected only pilgrims that picked to partake in Hajj voluntarily in his research of the role of Hajj in the economic growth of Saudi Arabia.

Cohen (1979) reflected Hajj along with its necessary rituals for pilgrims as a form of tourism and examined the role of Hajj in the economic growth of Saudi Arabia. Evidently, the question of whether one should reflect religious journeys to be in the same or a similar vein as tourism has been allocated with in research like Robinson (1972), in which visitors of sacred places in India and South Asia were measured as revenue resources for the economic growth of the countries they visited. In fact, Cohen's view was an implicit explanation of Nunez (1977), in which Mecca is presented as a unique tourism destination throughout diverse periods of time and considered Hajj as similar to a tourist journey.

Ascoura (2013) investigated in his paper the interaction between the evolution of pilgrims' numbers, the urban growth and problems arising during the pilgrimage season. He found that the residential areas has expanded outside the current tourism zone, therefore the urban development is being affected by the pilgrims activities.

Kouchi et al. (2016) studies the non-oil-based Gross Domestic Product (GDP) growth of Saudi Arabia as a function of the growing number of pilgrims and the investment growth in the Hajj sector. They apply the Vector Error Correction Model (VECM) to module the dynamics of the possible relationship between economic growth and the Hajj pilgrimage in KSA. The results of the study established the being of only one bidirectional Granger causal relationship between economic growth and the increasing number of Hajj pilgrims in short-term. But, the non-oil GDP of Saudi Arabia rises by 0.84 Saudi Arabian Riyal ended the long-term in reply to a one-digit rise in the number of pilgrims. Manzo (2018) found that the total contribution of Travel & Tourism to employment² was 1,116,500 jobs in 2017 (9.1% of total employment). This is forecast to raise by 0.6% in 2018 to 1,122,500 jobs (8.9% of total employment). Alotaibi (2018) investigates strategic planning in the hotel industry in the two holy cities of Makkah and Madinah concentrating in the provision of hotel accommodation for pilgrims during umrah and hajj. She confirms some of the general perceptions of the industry identified beforehand, and detect similarities and differences in marketing and strategic practices.

² Including wider effects from investment, the supply chain and induced income impacts.

METHODOLOGY

We present in this section the recent methodology proposed by Chuang et al. (2009) to identify heterogeneity of Granger causality across diverse conditional quantiles. They suggested the Granger non-causality test in quantile range $[a,b] \subset (0,1)$. Remind that Lee and Yang (2006) considered only non-causality in a particular. The null hypothesis of this test is that a random variable in our study numbers of pilgrims (Number of pilgrims) does not Granger-cause another random variable non-oil-based Gross Domestic Product (*GDPNP*) in the $\tau - th$ ($\tau \in [a,b], 0 \prec a, b \prec 1$) quantile. So, the null hypothesis can be written by Chuang et al. (2009) as:

$$H_0^{Q^2}: Q_{GDPNP_t}\left(\tau/I_{t-1}^{GDPNP}, I_{t-1}^{Numbers of pilgrims}\right) = Q_{DPNP_t}\left(\tau/I_{t-1}^{GDPNP}\right)$$
(1)

We note $Q_{GDPNP_{t}}(\tau/I_{t-1})$ the $\tau - th$ conditional quantile function of GDPNP given the information set $I_{t-1} = I_{t-1}^{GDPNP} \cup I_{t-1}^{\text{Numbers of pilgrims}}$ and I_{t-1}^{GDPNP} and $I_{t-1}^{\text{Numbers of pilgrims}}$ are information setups to time t-1 generated by $GDPNP_{t-1}$ and Number of pilgrims_{t-1} respectively. Knowing that $Q_{GDPNP_{t}}(\tau/I_{t-1})$ is the linear conditional quantile function is written as:

$$Q_{GDPNP_{t}}\left(\tau/I_{t-1}\right) = \alpha\left(\tau\right) + \sum_{i=1}^{p} \beta_{i}\left(\tau\right) GDPNP_{t-i} + \sum_{j=1}^{p} \gamma_{j}\left(\tau\right) \text{Numbers of pilgrims}_{t-j} \quad \tau \in [a,b] \quad (0 \prec a, b \prec 1) \quad (2)$$

In that case the null hypothesis of (1) can be written as follows:

$$H_0: \gamma(\tau) = 0 \quad \tau \in [a,b] \quad (0 \prec a, b \prec 1)$$
(3)

where $\gamma(\tau) = [\gamma_1(\tau), ..., \gamma_q(\tau)]'$. This null hypothesis can be tested by a sup-Wald test. The Wald test statistic can be written as follows for a given fixed τ :

$$W_{T}(\tau) = T\hat{\gamma}(\tau)' \left(\Pi\hat{\Omega}(\tau)\Pi'\right)^{-1}\hat{\gamma}(\tau)/[\tau(1-\tau)]$$

wehre $\Omega(\tau) = D(\tau)^{-1}M_{XX}D(\tau)^{-1}$, $\hat{\Omega}(\tau)$ is the estimation of $\Omega(\tau)$,

 $X_{t-1} = \left[1, GDPNP_{t-1}, \dots, GDPNP_{t-p}, \text{Numbers of pilgrims}_{t-1}, \dots, \text{Numbers of pilgrims}_{t-q}\right]',$ $M_{XX} = T \to \infty \lim T^{-1} \sum_{t=1}^{T} X_{t-1} X_{t-1}' \text{ and }$

$$D(\tau) = T \to \infty \lim T^{-1} \sum_{t=1}^{T} f_{t-1}(F^{-1}(\tau)) X_{t-1} X'_{t-1}$$
. Such us the F_{t-1} and f_{t-1} are the

distribution and density function of G_t conditional on I_{t-1} and T is the sample size.

In the practise, the sup-Wald test statistic can be calculated by partitioning [a,b] with equal step as follow referring to Chuang et al. (2009):

$$\sup W_T = \sup_{i=1,\dots,N} W_T(\tau_i), \ a \le \tau_1 \prec \dots \prec \tau_N \le b$$

Where the W_T is the Wald statistic, the τ_i is i-th particular quantile, In this empirical work we consider different quantile intervals [a,b]. The critical values for the asymptotic distribution of the sup-Wald test can be calculated by simulating the Brownian motion (Andrews (1993) and De Long (1981)). The result of the sup-Wald test on various [a,b] may be used to identify the quantile range from which causality arises.

Koenker and Machado (1999) proved that the weak limit is the sum of squares of q independent Bessel processes. This immediately leads to the following result:

$$\sup_{\tau \in [a,b[} W_T \xrightarrow{D} \sup_{\tau \in [a,b[} \left\| \frac{\mathbf{B}_q(\tau)}{\sqrt{\tau(1-\tau)}} \right\|^2$$

where $\mathbf{B}_{q}(\tau)$ is a vector of q-independent Bessel processes.

DATA ANALYSIS AND EMPIRICAL RESULTS Data description

This study uses annual data for the specified variables for Saudi Arabia from 1964 till 2017 to examine the impact of numbers of pilgrims on non-petroleum GDP. The data was collected from the World Bank World Development Indicators (World Bank, 2017); the World Investment Report (UNCTAD, 2017); and the IMF.

	GDP-NP	Numbers of pilgrims	Trade
Mean	221499.345	1058249.	77.29591
Average	158892.194	995611.0	75.08284
Standard deviation	242780.347	390287.0	12.57558
Skewness	1.795	0.307532	0.769983
Kurtosis	5.827	2.158656	4.094335
Minimum	8057.920	374784.0	56.08838
Maximum	1071535.080	1828195.	120.6194
Jarque-Bera	42.65971***	2.217582	7.286839**
Probability	0.000000	0.329958	0.026163
Observation	49	49	49

Table 2. Summary statistics

Notes: Jarque-Bera denotes Jarque and Bera's (1982) normality test. BDS (m, l) is the statistics for the linearity test of Brock et al. (1996), where m is the embedding dimension and l is the distance parameter. σ is the standard error in the series. The numbers in the parentheses are p-values for the corresponding test statistics. ** denotes significance at the 5% level, ***denotes significance at the 1% level.

But the data for numbers of pilgrims was from annual reports of the Central Department of Statistics of Ministry of Economy and Planning of Saudi Arabia. Data reported in current price at point of collection have been converted into Year 2000 constant price by GDP deflator and scaled using natural logarithm. Table 2 summarizes the descriptive statistics for three variables: GDP-NP, Numbers of pilgrims and trade. All variables are skewed to the right, with excess kurtosis. The p-values for the normality test statistics confirm the non-normality distributions for both GDP-NP and trade.

In table 3, we test the stationarity of the variables by conducting the Augmented Dickey-Fuller (ADF), Phillips-Perron (PP) and Kwiatkowski–Phillips–Schmidt–Shin (KPSS) unit root tests. The results obtained offer strong evidence that the null hypothesis of the unit root is not rejected, so all our variables are integrated of order one (i.e., I(1)). Nevertheless, all the variables are found to be stationary in the first difference and not in level. Since all variables in our study are integrated of order one only inflation and terms of trade, according to, at least, one of the tests employed. Clearly, the ADF, PP and KPSS tests reject the null hypothesis for, respectively, GDPNP (10% level), Trade (5% level) and Number of pilgrims (1% level). Thus, the three variables are regarded as stationary series.

	U		
	ADF	PP	KPSS
GDPNP	-2.784295*	-2.466323	0.286455
Numbers of pilgrims	-1.703928	-1.676084	0.813084***
Trade	-1.98389	-2.967593**	0.170558
Critical values			
1% level	-3.577723	-3.577723	0.739000
5% level	-2.925169	-2.925169	0.463000
10% level	-2.600656	-2.600656	0.347000

Table 3. Unit root test results

Note: * denotes significance at the 10% level, *** denotes significance at the 5% level, **** denotes significance at the 1% level.

Empirical Result

We started by testing the causal relationship using Granger causality test based on the following linear equations:

$$GDPNP_{t} = \alpha_{0} + \sum_{i=1}^{p} \alpha_{i}GDPNP_{t-i} + \sum_{j=1}^{q} \gamma_{i}Z_{t-j} + \varepsilon_{GDPNP,t}$$
(8)
$$Z_{t} = \beta_{0} + \sum_{i=1}^{p} \beta_{i}Z_{t-i} + \sum_{j=1}^{q} \varphi_{i}GDPNP_{t-j} + \varepsilon_{Z,t}$$
(9)

where $Z_t = \text{Number of pilgrims}_t$ or $Trade_t$, GDPNP is the Gross Domestic Products Non Petroleum. We conduct a linear Granger causality test using VAR (1), the lag truncation orders is selected by using Akaike information criterion. The null hypothesis of the test is follow: $H_0^{m^2}: \varphi_1 = ... = \varphi_q = 0$ or $H_0^{m^1}: \gamma_1 = ... = \gamma_q = 0$, when the null hypothesis is rejected we indicate respectively that, Z_t is said to Granger cause *GDPNP*_t or *GDPNP*_t is said to Granger cause Z_t .

The result reported in Table 4 proved that the null hypothesis of non-causality from numbers of pilgrims to GDPNP is rejected at the 5 % significance level. However, in terms of trade, the same null hypothesis cannot be rejected even at the 10% significance level. In the opposite direction, the null hypothesis of non-causality from GDPNP to numbers of pilgrims or to trade cannot be rejected at 10% significance level. Also, the null hypothesis of non-causality from trade to GDPNP cannot be rejected at 10% significance level. We recall that the linear Granger causality test can miss the important nonlinear causal relationship following to the sensitive of this test to non-normal or nonlinear series. Next, we test the presence of nonlinearity in the relationship between GDPNP and the two predictors, number of pilgrims and trade, by applying the Brock at al. (1996) test on residuals of an AR(1) model for GDPNP and the GDPNP equation in the VAR(1) model including number of pilgrims and trade. As illustrated in Table 5, the BDS test overwhelmingly rejects the null of non-*iid* structure for all of the embedding dimensions concerned, and hence, implies an omitted nonlinear structure.

•	0	
Null hypothesis	Statistic	p-value
$GDPNP \rightarrow Trade$	0.924046	0.6300
$Trade \rightarrow GDPNP$	1.004667	0.6051
$GDPNP \rightarrow$ Numbers of pilgrims	1.132492	0.5677
Numbers of pilgrims $\rightarrow GDPNP$	8.232944**	0.0163

Table 4. Linear Granger causality

**Significant at the 5% significance level.

Fable 5.	Brock et al.	(1996)	BDS test
----------	--------------	--------	----------

	Dimension						
	2	3	4	5	6		
AR(1):GDPNP	0.0000	0.0000	0.0000	0.0000	0.0000		
VAR(1):[GDPNP, numbers of pilgrims]	0.0100	0.0000	0.0000	0.0000	0.0000		
VAR(1): [GDPNP, trade]	0.0200	0.0000	0.0000	0.0000	0.0000		

Note: Entries correspond to the P-value of BDS test statistics applying to the residuals recovered from AR(1) model of GDPNP and the residuals from the GDPNP equation of the VAR(1) model with numbers of pilgrims or trade.

We also apply the Bai and Perron tests (2003) to AR(1) model for GDPNP and the GDPNP equation in the VAR(1) model including number of pilgrims and trade. This test is to detect a multiple structural breaks. The results presented in table 6 show the detection of four breaks for AR(1) model of GDPNP and seven breaks for VAR(1) model with number of pilgrims and trade. Given the evidence of structural breaks-points and nonlinear interdependencies, we next apply the quantile Granger non-causality test developed by Chuang et al. (2009), to deal with the misspecification of our linear model.

Ta	ıbl	le	6.	Bai	and	Perron	s	(2003)	test	of	mul	tip	le	stru	ctural	brea	ks
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Models		Break	dates	
AR(1):GDPNP	1984	1975	1992	2000
VAR(1):[GDPNP, numbers of pilgrims]	2001	2010		
VAR(1): [GDPNP, trade]	1979	1994	2010	

Note: Break dates are based on the Bai Perron (2003) test of multiple structural breaks applied to the AR(1) and VAR(1).

Then, first, we study the causal relationship between Numbers of pilgrims and GDP-NP, by testing the Granger causality in quantiles. Resembling the test for linear causality, the quantile causality test is founded on the resulting conditional quantile functions:

$$Q_{GDPNP_{t}}(\tau/I_{t-1}) = \alpha_{0}(\tau) + \sum_{i=1}^{q} \alpha_{i}(\tau) GDPNP_{t-i} + \sum_{j=1}^{q} \gamma_{j}(\tau) \text{ Numbers of pilgrims}_{t-j}$$
(10)

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$$Q_{\text{Numbers of pilgrims}_{t}}(\tau/I_{t-1}) = \beta_{0}(\tau) + \sum_{i=1}^{q} \beta_{i}(\tau) \text{Numbers of pilgrims}_{t-i} + \sum_{j=1}^{q} \gamma_{j}(\tau) \text{GDPNP}_{t-j}$$
(11)

where $\tau \in [a,b]$ ($0 \prec a \prec b \prec 1$). If the null hypothesis $H_0^{Q_1}: \gamma_1(\tau) = ... = \gamma_q(\tau) = 0$ ($\tau \in [a,b]$) is rejected, {Numbers of pilgrims_t} is said to Granger-cause {GDPNP_t} in quantile interval [a, b]. If the null hypothesis $H_0^{Q_2}: \varphi_1(\tau) = ... = \varphi_q(\tau) = 0$ ($\tau \in [a,b]$) is rejected, {GDPNP_t} is said to Granger-cause {Numbers of pilgrims_t} in quantile interval [a, b]. Similar to Chuang et al. (2009), the same lag order q for both GDPNP_t and Numbers of pilgrims_t is used. The lag order q is selected when the sup-Wald test is used. Let's say, if the null hypothesis $\gamma_q = 0$ for $\tau \in [a,b]$ is not rejected under the lag-q model, however the null hypothesis $\gamma_q \neq 0$ for $\tau \in [a,b]$ is rejected for the lag-(q - 1) model, at that time we set the desired lag order q* = q-1.

Additionally, the null hypothesis of H_0^{Q1} and H_0^{Q2} can be tested by the use of the sup-Wald test, as mentioned in second section.

In second time, we replace the Numbers of pilgrims by trade to test the relationship between trade and non-oil-based gross domestic product.

Quantile	Numbers of pil	grims / GDPNP	GDPNP / Num	bers of pilgrims
interval	Lag order	Statistic	Lag order	Statistic
[0.05,0.95]	2	15.68**	1	4.68
[0.05,0.5]	2	2.86	1	4.68
[0.5,0.95]	3	5.92*	2	3.24
[0.05,0.2]	1	3.56	2	0.86
[0.2,0.4]	1	3.74	1	4.68
[0.4,0.6]	1	5.72*	1	3.53
[0.6,0.8]	3	25.49***	1	2.56
[0.8,0.95]	2	26.68***	1	3.18

Table 7. Quantile causality test: Numbers of pilgrims and GDPNP

Note: *Significant at 10% significance level. **Significant at 5% significance level. *** Significant at 1% significance level.

Tables 7 summarizes the quantile causality test results for the causal relationship between the non-oil-based Gross Domestic Product $(GDPNP_t)$ and Numbers of pilgrims (Numbers of pilgrims_t).

First, for causality from the Numbers of pilgrims to GDPNP, the quantile causality test for the quantile interval [0.05, 0.95] is significant at the 5% significance level. The following test results in the sub-intervals further identify the quantile interval from which the causality arises. In particular, the quantile causality test is not significant for quantile intervals [0.05, 0.5] and [0.05, 0.2], but significant for quantile intervals [0.5, 0.6] at the 5% significance level. In particular, it is significant for higher quantile intervals [0.6, 0.8] and [0.8, 0.95] at 1% level.

It is generally believed that varying conditional quantiles of GDPNP reflects different prices situation; for example, high, medium, and low levels of quantiles correspond to expansionary, medium, and recessionary economic situation, respectively.

This is an important piece of information for political economics in Saudi Arabia. Indeed, the results imply that the numbers of pilgrims Granger-causes growth in a recessionary economic situation rather than an expansionary economic situation.

In opposite, in an expansionary economic situation, local pilgrims become pessimistic to make more expenses but the foreign pilgrims are neutral because they are forced to buy gifts for families and therefore spend.

These results are consistent with Kouchi et al. (2016). In the opposite direction, that is, from the non-oil-based Gross Domestic Product (GDPNP_t) to (Numbers of pilgrims_t), the quantile causal relationships are non-significant for all quantile intervals, which is consistent with Balcilar et al. (2016) results.

Quantile	Quantile Trade /		GDPNP / Trade		
interval	Lag order	Statistic	Lag order	Statistic	
[0.05,0.95]	2	16.78**	1	4.28	
[0.05,0.5]	3	15.84**	1	4.28	
[0.5,0.95]	3	5.96*	2	3.34	
[0.05,0.2]	1	3.946	2	0.96	
[0.2,0.4]	1	5.84*	1	4.58	
[0.4,0.6]	1	5.83*	1	3.53	
[0.6,0.8]	3	16.39**	1	2.42	
[0.8,0.95]	2	17.53**	1	3.15	

Table 8. Quantile causality test: Trade and GDPNP

Note: *Significant at 10% significance level. **Significant at 5% significance level. *** Significant at 1% significance level

Tables 8 summarizes the quantile causality test results for the causal relationship between the non-oil-based Gross Domestic Produc ($GDPNP_t$) and Trade (Trade_t).

First, for causality from the $Trade_t$ to GDPNP, the quantile causality test for the quantile intervals [0.05, 0.95] and [0.05, 0.5] and are significant at the 5% significance level. In particular, the quantile causality test is not significant for quantile interval [0.05, 0.2], but significant for quantile intervals [0.5, 0.95] and [0.4, 0.6] at the 5% significance level.

In particular, it is significant for higher quantile intervals [0.6, 0.8] and [0.8, 0.95] at 5% level. It is generally believed that varying conditional quantiles of GDPNP reflects different prices situation; for example, high, medium, and low levels of quantiles correspond to expansionary, medium, and recessionary economic situation, respectively. Indeed, that trade Granger causes growth rate in an extreme boom economic situation. In this state, agents may become loss aversion and herding behavior. In the low quantile levels of the level of trade, when agents are pessimistic, economic growth decrease.

CONCLUSIONS

In this study, we revise the predictability of religious tourism and trade for GDPNP using the causality-in-quantiles test of Chuang et al. (2009). Results show that the empirical evidence approves the presence of nonlinearity and regime changes

relationship between trade or numbers of pilgrims and GDPNP. Next, we examine these causal relationships by conducting a quantile non-causality test (Chuang et al. 2009).

This test shows the existence of causal relationship from both the number of pilgrims to GDPNP and trade to GDPNP. Our study clearly shows that Saudi Arabia can enhance their economic growth and prospects by diversifying their economic activities through investment in the tourism industry principally in religious tourism, by moving further and further away from its traditional source of economic growth such as oil.

These findings suggest that Saudi Arabia should continue the efforts of maintaining a good level of investments towards the religious tourism industry and perhaps putting in place all the necessary strategies and financial resources and likewise to improve the performance of this industry. Therefore, Saudi Arabia needs to increase the number of their tourist arrivals (pilgrims).

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TOURISM AS A VEHICLE FOR LOCAL ECONOMIC DEVELOPMENT IN SMALL TOWNS? WHEN THINGS GO WRONG: THE CASE OF ALIWAL NORTH, SOUTH AFRICA

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Abstract: Post-apartheid local economic development (LED) issues have been of central concern in South African economic planning. The aim of this investigation was to examine the challenges of tourism-led LED in Aliwal North, a small town in South Africa. It shows that despite the many tourism products that could potentially be deployed as a development driver for LED in this town and its hinterland, a range of challenges have frustrated such ambitions. Challenges involve poor management of key tourism products, a lack of targeted and coordinated marketing activities of the destination and a lack of a coordinated stakeholder relationship in the broader destination region, as well as limited management capacity and funding.

Key words: South Africa, Eastern Cape, Aliwal North, local economic development, tourism

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INTRODUCTION

In a recent book focused on small town tourism development in South Africa, Donaldson (2018:7) makes the following observation: "Tourism-based development is a theme equally important in the developing world as in the developed world...while...metropolitan areas being positioned to become (or remain) globally competitive, there are many towns which depending on their location relative to the metropolitan region are struggling for survival with crippled service delivery and a lack of competent urban management, whereas others have been transformed into prosperous local post-productivist (agriculture-oriented) economies functioning as vibrant tourist

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destinations". The deployment of tourism as a development driver has taken place for good reason. Tourism has become one of the fastest growing and largest economic sectors globally (Sharpley & Harrison, 2019). It has furthermore been associated with the creation of jobs and economic revitalisation of localities facing stagnation (Binns & Nel, 2002; Meyer & Meyer, 2015; Rogerson, 2019a). A significant number of destinations worldwide, including South Africa, have realised tourism's potential as a driver of socioeconomic progress (Brida & Pulina, 2010), which has been recognised in a range of policy documents (Republic of South Africa, 2010, 2017). Small towns in South Africa have aimed to mimic these strategies and have faced similar challenges as highlighted by Donaldson (2018). Nevertheless, many small town (potential) destinations have invested in tourism with the hope of securing investment from other sources (Milne & Ateljevic, 2001; Rogerson, 2019b; Rogerson & Rogerson, 2019). The question arises as to why tourism is then not prioritised or not contributing to economic development in some small towns with tourism potential. The aim of this investigation was to examine these challenges facing the tourism and local economic development nexus in Aliwal North – a remote town in South Africa's Eastern Cape Province (Figure 1).

We explore how tourism could be (but is not, owing a number of factors we highlight) utilised to drive LED in a small town with tourism potential. Following a brief introduction to the study area and the methodology employed in the investigation, a number of sections of review and analysis follow. A broad context in current literature is presented. Thereafter, the policy context for the South African deployment of tourism as a local economic development driver is considered, after which the bulk of the paper focuses on the research findings. In the final section conclusions are drawn.



Figure 1. The location of Aliwal North, Eastern Cape Province, South Africa

From a methodological point of view, the investigation is informed by both primary and secondary data. The primary data was collected from a number of information rich role-players. The interviewees included personnel from the LED units within the local (Walter Sisulu) and district (Joe Gqabi) municipalities of Aliwal North.Other interview participants included representatives from the following organisations: the Joe Gqabi Economic Development Agency (JOGEDA), the Eastern Cape Parks and Tourism Agency (ECPTA), former chairman of the Community Tourism Organisation and members of the Maletswai Business Forum. Secondary data was collected from the following data sources: the Integrated Development Plans of both Walter Sisulu Local and Joe Gqabi District Municipalities; other documents relating to development in Aliwal North; and, planning documents of the Eastern Cape and Parks Agency, Eastern Cape Provincial Department of Economic Development, Environmental Affairs and Tourism and the Joe Gqabi Economic Development Agency. The local tourism marketing brochures were analysed for the purpose of investigating the media representation of Aliwal North as a tourism destination. The key research question was whether or not tourism has become a key economic driver for this town and its hinterland.

NOTES ON THE RELATIONSHIP BETWEEN LED AND TOURISM

There is no universal definition of LED (Wilson, 1995; Nel, 1999; Rogerson, 2011, 2014; Hristova & Tast, 2015; Rogerson & Nel, 2016) – it is described in different ways, but common characteristics do exist. Zaaijer & Sara (1993:129) define LED as a way in which local stakeholders and government come together to plan, combine resources and include other suitable partners (such as the private sector) with an aim to increase economic activity, which would in turn result in the creation of employment in a locality. Similarly, Hristova & Tast (2015:385) argued that "Local Economic Development [is] a process in which the local authorities cooperate with the public sector, business community, and NGO's, in order to create a more appropriate environment for economic development and for reducing unemployment. Its objectives are to stimulate investments that will promote sustained high growth in local communities". Rogerson (2014:204) presents LED as economic planning specific to a locality with the purpose of protecting itself from the global and national environments while at the same time maximising opportunities provided by these environments.

There is a seemingly worldwide consensus on the uniqueness of Africa's policy interventions relating to development and LED (Reddy & Wallis, 2012). Policies developed for other parts of the world are believed to yield different results in Africa, and even policies developed for the continent fail to take into consideration the diversity within the continent and end up failing (Reddy & Wallis, 2012). Rodriguez-Pose & Tijmstra (2007) concur with these findings and suggest that LED success in Africa is elusive, with South Africa hailed as an anomaly because of some degree of success being achieved in LED (Nel, 1999; Rogerson & Nel, 2016; Rogerson, 2019b).

The fall of apartheid brought a turn of events regarding LED planning in South Africa (Rogerson, 2014). LED was made mandatory and spread broadly from big metropolitan areas to include smaller cities and small towns (Rogerson & Nel, 2016). A plethora of policy legislation pertaining to LED was developed and resources committed for the implementation of LED programmes (Rogerson, 2014). Despite good intentions to implement equal development, however, it further exacerbated unequal development between urban and rural areas. This was largely because it was implemented on an already uneven terrain inherited from apartheid, and resulted in urban areas leading in development, while small towns battled to catch up (Rogerson, 2014; Rogerson & Nel, 2016).

The redefinition of the role of local authorities in South Africa is a mandate that has also been considered internationally, as evidenced by Ruhanen (2013). She notes that the role of local authorities has shifted from that of servicing infrastructure, roads and refuse removal to a broader, more developmental focus that involves development planning and implementation (Ruhanen, 2013). In South Africa, the Local Government Municipal Systems Act introduced the Integrated Development Plan (IDP) in 2000.

The IDP is a master plan, unique to each locality, that captures the development objectives of that locality and actions aimed at reaching those goals (The South African LED Network, 2017). Scholars such as Reddy & Wallis (2012) and Rogerson (2014) deem the release of the 2006 national policy framework document *Stimulating and Developing Sustainable Local Economies* as crucial in the development of LED policies, and suggest that this document demonstrates maturity in policy legislation. The policy encourages localities to enhance economic inclusivity, ensure the best investment of local resources, maximise the exploitation of local opportunities and increase the locality's competitive advantage to address local challenges such as unemployment (Rogerson, 2014).

The decline in South Africa of economic sectors such as manufacturing, mining and agriculture contributed to the increase of unemployment and the stagnation of many local economies. Government and affected stakeholders needed to find new ways to revitalise local economies and create employment. The New Growth Path (NGP) of 2009 was used as a plan to create a high number of jobs in a limited space of time – the mandate was to be achieved by utilising government policy to untangle structural challenges from the past (Rogerson, 2014). The NGP was criticised for being central planning based and failing to bring local authorities to the planning table (Rogerson, 2014). It therefore failed to take into consideration the uniqueness of localities and the different strategies required for implementation. Reddy & Wallis (2012) note that in Africa, national government still acts as the main player in the implementation of LED. They claim that national government initiates economic development through targeted policy interventions and infrastructural developments but conclude that in practice it is the private sector that is responsible for delivering economic growth and poverty alleviation in a locality (Reddy & Wallis, 2012). This practice, noted by Reddy and Wallis, represents a market-led approach to LED and has been the reality of many African countries, including South Africa (Reddy & Wallis, 2012; Rogerson, 2014, 2019a, 2019b).

The implementation of LED in South Africa is traditionally market led (similar to that of the international approach) but is evolving towards a pro-poor approach (Rogerson, 2011). The preoccupation of the market led approach with economic elements such as employment, income and wealth creation and growth at the opportunistic cost of social and environmental factors is unsustainable. The evolution toward a pro-poor approach in South Africa is evidence that a market led approach has not lived up to expectations (Rogerson, 2019b). Rogerson (2011) is not convinced that the pro-poor approach is the best strategy, claiming that many issues around economic growth are not addressed by it. In South Africa, the application of LED subscribes to a project-based approach which Rogerson (2011) aligns to how the Local Economic Development fund was implemented. The roll-out of the fund was based on municipalities applying for funding to implement projects in sectors such as SMME Development, business incubation and tourism development.

The outcome of the implementation of the fund was small unsustainable projects, with most failing once funding came to an end (Rogerson, 2011). In South Africa's metropolitan areas, the trend now follows that of North America and Western Europe, who prioritise sustainable competitiveness and economic growth (Rogerson, 2011).

A number of challenges, varying from local to national scales of analysis, face LED practice. Scholars in the field raise a number of concerns regarding the implementation of LED (Ntonzima & Binza, 2011; Hristova & Tast, 2015; Rogerson & Nel, 2016). Ntonzima & Binza (2011) earmark the lack of integration and cooperation between stakeholders as a huge concern. They say that various government departments, funding institutions and international donors have vested interests in the LED programme, resulting in duplication of efforts and limited impact. They further note that the role of national and provincial government is not absolutely clear and needs to be redefined to ensure efficient and effective implementation of LED. They also raise the issue of scarce accurate data that can be utilised by local authorities to make decisions and develop policy regarding LED. According to Ruhanen (2013) the role of local government in sustainable development should be extended. In trying to achieve their development mandate most local governments in South Africa are faced with challenges such as institutional weakness and limited capacity and skills. Rogerson & Nel (2016) add the following as challenges faced by the distressed municipalities of South Africa: capacity challenges, insufficient personnel in economic development, a weak institutional capacity and inadequate data for use in planning and decision-making.

AN OVERVIEW OF TOURISM IN THE EASTERN CAPE

The Eastern Cape Province, in which Aliwal North is located, is endowed with natural beauty, a rugged wild coastline, sandy beaches, a rich culture, heritage, a diversified climate and a stagnant agricultural economy. To complement the natural man-made attractions and infrastructural developments such resources. as accommodation, conference facilities and places of entertainment also render the province an attractive tourism destination. The province links the tourism renowned destinations of KwaZulu-Natal and the Western Cape (Department of Economic Development and Environmental Affairs, 2009). The case study town lies on the banks of the Orange River and was placed on the tourism map by the thermal spring. Aliwal Spa that produces salty water rich in minerals at a temperature of around 34 degrees (Aliwal North, 2016). The population of Aliwal North is estimated in total at 17 000, with approximately 5 000 households. Unemployment in this small community is very high (22%) (Maletswai Local Municipality, 2013). Agriculture, retail and service industries are the main economic sectors and employers in the town. The town is harshly affected by the El Nino induced droughts experienced across South Africa and therefore the local agricultural industry is not performing well with jobs lost, leaving the community in dire conditions (Maletswai Local Municipality, 2013). Aliwal North has good potential for tourism. It is accessible by road and lies in-between two cities that are accessible by air: East London and Bloemfontein. Aliwal North also acts as a gateway to the province of the Eastern Cape from the northern provinces of South Africa. Situated almost in the middle of the Friendly N6 Route, it serves as a convenient transit stop and overnight destination for travellers to and from the Eastern Cape Coast. It furthermore serves as a major economic hub and meeting and conference destination, especially for the public sector (Maletswai Local Municipality, 2013), and boasts a portfolio of tourism products such accommodation, culture and heritage sites, and eco-tourism and entertainment facilities. These tourism products are supported by an infrastructure of services such as retail stores and banking and transport services (Maletswai Local Municipality, 2013).

Tourism product portfolio of Aliwal North and its hinterland

Rogerson (2002) asserted that tourism in South Africa is led by private sector developers who evolve small town/rural tourism products as a result of a quest for new

leisure destinations and targeted tourism-led LED initiatives (Rogerson, 2002). Aliwal North has grown based on both these initiatives. When the hot springs with "healing potential" were discovered, a resort was developed (Aliwal North, 2016). With growth in the popularity of the resort, other services were developed to support the demand from tourists. When in 1994 the new democratic government came to power, it tasked local government with economic development within their localities. Tourism in Aliwal North was purposefully targeted in policy documents by local and district authorities as one of the means to drive local economic development (Maletswai Local Municipality, 2013; Joe Gqabi District Municipality, 2014). Interviewees pointed out that the decision to utilise tourism as a tool for LED in Aliwal North came as a result of the success of tourism in the town in the past. A participant from the Eastern Cape Parks and Tourism Agency estimated that the number of tourists that previously visited Aliwal North during its peak period as a tourism destination was up to 60 000 people per annum.

This number should be considered within the context of the apartheid government where only white citizens were allowed to travel and enjoy tourism product associated with mainstream tourism (Rogerson, 2015). Other reasons stated for the consideration of tourism-led LED strategies in Aliwal North were the existence of a variety of attractive tourism products and services that enhance the tourism product portfolio and the town's position as the gateway to the Eastern Cape Province from the Northern provinces.

Type of tourism product	Categories
	Hotels
	Guest houses and lodges
Assemmedation facilities	Bed and Breakfasts
Accommodation facilities	Camping facilities
	Caravan facilities
	Farm stays
Meeting venues	Conference centres
Loiguro facilition	Aliwal Spa Resort
Leisure lacinties	Thaba Nkulu Resort
	Museums
	Garden of remembrance
Culture and heritage	Arts and crafts
	Rock paintings
	Anglo Boer War Memorial
Naturo recomver	Buffelspruit Nature Reserve
Nature reserves	Privately owned game farms
	Fishing
Activities	Hiking
Activities	Hunting
	Game drives
Festivals	Sondela Festival
	Catering service
Restaurants	Fast food outlets
	Pubs and grills
	Bars
Nightlife	Night clubs
-	Taverns

Table 1. Tourism Product of Aliwal North

A further motivation mentioned was that tourism as a strategy for LED had worked in other regions and therefore Aliwal North wanted to replicate that success. The significance of a portfolio of tourism products and services that further complement these products was also noted by Binns & Nel (2002) and Rogerson (2002), as well as Brida & Pulina (2010). These investigations recommend that destinations should consider a number of conditions when deciding to utilise tourism as vehicle for LED. Diversity of the products on offer is key as it keeps visitors entertained for longer, leading to longer stays and higher spending (Rogerson, 2002).

The first theme that emerged from this investigation was that there is a varied portfolio of tourism products available in Aliwal North (Table 1). A precondition for tourism development is that a destination should have a variety of tourism products available to attract visitors, and as evident from this table, Aliwal North fulfils this requirement. Study participants asserted that the Aliwal Spa Resort was considered the backbone of the tourism offerings of Aliwal North. It was stated that this resort started to deteriorate about 15 years ago and has never been fully restored even after millions of rands have been invested by donors such as the Department of Tourism. The resort is closed for most of the year, with limited operations resuming during December holidays because of demand from the local community. Activities such as the health spa and training facility that are situated within the Aliwal Spa Resort.

Interviewees pointed to a seeming mismanagement of the strategic tourism product of Aliwal North. Binns & Nel (2002) found that proper management of tourism services in Still Bay, for example, was one of the preconditions for the success of tourism as a LED strategy. Binns & Nel (2002) found that a leader or a champion for tourism (Binns & Nel, 2002) had a key role to play in the management of tourism as a whole in a destination. It became evident from the interviews that there is no leader or champion for tourism in Aliwal North. Instead, the trend is that the private sector focuses on the management of their own businesses, while the community is powerless and does not know what to do.

Furthermore, various government spheres do what they can in implementing policies amid limited financial and management resources. This means that there is no coordination of efforts between stakeholders. A portfolio of different tourism products is not enough on its own. The availability of services to complement the tourism products, the proper management of tourism within a destination and the availability of a tourism leader should also be accompanied by strong, effective and focused marketing strategies to attract tourists to the destination. The next section will discuss the importance of targeted and coordinated marketing activities and its absence in Aliwal North.

POOR MARKETING OF ALIWAL NORTH AS DESTINATION

It emerged strongly from the investigation that attempts to market Aliwal North as a tourism destination are limited and inconsistent. The popular option for tourism promotion by the local municipality, the district municipality and the Eastern Cape Parks and Tourism Agency is the attendance of trade shows such as the Tourism Indaba, Johannesburg Expo and the Cherry Festival in Ficksburg. Representatives from these organisations attend the shows and take along brochures, presentations and other marketing material from various local tourism businesses. When attending some trade shows and when the budgets permit, they invite and pay for small businesses to also attend these shows. Nevertheless, it emerged that there are few tangible benefits of the marketing attempts. As one interviewee remarked: *"All they come back with are bags full of freebies and brochures from other destinations"*. Further evidence came from the marketing materials that were analysed as part of secondary data collection. The regional brochure of the Eastern Cape Highlands (Fig 2) was funded by the Joe Gqabi District Municipality. It is a generic brochure that focuses on the whole Joe Gqabi region. Furthermore, the brochure vaguely and briefly presents Aliwal North as a historical town that is home to the Aliwal Spa Resort. The only picture of the Maletswai locality shown by the brochure is that of the Aliwal Spa Resort. The brochure utilised a picture of a resort that is now non-operational during most parts of the year as a means of attracting tourists. This shows how unfocused the attempt is at place marketing.

Figure 2 showcases the "Friendly N6 Route" brochure. The brochure features the town of Aliwal North as a tourism attraction; in particular, it is described as a caravan heaven and historical town. The interesting thing about the Friendly N6 Route brochure is that it does not even mention the existence of the Aliwal Spa Resort.



Figure 2. Aliwal North featured in the Friendly N6 brochure

A contradiction is noted regarding the two brochures that were analysed. The Eastern Cape Highlands brochure, funded by government, features and presents the Aliwal Spa Resort as a tourist attraction. On the other hand, the Friendly N6 Route brochure, which is the marketing effort by the private sector, does not mention the Aliwal Spa Resort. This contradiction underlines the uncoordinated efforts of the stakeholders within the tourism space of Aliwal North. *"Tourism is not our competency"* noted the local municipality concerning the marketing initiatives and the limited budget allocated for marketing tourism within the municipality. This response is in contrast with an earlier claim by the same participant that suggested that *"[the municipality] will always find a way to harness tourism as it is our cash cow"*. There is a contradiction present in the negation of the responsibility for tourism on the one hand and the willingness to benefit from tourism on the other. The lack of marketing initiatives was confirmed by other survey participants from the Joe Gqabi Development Agency.

There are currently no efforts made by the agency to market Aliwal North as a tourism destination. The respondents claimed that the agency will initiate a marketing programme from its side once the Aliwal Spa Resort is fully developed and operational. A study participant from the Eastern Cape Parks and Tourism Agency (ECPCA) was not

aware of the existing marketing campaigns in the region and in Aliwal North, despite being mandated with the development and marketing of tourism within the Eastern Cape Province. The fragmented nature of the marketing activities can be seen as separate and uncoordinated marketing activities by the private sector businesses on the one hand and the public sector on the other, each pursuing marketing activities geared towards their perceived target markets. The question of the effectiveness of the chosen marketing initiatives needs to be considered further. Insight into who the target market is, the distribution channel for the marketing material and what can be done to enhance these attempts needs to be improved. The Trade Led Tourism Growth Strategy for the Eastern Cape (Eastern Cape Tourism Board, 2010) made a recommendation for the formation of joint marketing partnerships by public and private sector companies who have expertise and knowledge about who the client is and what they are looking for.

In order to implement this recommendation, relationships with key stakeholders would have to be initiated, nurtured and maintained. This leads us to the following issue: the lack of coordinated stakeholder relationships in Aliwal North.

STRAINED STAKEHOLDER RELATIONSHIPS

The mismanagement of tourism in Aliwal North, as well as the uncoordinated marketing efforts discussed, are just some of the issues that point to a lack of sound stakeholder relationships in Aliwal North. This is of concern as various scholars (Zaaier & Sara 1993; Rogerson, 2002) and development organisations (United Nations, ILO, South African LED Networks), in their definition and discussions of local economic development, emphasise the importance of sound stakeholder relationships.

Local municipality functionaries identified the private sector, community tourism organisations and other government departments and entities as their main stakeholders in both tourism development and the implementation of LED. The South African LED Network (2017) advises that specific responsibilities should be given to the various stakeholders identified so that there is a clear path of who needs to do what and what is expected from whom. The roles were allocated as follows: the private sector drives LED, governments create a conducive environment for the implementation of LED through policies, infrastructure provision and by-laws and the communities should identify and exploit local resources for their own benefit. This same role clarification was featured on the 1996 White Paper on the Development and Promotion of Tourism Development in South Africa. The dilemma is whether the clarification of roles is reflected in practice and whether it is in fact influenced by the way they are presented within the White Paper.

Strained stakeholder relations emerged as a challenge to tourism development and the implementation of LED. The private sector business owners as members of the local business forum voiced their distrust in government, specifically the local municipality. The claim was that the local municipality does not know what they are doing and therefore they were putting private businesses at risk through their failure to provide much needed basic resources such as water and electricity, both vital enablers of tourism.

The politicisation of labour also emerged as a critical issue that has led to both job losses and closure of small businesses. Members of the local business forum expressed frustration because of unsuccessful attempts at getting the local municipality to attend discussion forums. The local municipality is perceived as seeing the value of private business only when it wants to 'tick the box' of public participation in its policy development process. The study participants from the local business forum were positive about the mandate of tourism as a driver of LED. They shared that they had previously formed a steering committee with the municipality with the aim of fast-tracking the completion of the Aliwal Spa Resort refurbishments and getting it ready to be opened for business. They spoke of deals that were discussed and planned with companies that provide tourism management services to oversee the operations at Aliwal Spa. It was noted that site visits were conducted at similar resorts that were managed by the destination management company and a contract was ready to be signed when the local municipality, as the owner of the Aliwal Spa Resort, reneged on the deal made. The participants explained that the identified destination management company mentioned had placed a condition on the proposed deal. The condition was that the destination management company did not want to sign a contract with the local municipality because the fluid nature of municipalities results in little guarantee that the same political party would be in power for the duration of the contract. The destination management company did not want to forge new deals and sign new contracts each time there was a change of power at the municipality. A proposal was made that Joe Ggabi Economic Development Agency (JOGEDA) should co-sign the contract and act in lieu of the municipality. The municipality did not agree and reneged on the deal. According to the study participants, the result of these actions by the municipality led to mistrust and frustration.

The collapse of the local tourism association together with small businesses' exit from tourism also emerged as issues in local stakeholder relations. The view is that these stakeholders realised that there is no direct benefit from tourism and did not want to invest their resources haphazardly. A contradictory view was expressed by other study participants from government and the private sector which asserted that the local community was passive and waited for action and orders from government.

Overall, there is therefore a lot of finger pointing among the stakeholders. Trust was broken between stakeholders, resulting in each working on their own, in isolation. The challenges to tourism implementation as a tool for LED are not limited to those discussed above. Capacity and funding for tourism were also identified as major issues.

LIMITED CAPACITY AND FUNDING FOR TOURISM

One of the themes that emerged from this investigation is the limited capacity and funding for tourism development and LED implementation. This comes despite the fact that the tourism sector has been highlighted as a key driver of LED. The National Tourism Sector Strategy of 2011 already identified capacity and funding as constraints for tourism (National Department of Tourism, 2011). During fieldwork conducted in 2017, these concepts were still raised as obstacles for tourism by some. Participants from the local and district municipalities maintained that there was enough human resource capacity to perform LED activities. They raised the issue of limited budgets for travel and implementation as the constraint that made their organisations seem incapacitated.

According to them, this challenge limited the impact derived from the implemented projects. "Often things are done just for compliance (top management), not taking into consideration how effective or efficient they might be. Local government departments are fragmented in their approach and work in silos", was the conclusion. On the other hand, governments' inability to plan for and implement LED emerged as a concern from the interviews conducted with the private sector. Another observation was that the local municipality has no budget set aside for tourism development. The norm was reliance on the district municipality that has a budget of R250 000 for LED implementation for the whole region. The budget includes the implementation of LED activities within other sectors as there is no separate budget for the implementation of tourism development projects. The Joe Gqabi Economic Development Agency, an agency developed and mandated to drive economic development within the district, also does not have

dedicated funds for tourism development and LED implementation and relies on external donors such as the Eastern Cape Development Corporation, the Industrial Development Corporation and the Department of Tourism for funding of specific projects.

These emerging challenges are not unique to this locality as similar results were found by Rogerson & Nel (2016) as well as Lawrence & Rogerson (2019) in their research on planning for local economic development in distressed areas. They found that municipalities face the following challenges in their pursuit of successful LED strategies, capacity constraints for LED planning and implementation, limited human resource capacity within the municipalities, funding shortages, and inadequate data or research to inform targeted LED planning and implementation. Attempts to address these challenges should begin at national policy level. Drawing from national policy, the local authorities can tailor-make their own solutions based on locality strengths and weaknesses. The town of Aliwal North satisfies the precondition of owning a varied number of tourism products together with services that enhance the tourism products, required for a successful tourism destination. Findings from the data collected show that there is a willingness to utilise tourism to drive LED in Aliwal North. It is also evident that a number of constraints negatively impact tourism development and LED implementation.

CONCLUSION

For a destination to be able to attract tourists, a portfolio of tourism products and supporting services needs to be accompanied by appropriate tourism management, aggressive marketing activities, funding for tourism and good stakeholder relationships. The findings of this study positively point to availability of a mix of tourism products to attract visitors to Aliwal North, a host of support services and the advantages of being both the gateway to the Eastern Cape Province from the Northern provinces and the main economic centre of the Joe Gqabi District Municipality. Challenges indicated by the findings of this study include the mismanagement of tourism, limited capacity and funding for tourism, as well as broken stakeholder relationships in Aliwal North.

An investigation of documents such as the Joe Gqabi District Local Economic Development Strategy and the Integrated Development Plans of the Maletswai Local and Joe Gqabi District Municipalities revealed that tourism is featured as a possible LED strategy for Aliwal North. In practice, however, tourism is not a priority and is haphazardly planned. At the local municipality, district municipality and at the Joe Gqabi Economic Development Agency there are no personnel employed solely for promoting and managing tourism. Rather, tourism is managed by the local economic development personnel. Some of these personnel do not have specific qualifications in tourism and/or experience working within the tourism sector. There was scant evidence of specific plans for further tourism development in the reviewed documents from the local municipality, such as plans to develop the local nature reserve through funding from the Department of Environmental Affairs. The claim made by Visser & Hoogendoorn (2012) that the benefits of tourism in South Africa can be traced back to the marketing campaigns of South African Tourism is a clear indication of the significance of marketing within tourism destinations. Hytia & Kola's (2013) research in Eastern Europe also showed how poorly tourism performs in destinations where reliance is placed on tourism products with marketing initiatives ignored.

Findings from the study indicate that Aliwal North as a destination is not receiving optimal marketing. The current marketing initiatives are generic, lack focus and prove that implementation is only done for the sake of implementation. No evidence exists of awareness about the target market or the appropriateness of platforms and tools to reach that target market. Stakeholder relationships are highlighted in the literature as key elements in the implementation of local economic development. Agreement exists on the coming together of the different role players in society who have varied expertise and can create a suitable environment for LED implementation. Evidence from the study showcased broken relationships between local authorities and private business as well as between the community and the local authorities, and a non-existent relationship between the community and private business. The study participants also spoke of a mistrust of the local authorities. Therefore, the situation presented here dictates fragmentation which can be viewed as a constraint to successful tourism development and LED implementation.

Limited capacity for tourism emerged in contrasting views. The study participants from the local and district municipalities claimed capacity for tourism development and LED implementation is adequate. They placed blame on limited budgets for travel and operations. The private sector on the other hand pointed at government as incapable of tourism development and LED implementation. The research conducted by Rogerson and Nel (2016) in distressed municipalities, which include the municipality within which the town of Aliwal North falls, pointed to institutional as well as human resource capacity challenges as great obstacles in these areas. Limited funding for tourism development and LED implementation are also causes for concern. As noted by Rogerson & Nel (2016), most South African localities do not set aside funds for tourism. With such limited dedicated funding, the implementation of LED initiatives will remain a challenge. This was supported by a respondent from the district municipality who argued that the impact of implemented initiatives was sporadic and insignificant due to limited funding. It can be concluded that tourism, as it is currently implemented in the town of Aliwal North, is probably not the best strategy to drive LED within the town. A key tourist attraction is not operational, a budget is not set for further development of tourism, there is no research being conducted to analyse markets and trends for the town, and marketing activities are few and not suitably focused. There is also an implication of a lack of capacity to implement tourism-based LED and limited evidence of successful implementation. In the end this investigation re-affirms Lawrence & Rogerson's (2019:155) observation that any [tourism] development agency[ies] is contingent upon the establishment of partnerships amongst stakeholders, a committed and visionary leadership, an entrepreneurial approach undertaken within the maintenance of the public interest, a clear strategic vision for local development and the appropriate mobilisation and valorisation of local development assets.

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RELATIONS OF INNOVATIVE MANAGEMENT TOOL IN SLOVAK HOTEL FACILITIES

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Abstract: The article deals with the issue of applying management tool by using the Balanced Scorecard in hotel facilities in Slovakia. The main goal of the paper is to emphasize the importance of using the tools of strategic management in our case the method of Balanced Scorecard (BSC) in hotel segment but also in the other segments of business. The basis of the article forms the stated hypotheses focused on using the method of BSC in hotel facilities and verifying statistic influences in using the conception in hotels based on sizes of companies. These hypotheses were subsequently validated by the method of proportion the given data in population and the chi-squared method of independence testing. The hypotheses were formed on basis of literal search which is described in the competent chapter focused on expert texts and the research which has been carried out up to now. According to statistical verification we can state that there exists statistically important relationship between size of hotel facilities and using Balanced Scorecard and we can also state that more than 10% of hotel facilities use the Balanced Scorecard method.

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Key words: Management tool, Tourism, Balanced Scorecard, Financial, Non-financial Indicators

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INTRODUCTION

Business entities must respond to constantly changing situations in the market and be able to adjust professionally to these changes. In connection with the previous statement businesses constantly need competent managers who possess innovative attitudes which will bring new ideas and trends in business. At present business entities are focused not only on finance views, but the possibilities of their growth more and more depend on flexible factors such as readiness to engagement, the ability to learn, innovative force of employees using possibilities of information society. All these factors are closely connected with the ability of constant improving relationships with customers or suppliers. In this context it is very important to focus on the management and measuring the performance of a business (Sasse ,2014; Kotulič et al., 2018).

The Balanced Scorecard represents a complex tool of measuring and managing an enterprise which is based on two basic pillars. The pillars represent financial and nonfinancial indicators (Kerai & Saleh, 2017; Kollberg & Elg, 2011). In our research we examined the Balanced Scorecard in tourism industry. Over the past 50 years, the tourism industry has been characterized by rapid growth, establishing itself as a key pillar in the economy for many countries. On the international scene and in the face of a "new" demand for unique experiences, "new" models of supply have emerged, among which are those that promote tourism as a tool for local development on the premises of sustainability (understood as the generation of lower environmental and socio-cultural impact and with economic benefits to the host communities) (Fuentes-Moraleda et al., 2016). The tourism competitiveness is mainly the result of the quality of tourism products and the level of the country's competitiveness is determined by the interest of the visitor in the offered products (Košíková et al., 2019). Improvment of tourism over the last period, amid mutations in human society is marked progress in other economic branches and beyond (Tatar et al., 2018). Tourism is a practical means for development in developing countries, with sustainable community-based ecotourism as a tool for social, economic, and environmental wellbeing of localities (Atanga, 2019). Tourism is one of the most important sectors of the world economy. The benefits of the tourism industry to the economic development of many countries of the world have been globally acknowledged (Salimon et al., 2019). Most European territories and places actively try to increase its market share in the tourism industry (Voznuka, 2016).

Over 60% of overnights spent in the European Union were realized in hotels and similar establishment (Kátay, 2015). Tourism has been and remains as one of the leading and main profitable sector of global economy, despite, even the global economic crisis in 2008. For rapid growth and development, it is recognized as economic phenomenon of the XX century (Żegleń & Grzywacz, 2016), as it determined the levels of world relations between states and territories, influenced their economic and social development, legislative decision making, development systems of the world, continental and local tourist connections (Koshim et al., 2019). The issue of measuring and evaluating the enterprise performance and efficiency remains an open question, as identification and management of the financial health still represent a prerequisite for improving strategic management decision-making processes (Cabinova & Onuferova, 2019). Many people are looking for sport activities in a field of tourism. The practice of sport and leisure began to transcend the urban area because people are oriented towards the practice of physical exercise in nature, closely related to environmental requirements (Ilies et al., 2018). Each tourist co-creates their experience with other tourists and service providers (Ilies & Ilies, 2018). Tourism helps to raise local awareness of the financial value of natural and cultural sites.

THEORETICAL BACKGROUND

The Balanced Scorecard is a system of measuring the performance of an enterprise in which it is necessary to take into consideration the most important aspects of business. These aspects are expressed in vision of business, its mission and strategy. Although the BSC has gained popularity among managers as a performance measurement tool, little empirical evidence exists to substantiate claims that the BSC promotes superior financial performance when compared to a traditional performance measurement system (Davis & Albright, 2004). The vision expresses the basic orientation and the strategy shows the way to its realization. After having stated the mission of a business, its vision and strategy it is necessary to define the targets, metrics and strategic actions which are assigned by a concrete point of view - so-called perspectives. The assignment to particular perspectives has to prevent from one-sided thinking in deducing and following the targets. Thinking within the boundaries of perspectives and their connection in this way documents the main coherences important for realization of strategies (Vysušil, 2004). Critical factors of a success state what is important for success and special measurements serve to measure whether it is dome as it is to be done (Niven, 2002). Some phenomena affecting the overall efficiency cannot be expressed by financial indicators. They cannot be recorded into accounting standards, as being unable of reflecting non-financial aspects of company reality.

These are expressed in details of company goals and company strategies (Gallo & Mihalčová, 2016). The main mission of the BSC is that an enterprise is not managed as it used to be managed in the past, but by the strategies directed to the future so that its long-term existence is ensured. Balanced Scorecard is one of five management tools that most widely used in the business world. Recently, BSC research has developed significantly, not just considering it as performance measurement tool but also as a strategic management system (Handoko & Wehartaty, 2017; Hladchenko, 2015).

On basis of their expert observation, the authors of the BSC Norton and Kaplan (1996) offered four perspectives which make the basis of the given methodology. Characteristics of the four basic perspectives represent the following activities: financial perspective look at an enterprise from the point of view of its owners. The goals related to growth, cutting the cost, investments, and sustaining in the market and so on are set up. The goals are related to traditional financial indicators. Customers' perspective looks at an enterprise from the point of view of customers. Increasing the share in the market, satisfaction of customers, gaining new customers, increasing profit per customer or return of customer are frequent goals. The perspective of internal processes follows the goals related to processes that must be improved to reach the goals set up in financial and customers' perspectives. Emphasis can be put on, for example, on the goals in the domain of value chain, innovative and operative processes. The perspective of learning and growth is focused on the goals related to the infrastructure and education of an enterprise. The authors of the conception do not recommend following more than twenty indicators in an enterprise. Doing so, an enterprise avoids following useless indicators and can concentrate its capacities on more important activities (Kaplan & Norton, 2007). Figure 1 shows the perspectives of the BSC.

The Balanced Scorecard often becomes a subject of research related to its usage and verifying as a method served for measuring management and performance of a business. Every year Bain&Company do research in the field of strategic management to which the BSC belong. The mentioned conception regularly ranks among the first ten most used manager tools. The research Bain& Company in 2017 was done on the pattern of 1200 businesses all over the world brought the result that as far as 52% businesses use the conception. It can be ranked up to half out of 10 most used tools out of all management tools. A research has also been done in Slovakia to present the use of the BSC. Ms. Karabašová was the first one to do the research. She solved the problem in her PhD thesis in 2010. The research was done on the pattern of 110 businesses and showed that only 6% of addressed businesses used the BSC.

It means a big difference if to compare the unfavourable result with other countries. (Lesáková et al., 2017) also dealt with the problem. Their research came with new results. The newer research did not bring about remarkable changes and it proved that only 9.15% of businesses in Slovakia use the conception BSC.

In comparison with developed countries we fall behind significantly in using the BSC because in Europe the method is used by 53% of businesses and they are mainly located in western European states (Bain & Company, 2017).



Figure 1. Prespectives of Balanced Scorecard method (Source: authors' processing according to Kaplan, Norton, 2005)

MATERIALS AND METHODS

The article is focused on presenting the research of using non-financial indicators in hotel facilities in Slovakia and to point out the link in using BSC. We combined using non-financial indicators with the BSC because it is the right method that is characterised as the conception which uses financial but also a great deal of non-financial indicators.

We worked up to the main goal of the research with the help of partial goals that is using the method BSC in hotel facilities and demonstrating statistically important relationship among size of hotels and using the BSC. We choose the method of a questionnaire research as a suitable method of gaining data. The questionnaire was formed online by the application Google form. The questions in the questionnaire were a combination of questions with the possibility of choosing a concrete answer and the questions formed according to Likert's scale. We consider Likert's scale to be an appropriate tool by which we want to find out importance of particular factors related to our research. The possibilities of the choice were created by a scale consisting of five points and the respondent could choose the most suitable point that corresponds with an appropriate question. The questionnaire was divided into two parts - an identification part and a research part. The first part was focused on the identification of questions concerning hotel facilities. Those questions concerned designating the size of a hotel facility, the size of the hotel and the classification of the hotel characterized by the assigned stars. The second part concerned the research itself and all the questions were divided into three parts according to specific spheres.

The questions in the first sphere were focused on the strategy of a business, the questions in the second sphere were aimed on measuring the performance of a business and the questions aimed right on the BSC formed the third group. The very questions in the third group focused on the BSC were the most extensive and we tried to find the answers to the questions how the BSC was used, what the reasons of not using the method were, what preferences of particular indicators were which contain perspectives of the BSC. The first goal which we wanted to reach was the analysis of the real state focused on using the BSC in hotel facilities in Slovakia. The hotel facilities were categorized on the basis of methodology and classification of businesses OKEČ and SK NACE. OKEČ is a sectoral classification of economic activities and SK NACE is a standard classification of economic activities used in the EU. We gained the database of the hotel facilities which we used in our research from the Slovak Business Agency.

The questionnaire was sent to 596 hotel facilities in Slovakia. We received back 63 fulfilled questionnaires, so the return of the questionnaires made 9.46%. We can consider the return on the level of 10% for the needs of a questionnaire research as standard and the results to be relevant. The hypothesis that resulted from the main goal of the article made up an important part of our research.

H1: We suppose that more than 10% of hotel facilities use the BSC as a tool of managing a business.

H2: We suppose that there exists statistically important relationship between size of of the tourism-related enterprise and using the BSC.

Evaluation of all the gained data was done by the research method such as descriptive statistics, contingency tables and others using the analysis, comparison, synthesis, selection, induction and deduction. The questionnaire was formed on the bases of set hypotheses which were statistically verified. We used the method of proportion of a given phenomenon in population and chí-squared independence testing to verify the hypotheses. We verified the hypotheses by a chí-squared testing in the statistics programme Statistica by the software company StatSoft, version 5, 5th edition.

RESULTS AND DISCUSSIONS

The research which had been carried out was focused on the importance of nonfinancial indicators in management of hotel facilities in Slovakia. The BSC points out the importance of non-financial indicators. That is why we selected as the first goal finding out how the BSC is used in hotel facilities in Slovakia. The questionnaire contained a concrete question how this conception was used. To verify the hypothesis focused on using the conception we used the statistics method of finding out the proportion of a given phenomenon in population. Table 2 shows the results.

Table 1. Calculation of the selected indicators (Data source: Marcheová et al, 2011)

Method of proportion of a given phenomenon in population	Pearson´s chí-squared independence test
$p = \hat{p} \pm z_{\alpha} * \sqrt{\frac{\hat{p} * \hat{q}}{n}}$	$\chi^2 = \sum \frac{(f_e - f_t)^2}{f_t}$
Proportion of a given phenomenon in a selected sample	f_e – empiric frequency of the research phenomenon
\hat{q} - Proportion of an opposite phenomenon	f_t – theoretical frequence of the research phenomenon
in a selected sample n - Sampling size	χ^2 – gained value, that is chí-square, which will
Za – confidence level	be compared with a table value according to the selected probability of a mistake

Table 2. The result of testing of the first hypothesis by using the proportion of a given phenomenon in population

Method of proportion of a given phenomenon in population			
$\hat{p} = 0.2540$			
$\hat{q} = 0.7460$			
	0,2540 * 0,7460		
$p = 0.2540 \pm 1.96 *$	63		
$p = 0.2540 \mp 0.05484$			
$0,1465 \le p \le 0,3614$			

Figure 2 shows comparison between expected and real results.

By verifying the hypothesis by the method of proportion of a given phenomenon in population we got the values 14.65% - 36.14%. We got the given values by the calculation where we put the following variables. The first variable contained the percentage of the hotel facilities that use the BSC. The second variable was set up on the basis of the principle of opposite phenomenon that is putting the percentage of hotel facilities that do not use the BSC. To get a complete calculation we also put the value of the total number of respondents who were involved in the questionnaire research. To get a relevant result we put the stated measure of confidence. In our case we got the value of 95% which is evaluated by the quotient 1.96. Verifying the hypothesis by the mentioned method, we got the values over supposed 10%. It means that more than 10% of hotel facilities in Slovakia use the BSC. On the basis of gained and verified date we can state that our hypothesis was proved, we **accept it.**

The second hypothesis was stated that there exists dependence between size of a hotel facility and using the BSC. We have processed the data from the respondents who use the BSC and tried to verify the hypothesis by higher statistics. The method of Pearson's chí-squared independence testing was used to find out coherence between set variables. This method helped us calculate testing characteristics of chí-square which we compared subsequently with the critical table value for our selected error probability and found out degree of freedom. Table 3 contains expected frequency of dependence between size of a hotel facility and using Balanced Scorecard method.



Figure 2. Comparison of expected and real results of using the BSC in hotel facilities in Slovakia

Pearson's Chi-square Test of Independence				
Summary Table: Expected Frequencies				
	O15_PREK	O15_PREK	Row	
	G_1:1	G_2:2	Totals	
G_1:1	32.2864518	10.92356	43	
G_2:2	14.7135482	5.27644	20	
All Groups	47	16	63	
Calculated value	p = 0.04493			
Error profitability	$\alpha = 5\% (0.05)$			
Degree of freedom	DF = 1.00			
Critical value	$x^2 = 0.01$			

Table 3. The results of testing the second hypothesis by using chí-squared test

Figure 3 shows the direct coherence of these two variables by means of XY scatterplot. On the basis of verifying the hypothesis by chí-squared test we can state that there exists statistically important relationship between size of a hotel facilities and using the BSC method. This relationship comes out of the result of calculated value in which the p-value is smaller than 0.05. There is an important relationship from the point of view statistics. It means that we **accept** the hypothesis.

The aim of our research was analysing the actual situation in using the BSC in hotel facilities in Slovakia and pointing out the fact that businesses do not use satisfactory non-financial indicators in management and manage their performance mainly by financial indicators. The results of the research show that in the category of hotel facilities the level of using the BSC is very low, the conception is used only by 13% of businesses. We also found out that using the BSC depends on size of a tourism company. We tried to verify this datum on the basis of published information on much higher usage of the BSC mainly in the countries of Western Europe and America.



Figure 3. BSC versus size of hotel companies

CONCLUSION

Tourism is a rapidly developing industry in many countries (Dunets et al., 2019). Strategy planning in general and integrated tourism development in particular has an important role for local development and application of planning concepts, taking into account their official purposes (Gozner & Josan, 2013). Measuring performance of a business and searching suitable strategic tool in management of a business in tourism or other industry is still an actual issue. Businesses are mainly managed by financial indicators but modern trend points out the growing importance of non-financial indicators in doing business (Kisel'áková et al., 2019). Several complex systems of measuring performance of a business have been formed.

They contain the signs of financial and non-financial management. Balanced Scorecard is a strategic evaluation tool using both financial and non-financial indicators to determine the business performance of organizations or companies (Varmazyar et al., 2016; Šimelytė et al., 2014). The BSC on which this article is focused is one of such systems. In our writing we selected the BSC as a tool of strategic management. We evaluate the results as not satisfactory because the BSC is used only by a bit more than 10% of hotel facilities in Slovakia. The truth is that we expected such results because similar research in the past had stated such results.

Finding out statistical relationship between using the BSC and size of a hotel facilities was a partial goal of the article. Realised research proved that the BSC is relatively often used abroad and belongs among most used tools in management of

businesses. We also can state that there exists statistically important relationship between size of hotel facilities and using Balanced Scorecard.

In general we can state that businesses begin to realize that the assessment only by financial indicators is not able to stand growing competition at present and is not suitable for businesses oriented to the future. A business loses its ability to compete because it does not invest enough into non-material spheres. Such spheres contain product and process innovations investments towards employees' abilities, their motivation and subsequently satisfaction of customers. Investments into new products, new techniques and processes worsen the short-term results of a business. The same is with investments towards human resources capital and into education of employees – the short term financial results will be negative. But that does not mean that a business will come across problems because from the long-term point of views these investments will bring profit and raise the value of a business which is the main goal of owners of businesses. Creation of permanent mutually beneficial relationships with customers is a condition for the long-term working of a business.

We agree with Mr. Dimitropoulos' s statement (2017) that applying the BSC can provide certain competitive advantage. Every realized research in this field has its limits. In our case it is the number of respondents that we would like to enlarge in the future and thus to gain more precise data on this issue.

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SEGMENTING TOWNSHIP RESIDENTS BY THEIR ATTITUDES, BEHAVIOURS, AND OPINIONS TOWARDS RESPONSIBLE TOURISM PRACTICES

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Abstract: This article departs from the premise that the immense social and economic value that the tourism industry has in South African townships calls for a need to encourage responsible tourism behaviour among local residents. Responsible tourism behaviour is behaviour that seeks to minimise the negative impacts of tourism and maximise the positive impacts on the socio-cultural, economic, and ecological environment. Minimising the negative tourism impacts is important since these may have implications for the future growth and development of the tourism sector. The aim of this study was to segment residents in a South African township by examining their attitudes and behaviour towards responsible tourism practices. Three hundred respondents completed a selfadministered questionnaire. A statistical analysis using paired comparison revealed that certain behaviours of residents differ when they are at home and when they are travelling. The results revealed that residents are aware of responsible tourism practices such as waste reduction and the mindful use of water and electricity. However, it is concerning to note that when travelling, residents' use of water and electricity differs significantly from when they are at home. This could be because when travelling, they are not liable for the financial implications regarding the amount of water and electricity used. This study could assist communities and

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different tourism organisations and associations to develop awareness campaigns that encourage people to be more environmentally responsible when travelling.

Key words: responsible tourism, township, segmentation, behaviour, South Africa

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INTRODUCTION

According to the World Travel & Tourism Council (WTTC, 2019), the tourism sector creates jobs, drives exports, and generates prosperity worldwide. The sector consists of a wide variety of industries that aim to serve and support domestic, international, business, and leisure visitors. Small, medium, and large companies in industries ranging from accommodation and transportation to food and beverage, retail and culture, and sports and recreation all strive to create products and services that bring people together, support communities, and celebrate the natural and cultural wonders that the world can offer. In the annual analysis of 2018, the WTTC revealed that the global economic and employment impact of the tourism sector in 185 countries and 25 regions accounted for 10.4% of global GDP and 319 million jobs, or 10% of total employment (WTTC, 2019). In line with the WTTC (2019), the National Department of Tourism (NDT, 2017) in South Africa reported that the immense social and economic value of the tourism sector continues to improve the lives of millions of people in the country.

The sector directly and indirectly created approximately 1.5 million jobs in 2017, 9.5% of total employment. In addition, the NDT (2017) anticipates that the sector will create 2.1 million jobs by 2028. In order to guarantee this growth and ensure that it leads to real economic and social transformation for South Africans, it is critical that the sector vigorously promotes the values that form the foundation of sound, responsible, and sustainable tourism and avoids unguided forms of tourism that could be inflicted on the environment, society, and the economy (Cape Town Declaration on Responsible Tourism, 2002). The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2009) Regional Bureau for Science and Culture in Europe (BRESCE) points out that all forms of tourism have an environmental, social, and economic impact on the destination involved. In agreement, Hanafiahet al. (2016) posit that the tourism industry experiences various sustainability challenges such as resource manipulation and economic instability.

Determining how to minimise the negative tourism impacts is important since such impacts may have implications for the future growth and development of the tourism sector. Dolnicar et al. (2019) recognise that responsible tourism behaviour can minimise environmental problems and can be considered a solution to the negative environmental impacts created by those who use tourism products and services. Bob (2016) asserts that information dissemination through practices such as awareness campaigns may encourage people to be more environmentally responsible when travelling. Ridderstaat et al. (2014) suggest that to maintain sustainable tourism, local communities must engage in responsible tourism initiatives and must practise responsible tourism ethics during the management and operation of their tourism businesses.

Similarly, Eraqi (2014) emphasises that a community that practises responsible tourism develops a dynamic tourism industry, which is subsequently environmentally, socially, culturally, and economically sustainable. According to Hanafiah et al. (2016), tourism policymakers must promote and make available the benefits of renewal and resilience to the residents and the area. Researchers such as Dolnicar et al. (2019), Bob (2016), Barr et al. (2010) emphasise the importance of undertaking research in this area because responsible tourism behaviour of the local residents is crucial in enhancing tourism sustainability. Thus, this study investigated the demographic and tourism behavioural descriptors of township residents in Soshanguve.

LITERATURE REVIEW Responsible township tourism

According to Booyens (2010), since the dawn of democracy in 1994, township tourism in South Africa has been growing and has been considered a stimulant for local economic development. The cultural and heritage aspects of tourism products are said to be growing in popularity at a faster rate than other forms of tourism (Chili, 2015). South Africa is increasingly receiving significant numbers of visitors who are interested in township tourism (Booyens, 2010). Township tourism typically involves visitors travelling to poverty-stricken areas to see how the people live (Nemasetoni & Rogerson, 2017). Since township tourism tends to attract a relatively small share of the tourism market, this form of tourism is recommended for destinations that either have no resources or wish to develop into a mass tourism destination (Rogerson, 2005).

Booyens (2010) cited the following guidelines for responsible township tourism:

- Locals should have the opportunity to take part in decision-making, be employed, be trained and empowered, and become owners of tourism products.
- Local goods and services should be procured.
- Local entrepreneurship and small business development should be promoted.
- Local cultures should be respected and protected.
- Natural, cultural, and heritage resources should be preserved.
- Developments should be sensitive to the environment.

Despite the increase in the popularity of township tourism, there is a dearth of published research on responsible township tourism in South Africa (George & Booysens, 2014). Internationally, Cheng et al. (2019) reveal that a considerable number of studies identify environmentally responsible behaviour of residents as a significant indicator of sustainable tourism development. Research indicates that if individuals or groups are able to form attitudes and perceptions concerning sustainable development, they are likely to grasp and take preventative measures and offer solutions for environmental issues and in turn, show appreciation and empathy towards environmental and community issues with a sense of attachment and stewardship (Rosli & Ahmad, 2018). Environmentally responsible behaviour includes personal habits and collective actions (Cheng et al., 2019).

Responsible tourism behaviour can be defined as the behaviour that consciously seeks to minimise the negative impacts of tourism and maximise the positive impacts on the socio-cultural, economic, and ecological environment (Tichaawa & Samhere, 2015; Poudel & Nyaupane, 2017). According to Varela-Candamio et al. (2018), through learning new environmental attitudes and responsibilities, behavioural intentions can be altered. Many studies also see environmentally responsible behaviour as a consequence of environmental attitudes (Chiu et al., 2014; Liao & Satchabut, 2017).

Furthermore, a considerable number of current studies demonstrate both negative and positive tourism behavioural practices by local residents. For example, residents' influence on tourism development includes the *in situ* stage of image formation, which determines tourists' on-site experience, satisfaction with the destination, and word-ofmouth recommendations (Stylidis, 2018). This is because local residents serve as a primary source of information for visitors due to their familiarity with the destination (Brida et al., 2010). This indicates that residents play a crucial role in shaping the image of tourist destinations. According to Stylidis (2018), studies reveal that there is a positive relationship between the role of residents and their support for tourism development. In contrast, empirical research suggests that local residents who harbour a negative image often lack a sense of attachment and stewardship regarding community matters. Maruyama & Woosnam (2015) purport that understanding how residents behave towards tourism is imperative for the sustainable development of a tourist destination. It is, therefore, relevant to understand residents' demographic and tourism behavioural descriptors in shaping the image of a township as a tourist destination.

Demographic segmentation

Demographic descriptors are used to determine the observable demographics that differentiate one segment from another (Goyat, 2011). Variables such as age, gender, family size, family life cycle, income, occupation, education, generation, ethnicity, nationality, religion, and social class form the basis of demographic segmentation (Goyat, 2011; Veisten et al., 2015).Understanding the demographic characteristics of travellers helps to create a more thorough tourist profile (Tichaawa & Harilal, 2016; Alén et al., 2017). The study of tourist demographic characteristics is also useful in the formulation of marketing strategies (Duman & Tanrisevdi, 2011) and provides useful information for policy-makers and tourism managers for strategy formulation, product development, and service delivery (Brida et al., 2010).

Behavioural segmentation

Tourism studies use segmentation widely to categorise diversified groups and thus identify niche markets for tourism products and services (Park & Yoon, 2009; Rid et al., 2014). In addition, the purpose of segmentation is to adapt marketing practices (i.e. development, offerings of wanted products, and promotion) to the needs of specific target groups (Park & Yoon, 2009). According to Kotler et al. (1999), marketers generally perceive behavioural segmentation to be the best method for initiating market segmentation. Numerous scholars are of the opinion that behavioural segmentation is a more effective extrapolative option for tourism behaviour than socio-demographic segmentation (Dryglas & Salamaga, 2017; Tkaczynski et al., 2009).

According to Mahdzar & Gani (2018), behavioural segmentation is also referred to as psychographic segmentation, and psychographic variables include activities, interest, opinion, attitudes, and values. Mahdzar & Gani (2018) further posit that this type of segmentation divides the market into groups according to visitors' lifestyles. This simply means that numerous possible influences on a resident's behaviour are considered, including attitudes and activities. In their study on the psychographic and behavioural descriptors of ecotourists within the Capricorn District Municipality, Silent et al. (2018) found behavioural descriptors to be an effective means of segmenting ecotourists in that region. Consequently, it is important to explore behavioural patterns of township residents regarding responsible tourism practices to inform development policies more effectively and to provide a better understanding of township tourists.

As cited by Nkemngu (2012), according to the 2011 annual report of the Gauteng Tourism Authority, the history of human occupation in the township referred to today as Soshanguve dates back 200 000 years. The township as it currently appears came into being in 1972. The name *Soshanguve* comes from the indigenous groups that settled there after they were forcefully relocated by the apartheid government in 1972. The indigenous groups comprise Sotho, Shangaan, Nguni and Venda (Nkemngu, 2012). However, more recently, a more broadly encompassing explanation has been suggested: Sotho, Shangaan, Afrikaans, Nguni, Venda, and English. As quoted by Anyumba (2017, p.3), "[a]ll townships in South Africa are characterized by either `liberation struggle' credentials, a rich architectural heritage, or black enterprise that was `throttled' by the system of apartheid and spatial locations far removed from city centers". Soshanguve lies about 45 km north of Pretoria, Gauteng, South Africa (Figure 1).



Figure 1. Map of Soshanguve (Source: Viamichelin.com)

The township offers a special natural attraction within its confines, the Tswaing crater. The historical and natural landscape of Soshanguve creates a unique and competitive advantage over other townships. Infrastructural developments including road networks, electricity supply to households, tap water provision, and the opening of shopping centres such as the Soshanguve Crossing Mall makes Soshanguve a tourism force that provides opportunities to fill gaps and add to the body of knowledge, thus prompting the study. In addition, global literature on slum tourism mostly focuses on the debate about whether township tourism is voyeuristic or not (Pickard, 2007; Gross, 2010).

MATERIALS AND METHODS

The research design of this study was exploratory because prior to the study, very little or no information was available on the tourism phenomena being investigated (Jennings, 2010). The research design was a survey and thus, the epistemology of this study is known as positivism, which means that the researchers used quantitative sciences to create new knowledge and analyse data (Robert, 2010). Bryman (2012) argues that a positivist stance is objective and only considers facts, not respondents' subjective feelings.

Vanderstoep & Johnston (2009) define a population as the study of a universe of people to which the study can be generalised. The population for this study comprised residents who visited Soshanguve Township. According to Bryman (2012), sampling is the systematic process of accessing people to participate in a particular research study. Convenience sampling was chosen for this study because this technique minimised the time and costs of conducting the study (Altinay & Paraskevas, 2008).

Jennings (2010) and Altinay and Paraskevas (2008) state that convenience sampling means that the researchers selected respondents for the study based on

respondents' convenient accessibility. The sample for the study comprised 300 adult township residents who reside in Soshanguve. Primary data for the study was collected by means of a questionnaire consisting of closed- and open-ended questions.

For the closed questions, a 5-point Likert scale was used. According to Jennings (2010), the main advantage of using primary data is that the findings from the collected data are suitable specifically for the research project at hand. Data analysis for the study was conducted by means of descriptive and inferential statistics, namely factor analysis, Cronbach's alpha and the Wilcoxon signed-rank test.

RESULTS DISCUSSIONS Demographic results

This section reports on the socio-demographic information of the respondents. Demographic descriptors are inherent, economic, geographical, and social traits that constitute an individual and define the location of that individual in his/her social environment (Reic, 2016, p.90).

Socio-demographic profile of respondents

This research study obtained 300 usable questionnaires. The gender distribution was 56% male and 44% female. This is in contrast to the study conducted by Cheng et al. (2019) on community participation as a mediating factor on residents' attitudes towards sustainable tourism development and their personal environmentally responsible behaviour. In the study of Cheng et al. (2019), the results concerning gender distribution indicated a greater number of females than males. In the current study, the dominant age group was 18–24 years (43% of respondents), which is in line with the findings of Cheng et al. (2019) that demonstrated the majority of the sample to consist of the youth. In terms of education distribution, the results indicated that most of the respondents were in possession of a national diploma (36%). Regarding the category for length of time residing in Soshanguve, 35% of respondents indicated less than five years. In addition, 46% of the respondents stated that they were living with family. The majority of respondents personally found responsible tourism important (37%). Lastly, the results demonstrated that 63% of the respondents had taken a holiday in the past four years, with 50% indicating that they had taken a responsible holiday in the past four years.

Behavioural descriptors of respondents

The analysis presented below includes the factor analysis that addresses the grouping of factors.

Factor analysis on behavioural descriptors of township residents

To address the research aim of identifying behavioural descriptors of township residents regarding responsible tourism practices, an exploratory factor analysis was used to group a large number of variables (Jennings, 2010). Similarly, Bandalos & Finney (2018) maintain that factor analysis is used to determine the co-variation between a set of detected variables as a function of one or more concealed concepts. To ascertain the adequacy of analysis, this research paper utilised the Kaiser-Meyer-Olkin (KMO) test. The factor analysis showed that the sampling was adequate since the sample size fell within the acceptable criteria and that the original variables could be factorised efficiently. Pallant (2013) specifies that the KMO value should be 0.6 or above.

A principal component factor analysis with varimax rotation of ten Likert-scale questions from the questionnaire used was performed on data gathered from 300 respondents. Factors were retained using the Kaiser criterion in which only factors with Eigen-values of greater than one are retained; hence two factors were retained. The two factors extracted accounted for approximately 61% of the total variation. The results of an

orthogonal rotation of the solution are shown in Table 1. Where loadings less than 0.40 were excluded, the analysis yielded a two-factor solution simple structure (factor loadings =>.40). Five items were loaded on Factor 1; these items incorporated items related to social aspects towards responsible tourism. Factor 1 was named Environmental Care. This factor showed reliability with a Cronbach's alpha coefficient of .860. Table 1 further illustrates the five items loaded on the second factor, which was named Social Responsibility. This factor showed reliability with a Cronbach's alpha coefficient of .797.

Questionnaire statement		or loading
		2
Protection of natural resources	.8415	
Environmental protection	.8473	
Waste reduction	.8217	
Fighting poverty and economic inequality	.5826	
Fairtrade	.6148	
Protecting human rights and protecting against child labour		.6769
Organic agriculture and food		.6682
Equal opportunities /fair pay in the workplace		.8016
Promoting development in the community		.7141
Animal protection		.5371
Variance	3.26766	2.85292
Cronbach's α reliability coefficient	.860	.797
Cumulative %	.3268	.6121

Table 1. Factor	analysis
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Paired comparison results

The Wilcoxon signed-rank test was used to compare the level of importance of responsible resident behaviour when at home and when travelling. The results are illustrated in Table 2 below. The results of the Wilcoxon signed-rank test indicate that the level of importance regarding the following variables does not differ significantly when travelling and when at home.

Table 1. Factor analysis

Variable	P-value
Separate my waste for recycling	0.6342
Use environmentally friendly detergents and cleaning products	0.2274
Take actions to limit my use of electricity	0.0000*
Take actions to limit my use of water	0.0000*
Use public transport when given the opportunity	0.7315
Buy organic foods	0.0307*
Contribute to organisations devoted to environmental protection	0.3476
Contribute to organisations devoted to social causes	0.8065

* indicates that there is a significant difference

• Separating waste for recycling when at home does not differ significantly when travelling, p=0.6342.

• Using environmentally friendly detergents and cleaning products when at home does not differ significantly when travelling, p=0.2274.

• Using public transport when given the opportunity when at home does not differ significantly when travelling, p=0.7315.

• Contributing to organisations devoted to environmental protection when at home does not differ significantly when travelling, p=0.3476.

• Contributing to organisations devoted to social causes when at home does not differ significantly when travelling, p=0.8065.

However, the level of importance allocated to taking actions to limit water usage at home differs significantly when travelling (Z=6.457, p<0.001). This action was rated to be more important when at home than when travelling. Taking actions to limit the use of electricity at home differs significantly from taking actions when travelling, which was rated to be more important at home than when travelling. Finally, residents rated the variable, Buy organic foods, to be more important when travelling than when at home, which suggests that when at home, residents pay less attention to what they eat than when they are travelling. The results indicate that when at home, residents are cautious about the amount of water and electricity used. Additionally, the type of food that the residents eat at home versus the type of food eaten when travelling is influenced. These findings could be due to affordability and the avoidance of high electricity bills, given the social standing of a township such as Soshanguve.

CONCLUSION

Responsible tourism behaviour aims to minimise environmental problems and such behaviour emerges as a solution to the negative environmental impacts created by those who use tourism products and services. Studies suggest that information dissemination through practices such as awareness campaigns may encourage people to be more environmentally responsible when they are at their homes and when they are travelling. Informed people are able to form attitudes and perceptions concerning sustainable development and are more likely to grasp and take preventative measures and offer solutions for environmental issues. Such individuals are capable of showing appreciation and empathy towards environmental and community issues and have a sense of attachment and stewardship. The aim of this study was to segment residents in a South African township by way of examining their attitudes and behaviours towards responsible tourism practices. The results indicated that residents are aware of responsible tourism practices. Protecting human rights and protecting against child labour, ensuring equal rights in the workplace, and waste reduction are some of the behavioural elements that were found. Additionally, the research highlighted that the behaviour and practices of residents when at home and when travelling differed in some of the elements (e.g. the use of water and electricity).

This is because townships in South Africa encounter many social challenges, which as indicated, have a significant effect on residents' behaviour and practices. It is, however, concerning to note that when travelling, residents' use of water and electricity differs from when they are at home. The findings indicated that residents use more water and electricity when travelling than when they are at home. This could be because when travelling, the residents are not liable for the financial implications regarding the amount of water and electricity used. These results may be used to inform tourism policymakers within the City of Tshwane Municipality/Soshanguve of the background of residents' responsible tourism behaviours in addition to how to promote responsible tourism behaviour when at home and when travelling.

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COMPARISON OF THE IMPACT OF THE ARAB SPRING AND TERRORIST ATTACKS ON THE DECLINE IN TOURISM IN EGYPT AND TUNISIA (2010-2015)

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Abstract: Tourism industry plays an important role in many countries while in several dozen ones, including Egypt and Tunisia, it is perceived one of the most significant sectors of the countries' economy. The main objective of the paper is to analyse the changes in tourist air traffic in Egypt and Tunisia during a period of challenging political transition called the Arab Spring in Egypt and the Jasmine Revolution in Tunisia as well as the influence of the terrorist attacks on tourists which took place in the two above-mentioned countries in 2014, 2015 and in the first half of 2016. The author will make an attempt to assess the magnitude of the negative impact of the political riots and terrorist attacks on the decrease in tourist traffic measured by a decrease in the tourist air traffic and in the number of tourists visiting the analysed countries. Egypt and Tunisia have been selected for the analysis as their anthropogenic and natural attractiveness make them the main tourist destinations for Europeans.

Key words: the Arab Spring; terrorist attacks; policy; tourism business; tourist traffic, air transport

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INTRODUCTION

Tourism is one of the fastest-growing sectors of services in the modern world. The number of tourists increased 50 times in the period of 1950-2015, from 25 million in 1950 to approximately 1180 million in 2015. During the first ten months of 2015 the number of tourists reached 1,015 billion and it surged by 4% in comparison to the corresponding period of the previous year. According to UNWTO international tourist arrivals are forecast to reach 1.8 billion by 2030. Tourism industry plays an important role in many countries while in several dozen ones, including Egypt and Tunisia, it is perceived one of the most significant sectors of the local (Herman et al., 2016; Gozner et al., 2017; Ilieş et al., 2016, 2017, 2018; Lincu et al., 2018) and countries' economy (Ilieş & Wendt, 2015; Esmail, 2016). Not surprisingly, the phenomenon of tourism attracts

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attention of governments, local authorities, entrepreneurs and numerous scientists as this multifaceted phenomenon is one of the most profitable service sectors. Especially in the context of terrorist attacks, which already have very rich literature (Sönmez, 1998; Sönmez & Graefe, 1998a; 1998b; Neumayer, 2004; Araña & León, 2008; Llorca-Vivero, 2008; Baker, 2014; Albu, 2016; Liu & Pratt, 2017). During the period of 1950-2015 income from tourism increased from 2 billion USD to 1,2 trillion USD (Tourism Highlights, 2015). The revolutions in Arab countries called the Arab Spring in Egypt and the Jasmine Revolution in Tunisia leading to political transformation have had a significant impact on safety of tourists visiting these countries. This insecurity has led to a visible drop in tourist air traffic in both Egypt and Tunisia.

The same effect was observed after the terrorist attacks. Egypt and Tunisia have been selected for the analysis of changes in tourist air traffic as their anthropogenic and natural attractiveness make them the main tourist destinations for people living in Europe. The term political factors refers to all important political events affecting internal policies and in the case of terrorist attacks – those affecting international policies. Bearing in mind the subject of this study, which is air traffic and the objective of the paper, which is determination of the magnitude of impact the political factors exert, the analysis does not contain detailed descriptions of the transformation processes taking place in each country – only the milestones are highlighted as they are affect tourist image of the country gathering media attention. In order to grasp the magnitude of changes in tourist air traffic the airports/cities perceived as the main tourist destinations in both countries have been selected. Their tourist nature is assessed on the basis of their demographic potential, tourist attractions and functions they perform.

SUBJECT AND METHODS OF RESEARCH

The subject of the analysis are changes in tourist air traffic in Egypt and Tunisia during a period of challenging political transition called the Arab Spring in Egypt and the Jasmine Revolution in Tunisia as well as the influence of the terrorist attacks on tourists which took place in the two above-mentioned countries in 2014, 2015 and in the first half of 2016 (Neagu, 2017). The objective of the study is an attempt to assess the magnitude of the negative impact of the political riots and terrorist attacks on the decrease in tourist traffic measured by a decrease in the tourist air traffic and in the number of tourists visiting the analysed countries. Answering two questions seems to be cognitively and scientifically interesting. The first one is: which of the events which took place in Egypt and Tunisia, the Arab Spring or the terrorist attacks, caused a larger drop in tourist traffic in the two mentioned countries? The second question regards durability of the downward trend in the tourist traffic observed in the analysed countries. The main problem concerning the analysis and correlation was access to reliable data on tourist traffic and for some airports it was difficult to obtain reliable data on passenger traffic. The main data source for the Egyptian airports were the Egyptian Holding Company for Airports and Air Navigation (EHCAAN) and the Ministry of Civil Aviation for the period of 2007-2015 and for Tunisia it was the "List of the busiest airports in Africa" and data derived from official websites of airports.

The most essential data which allows to assess the actual impact of the political events on tourist traffic in the analysed countries are the years of the Arab Revolution, which are 2011-2013. However, to grasp a wider background, the whole period of 2010-2015 are to be analysed. The same period will be taken under consideration in the context of the terrorist attacks of 2014 and 2015. The author will also attempt to evaluate the influence of the political events and terrorist attacks on the economy of

both Egypt and Tunisia as their economies depend heavily on the tourist industry. The study involved simple, classic research methods. They are methods of statistical analysis of changes in tourist traffic and the analysis of the correlation between these changes and the political events and terrorist attacks in the analysed countries (Wendt & Bógdal-Brzezińska, 2018). The statistical analysis was also used to estimate further changes in tourist traffic. Due to the progress of the Egyptian revolution, the period 2010-2014 has been chosen for the analysis of the influence of the political events on tourist traffic while in Tunisia, where the process of political stabilization had finished earlier, the period of 2010-2012 has been chosen.

Due to data accessibility, in order to assess the influence of the terrorist attacks in both countries, the year of 2015 and the first half of 2016 have been selected. Notwithstanding, while analysing the passenger traffic volume at the airports in Egypt and Tunisia, it has to be kept in mind that the changes in the number of passengers indicate only the overall changes in passengers traffic and they cannot be perceived as indicators of overall changes in tourist traffic (Ilieş & Wendt, 2015). However, it seems to be eligible to conclude on the number of tourists on the basis of the changes in number of passengers at the airports as for European of Russian tourists planes are the main means of transportation when travelling to North Africa.

TERRORIST ATTACKS IN EGYPT AND TUNISIA FROM 2014 TO 2016

The political riots in Egypt and Tunisia were accompanied by terrorist acts on political opponents and the governmental forces from the very beginning (Aziz, 1995; Neagu, 2018). However, initially the main targets of the attacks in Egypt were not tourists. Although, as soon as in 2005 there was a terrorist attack in Sharm el-Sheikh and over 70 people died, including tourists from the United Kingdom, the Netherlands, France, Kuwait, the Czech Republic, Italy, Spain and Israel, over the next ten years tourist could feel relatively safe in Egyptian resorts. However, just after the short period of political stabilization and one year after Al-Sisi became the President, on 31st of October 2015 there was a terrorist attack on a Russian airliner A321 operated by Kogalymavia. According to the experts' opinion, a bomb brought down the Russian airliner over the Sinai desert. Two hundred and twenty-four Russians died and an Egyptian branch of the Islamic State claimed responsibility for the attack.

It was a form of retaliation for Russian engagement in the war in Syria. Russia made a decision to immediately evacuate its citizens from Egypt. Next year, the president announced introduction of the prohibition of organizing tourist trips to Egypt. Further terrorist attacks, like the explosion in an Egyptian city of Al-Arisz, where in November (24.11.2015) two car-bombs went off next to the entrance to Swiss Inn hotel. After this attack, several further tourist offices deleted their offer in Egypt. What is more, on 7th of January, two masked men opened fire on a tour bus waiting for tourists near one of the hotels located along the road to Giza. Fortunately, this time no one was hurt. The two perpetrators were caught by the police and they admitted being members of the Muslim Brotherhood and claimed that the attack was to intimidate the tourists. At the same time, in Bella Vista hotel in Hurghada other two attackers armed with knives hurt two tourists from Austria and one coming from Sweden. The ministers of many European countries issued communications in which they discouraged their citizens from visiting Egypt. Likewise, Tunisia also has a history of terrorist attacks.

In 2008, El Ghriba synagogue on the Tunisian island of Djerba was attacked. Twenty-one people died in the attack, including 14 German tourists. Al-Kaida claimed responsibility for this attack. As for the next several years there were no further attacks, Tunisia became one of the most popular tourist destination for Europeans. However, the Jasmine Revolution and the successful attempt to democratize the politics were not commonly accepted by the citizens of Tunisia. One of the firsts terrorist attacks in which several Tunisian soldiers died took place in the Tunisian mountains in July 2014. However, just like in Egypt, the first attacks were aimed at the representatives of the government, not the tourists. Nonetheless, as soon as on 18th March 2015, during a failed attempt to attack the Parliament in Tunis, two attackers withdrew to the building of the Bardo National Museum where they killed 24 tourists from France, Italy, Japan, Poland, Tunisia, Spain, Colombia, Belgium, Russia and the United Kingdom.

In this case, just like in Egypt, the Islamic State claimed responsibility for the attack. As a result, more and more people were cancelling their trips to Tunisia and Tunisian hotels were affected by the growing losses. On 26th June 2015, two masked attackers opened fire at tourists sunbathing on the hotel beach in Sousse – one of the most fashionable Tunisian resorts. Thirty-eight foreigners died, including thirty tourists from the United Kingdom, three from Ireland, two from Germany and one person from Belgium, Portugal and Russia. The attacker had been trained in Libya, and once again the Islamic State claimed the responsibility for the massacre. In effect, many tourist offices from the UK and Germany were cancelling trips to Tunisia.

THE DECLINE IN THE NUMBER OF TOURISTS AT AIRPORTS IN EGYPR AND ITS CONSEQUENCES

In order to analyse the changes in tourist passenger traffic at airports in Egypt it is necessary to divide the airports into two groups. The first group comprises airports where many different groups of passengers are serviced – they are: Cairo and Borg al-Arab in Alexandria. The second one comprises airports were mainly tourists are serviced. However, this group can be further divided into two subgroups. The first subgroup comprises the airports located in regional tourist centres, which are: Sharm el-Sheikh, Hurghada and Luxor. The second one congregates the airports in the remaining Egyptian tourist destinations: Marsa Alam, Aswan, Abu Simbel and Taba.

data derived from the Egyptian froming company for imports and fin fravigation, 2015 (fende, 2016)					
Air port	2010	2011	2012	2013	2014
Cairo	16148	13037	14729	13774	14685
Borg al-Arab	712	1004	1975	2261	2507
Hurghada	8063	5975	7136	5783	7226
Sharm el-Sheikh	8694	5476	6625	5953	6239
Luxor	1971	914	810	640	611
Marsa Alam	1182	820	1089	914	1160
Aswan	955	338	294	250	270
Taba	446	309	282	189	45
Abu Simbel	490	119	74	36	11

Table 1. Passenger traffic at the selected Egyptian airports (in thous) (Data source: basis of data derived from the Egyptian Holding Company for Airports and Air Navigation, 2015 Wendt, 2016)

Obviously, serving almost 15 million passengers, Cairo is being ranked first as it is the capital city and a large centre of tourist traffic. The second and third place, in both 2010 and 2014, were taken by typical tourist destinations which are Sharm el-Sheikh, a city situated on the southern tip of the Sinai Peninsula and Hurghada in the Red Sea.

In 2010, Luxor took the fourth place. It is a city located in the centre of Egypt with its temples and necropolises of the Pharaohs. However, in 2014 Borg al-Arab in

Alexandria took its place as it served 2,5 million of passengers that year. However, not only the passenger traffic volume matters, but the analysis of its changes also.

In order to do so, it is important to provide at least some basic information on the political transformation which took place in Egypt in the period of 2011-2012 as they have been presented in the previous chapter of the paper. As it has already been stated, the key events like strikes, manifestations and others hampering tourist traffic took place in 2011 and 2013. In 2011, the beginning of the Arab Spring, strikes and street fights in Cairo calmed down after H. Mubarak had resigned.

A peace period started and tourists started again visiting Egyptian resorts relatively quickly. However, the problems with the elections, new constitution, decrees of the new president M. Mursi wanting to create a confessional state and, finally, the military coup all together resulted in a decrease in tourist traffic volume in 2013.

The influence of the above-mentioned political events on the passenger traffic in Cairo is clearly visible as in 2011 a fall of 3 million tourists was recorder in comparison to 2010 when 16 million tourists visited the city. In the next year, after the situation had been calmed, again the number of tourists increased and it reached 14,7 million in 2012. However, another year of strikes, manifestations and the military coup lead to a drop in the number of tourists – one million less passengers were served in Cairo in 2013 in comparison to 2012. The decrease is not as big as in 2011 as the military coup did not bring chaos. Despite overthrowing the legal government, the coup brought political stabilization. Although it was enforced by the army, still it was stabilization.

A new airport in Borg al-Arab did not record a decrease in the number of passengers, but is a result of deceleration in the growth rate. In 2010/2009 it was 91% while in 2011/2010 it was only 41% as a result of the riots. Then, in 2012/2011 it increased to 97% as it was a period of political stabilization. After that, in 2013/2012 and 2014/2013 it dropped to 14% and 11% respectively (Table 1). A basic comparative analysis of tourist and demographic potential has shown that Hurghada, Sharm el-Sheikh and Luxor are the main centres of tourist traffic in their regions (Nowak & Wendt, 2010). The passenger traffic at the airports in these destinations showed the same fluctuations as in Cairo. It is obvious, as it was affected by the same political events. However, this decrease was far higher than the decrease in Cairo, as it concerned mainly tourist traffic which is so sensitive to any changes in the level of safety. In Hurghada the number of passengers dropped by 26% in 2011/2010, in Sharm by 37% and in Luxor by 54%. Although the next year brought an increased number of passengers, but not in Luxor. However, the next drop in 2013 clearly confirms the thesis that the internal political events and the foreign tourists traffic are highly correlated in Egypt. Although, the volume of passengers traffic at the two airports by the Red Sea – Taba and Marsa Alam is definitely lower, as Hurghada and Sharm el-Sheikh had been claimed the best resorts for European tourists, there the correlation between political events and tourist traffic is also visible. In 2011 and 2013 a decline in the number of passengers reached 30% and 16% respectively while in Taba it was 30% and up to 33%.

The last figure recorded in Taba in 2013 may also be explained by its proximity to the border with Israel and the policies towards Palestinians pursued by both Israel and Egypt. In 2014 the airport in Taba was virtually closed as it served only 45 thousand of passengers, which constitutes only 10% of the number of passengers served in 2010. 2010 was the most profitable for the Egyptian tourist industry.

The airports in Aswan and Borg al-Arab do not only serve the tourist traffic as they are located in the northern and southern parts of the country, they mainly serve domestic passenger traffic. The airport in Abu Simbel is not as popular among tourists. The city is known for its temples which have been relocated with the assistance of some Polish archaeologists. Their relocation was necessary as they were under threat from the rising waters of the Nile that were about to result from the construction of the Aswan High Dam. The complex is located in the far south of Egypt and it takes 4,5 hours to reach them by bus departing from Aswan. It is a classic example of a city having world class monuments. Although the temples are part of the UNESCO World Heritage Site, they are the only attraction to see during a whole-day bus trip from Aswan and back. Here, the means of road transport are more popular than planes.

The analysis of the passenger traffic at Abu Simbel airport is even more interesting, as it also has confirmed the strong linkages between politics and tourism. During the period of 2009-2010, when the economic crisis in Europe and the US decreased the number of passengers from 650 thousand in 2005 to 450 thousand – 490 thousand tourists chose to fly to Abu Simbel although it was much more expensive than taking a bus. The Arab Revolution resulted in another drop in the number of passengers. The number decreased by 76% and later the tourist traffic in Abu Simbel was only decreasing more. Finally, in 2014 it reached 10 thousand people. As a result of the Arab Spring in 2011 the number of tourists in Egypt decreased by 35%, from 14,7 million to 9,5 million (Butterfield et al., 2012; Abdou & Zaazou, 2013). Although the next year brought an increase to 11 million tourists, lack of political stabilization triggered another drop – by 2 million in 2013. One year later, in 2014, there was a slight increase in the number of tourists. In that year 9,6 million tourists visited Egypt and generated 7,5 million USD income (Al-Shuwekhi, 2015). After the terrorist attacks in 2015 and 2016 another significant drop in the number of tourists visiting Egypt was recorded. Although, in 2014 the number of tourists increased by 4,5% in comparison to 2013, as the Egyptian statistical agency CAPMAS claims, during the next years a noticeable decrease in the tourist traffic took place. From January to April 2015 1,58 million tourists visited Egypt, while a year before there were 3.08 million visitors.

According to CAPMAS in 2015 9,3 million tourists arrived in Egypt, which is 5,6% less than in 2014. The number of tourists 2015 decreased by 40% in comparison with the record reached in 2010 (15 million people). After the terrorist attacks which took place in the second half of 2015 and at the beginning of 2016, the number of tourists visiting Egypt in the first four months of 2016 decreased by 48,78% in comparison to the same period in 2015. The analysis of the tourists' structure has revealed lack of Russians who used to be a large group of people spending their holidays by the Nile. The Egyptian tourist industry was actually based on the Russians and it was significantly affected by the introduction of prohibition to fly to Egypt after the attack on the Russian plane returning with tourists from Sharm el-Sheikh in October 2015. In the structure of tourists who visited Egypt in the first quarter of 2016 there were only 13% of people coming from Eastern Europe, half of them were Ukrainians. Almost one third of the visitors were form Western Europe - 36% of them were Germans. However, the percentage of tourists coming from the Middle East did not change and it was 30%. The crisis in Egyptian resorts will be probably deepen by the catastrophe of the Egyptian airliner flying from Paris to Cairo having 224 people on board which disappeared over the Mediterranean Sea in May 2016.

Such a significant decrease in the tourist traffic has a great impact on the economy. The smaller the number of tourists, the less people selling papyrus, perfumes, souvenirs or mineral water earn. A slump in incomes of taxi drivers, tourist guides, people selling sweets and cigarettes on beaches was recorded. According to the press releases issued by CAPMAS, the number of tourists decreased by 46% in February 2016 (Ayyad, 2016), including a 99% drop in the number of Russians visiting Egypt.

Income from tourist activities in Egypt was 500 million dollars in the first quarter of 2016 – it was three times less compared with the same period in 2015.

THE DECLINE IN THE NUMBER OF TOURISTS AT THE AIRPORTS IN TUNISIA AND ITS CONSEQUENCES

Similarly to the Arab Spring in Egypt, the Jasmine Revolution in Tunisia was reflected in the number of passengers served at Tunisian airports. Data for the period of 2010-2015 shows clearly that the number of passengers and tourists at all airports, except for the new one in Enfidha, dropped significantly. Even the airport located in the capital city served 18% people less than in 2011 than in 2010.

The two classic tourist airports in Monastir and Djerba recorded 71% and 26% drops in the number of passengers respectively. Such a significant decrease in tourist traffic in Monastir not only can be explained by the political events, but also by the facts that some part of the tourist traffic was moved to Enfidha. In 2012, after the revolution had finished, the number of passengers increased again to the level of 2010.

However, at the airports in Monastir and Djerba the number of passengers did not reached the value which had been recorded two years earlier (Table 2).

Duia bourcer filmaane baalonque de la fumble, 2014				
Air port	2010	2011	2012	
Tunis – Carthage	1 961,7	1 613,3	1 988,2	
Jerba – Zarzis	1 133,9	842,2	868,4	
Monastir	1 729,8	498,6	611,5	
Enfidha	244,0	637,3	1 032,9	

 Table 2. Passenger traffic at the selected Tunisian airports (in thous)

 Data source: Annuaire Statistique de la Tunisie, 2014

The Revolution of 2011 affected the economy of Tunisia significantly, especially the tourist sector (Becheur, 2011). In 2010 approximately 7 million of tourists visited Tunisia while in 2011 just 4,9 million – the volume of tourist traffic and income from tourism dropped by one third. According to the World Travel & Tourism Council, in the period of 2013-2014 almost 15% of the Tunisian economy was linked with the tourist industry and this industry generated 7% of GDP (The Travel & Tourism Competitiveness Report, 2015). During the first eight months of 2014 almost one million tourists visited Tunisia – less when compared with the same period of the previous year. What is more, the number of Europeans decreased by 50%. In the whole 2014 the number of tourists dropped by 3,4% when compared with 2013. It was 6,07 million tourists in 2014 which was 800 thousand less than in 2010 and 200 thousand less than in 2013. The already difficult situation of the Tunisian economy, approximately 10% of hotels were closed, got even worse after the terrorist attacks in 2015.

Table 3. Changes in the number of Germanand British tourists visiting Tunisia in 2015/2014 (in %)(Data source: www.anna.aero/2015/10/07/tunisia-tourism-scares-are-resulting-in-declining-passenger-traffic/)

State	January	February	March	April	May	June	July	August
Germany	8,4	-2,8	-14,8	-36,2	0,0	-17,7	-43,9	-51,5
United Kingdom	7,5	19,2	13,4	10,3	8,7	-0,9	-84,3	-94,1

After the attacks in the Bardo National Museum in Tunis in March and on the beach in Sousse in June when many German and British tourists died, the passenger traffic at the airports in Enfidha and Monastir decreased by almost a half. The largest drop was recorded in August 2015 when the number of passengers decreased by more than 80%. As the table above shows, the Bardo Museum attack (March 2015) led to a significant decrease in the number of German passengers and a visible drop in the number of tourists visiting Tunisia in the next months of 2015 in comparison to the same period of 2014. After the 18th of March 2015 lots of hotel reservations had been cancelled and in April the number of German tourists decreased by 36% when compared with 2014. The attacks which took place in June were catastrophic for the tourist sector of Tunisia. When compared to July 2014, in July 2015, the number of tourists from Germany decreased by 44% and by 85% from the United Kingdom, as many victims of the Sousse attack were British (Table 3).

CONCLUSION

In 2011 passenger traffic at the airport in Sharm El-Sheikh decreased by 37% and in Hurghada by 26% in comparison to 2010 (Table 1). The stabilization of political situation in 2012 resulted in an increased number of passengers, but not at all analysed airports.

A significant increase in the number of passengers served in Cairo (1,7 million), Borg al-Arab (0,97 million), Hurghada (1,16 million), Sharm (1,15 million) and Marsa Alam (270 thousand) was recorded while at the airports in Taba, Aswan, Abu Simbel and Luxor a decrease by 27000, 42000, 45000 and 104000 respectively were noted. The 2014 increase in the number of passengers, after the drop in 2013 which had been triggered by the political events, including the military coup, did not regard the airports in Luxor and Taba. In Abu Simbel the situation was even worse, as the number of passengers reached only 11 thousand in 2014 – only 1/45 of the number of passengers served in 2010 - before the revolution. What is more, the situation is worsened by the unstable political situation and the terrorist attacks in Libya, Gaza, North Sudan and on the border with Israel.

It seemed that 2015 would have been the year when the Egyptian tourist industry will be reborn. Although it was gained by force, the strong military power, confirmed by the presidential elections won by Abd al-Fattah as-Sisi, which were officially recognized by the international community, was perceived as a chance for political stabilization and further development of tourism. However, the increase in the number of tourists in passenger air traffic was hampered in 2014 after the terrorist attack on the Russian airliner (Airbus A321) taking off from Sharm el-Sheikh Airport in October 2015 (31.10.2015). As a result of this attack in which 220 passengers died, Russia withdrew the recommendation for tourist trips to Egypt and the relevant authorities prohibited any tours to this destinations. Similar decisions on flights to Sharm were made by the United Kingdom and several other countries are considering to do so. The next terrorist attacks, the explosion in the city of Al-Arisz in North Sinai where two bombs hidden in a car went off near the entrance to Swiss Inn hotel in November 2015 (24.11.2015). It finally confirmed lack of stabilization and a low level of safety what will definitely result in a further decrease in the tourist traffic in the first half of 2016.

Country	2010	2011	2012	2013	2014
Egypt	14,7	9,5	11,2	9,2	9,6
Tunisia	6,9	4,9	5,9	6,3	6,1

 Table 4. The number of tourists visiting Tunisia and Egypt (in millions)

 Data source: own elaboration based on: data.worldbank.org/indicator

The data on the passenger traffic in Tunisia has shown a significant decrease in the number of tourists in the analysed period. At times of the revolution the number of passengers served by the airport in Tunis decreased by 18% and by 26% and 71% in

Djerba and Monastir respectively. A decrease in the number of tourists was also recorded in 2012 (Table 2). According to the World Travel & Tourism Council in 2014 the number of tourists visiting Tunisia dropped by 15%, including a 50% decrease in the number of European tourists (The Travel & Tourism Competitiveness Report, 2015).

When compared to 2010, the number of people arriving in Tunisia in 2011 decreased by 2 million (Table 4). Although in 2012 the volume of tourist traffic increased showing a tendency to stabilization in the period of 2013-2014, the number of tourists in 2014 was still lower by 800 thousand in comparison to 2010, which was a record-breaking year in Tunisia. After the terrorist attacks in the Bardo National Museum and on the beach in Sousse where lots of German and British tourists died, the passenger traffic at the airports in Enfidha and Monastir decreased by nearly half. The record-breaking decrease took place in August 2015 when the general number of passengers dropped by more than 80% (Table 3). As the presented data on changes in the number of passengers served at the selected airports and on the volume of the tourist traffic in Egypt and Tunisia shows, the dynamics of changes triggered by the political events and terrorist attacks is differentiated. Political events affect the number of tourists to a smaller extent and they have a long-lasting effect (Table 4). Most probably this situation can be explained by lower prices encouraging tourists, especially those from East Europe, to visit Egypt and by a high safety level in the resorts warranted by the military and police during the Arab Spring. In the case of Tunisia, just like in Egypt, the number of tourists dropped after the Jasmine Revolution.

However, in the next years, until 2014, a stable but small increase in the number of people visiting this country was observed. In turn, terrorist attacks result in an almost immediate, significant drop in the number of tourists, especially from the countries which citizens were victims of the attack (Table 3). However, it is worth mentioning that the number of tourists visiting countries where terrorist attacks took place increases at a relatively fast pace. Egypt is an exception, as Russian tourists have never come back as a result of the Russian government's decisions. The only bright side of this situation is the fact that the terrorist attacks in Egypt did not result in a constant decrease in tourist traffic which was decreasing, sometimes even by 1/3, but in the next years, thanks to exceptional tourist attractiveness of Egypt, it was growing again.

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PROTECTED AREAS, COMMUNITY COSTS AND BENEFITS: A COMPARATIVE STUDY OF SELECTED CONSERVATION CASE STUDIES FROM NORTHERN KWAZULU-NATAL, SOUTH AFRICA

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Abstract: Communities neighbouring protected areas globally suffer various costs while enjoying limited benefits from conservation areas. This study compared livelihood costs and benefits to selected neighbouring communities around the Somkhanda Game Reserve (SGR), which is a community-owned conserved area and the Hluhluwe-iMfolozi Park (HiP), a state-owned, provincial park in northern KwaZulu-Natal. Quantitative (questionnaire) and qualitative (focus groups and interviews with key informants) methods were used to examine the livelihood impacts of the two conservation study sites on neighbouring communities. The political ecology and the sustainable livelihood framework guided the research. The most common livelihood costs incurred in both neighbouring communities include loss of land, curtailed access to traditionally used natural resources, destruction of crops and devouring of livestock by wild animals, loss or injury of human life by wildlife and the spreading of wildlife diseases to livestock. Benefits included employment opportunities, business opportunities, access to natural resources and collection of firewood. The identified livelihood costs from the two conservation areas have further been aggravated by lack of compensation to affected households. The study recommends that measures should be taken to strengthen problem animal control in the two conservation areas. Furthermore, both conservation areas should come up with some compensation criteria to cover affected households.

Key words: human wildlife conflict, livelihood costs and benefits, state-owned conservation area, community-based conservation area

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INTRODUCTION

The dawn of colonialism during the 18th and 19th centuries in Africa saw the twin processes of land and wildlife alienation which created hostility to wildlife among the affected local people (Munien et al., 2018). Musavengane and Simatele (2016a) assert that colonialism was the entry point through which the fortress conservation doctrine entered its way into Africa. This is common in South Africa as shown by Musavengane et al. (2019) in the case of the KwaGumbi community in northern KwaZulu-Natal where communities were forcefully removed to make way for wildlife conservation. Fortress conservation is a mode of conservation that spearheaded human-nature dichotomy through the conceptualisation of native resource users as the conservation problem (Makindi, 2016). Africans apart from being ignored, were overwhelmed, manipulated, and outmanoeuvered by a conservation crusade led, orchestrated, and dominated by white settlers. Above all, control over natural resources was taken away from them, and livelihood practices such as traditional hunting was criminalised (Chigonda, 2018). This is supported by Lubilo & Hebinck (2019) who indicate that the colonisers became avid gamekeepers and the Africans the poachers and the rural poor had to suffer the consequences of living with wildlife while reaping no benefits from wildlife conservation. As a result, one of the dominant conclusions that may be drawn from the decades of research on the social dynamics of biodiversity conservation is that protected areas (PAs) have added hardship to households in rural communities throughout much of the African countries (Musavengane & Simatele, 2016b: Thondhlana & Shackleton, 2013).

Consequently, PAs in Africa share common salient features: historical poor public relations and minimal support from local communities thus the land where the natives once hunted game both for food and ritual became enclosed and privatised and what was once an everyday practice became illicit overnight (Bragagnolo et al., 2016; Swemmer et al., 2017). Hence, PAs have been heavily criticised for preserving nature for a wealthy elite thus, this ethnocentric conservation strategy characterised with exclusion has not gained acceptance, as it works against the economic and social interests of local people, and frequently transformed wildlife from an asset into a threat and nuisance (Bennett & Dearden 2014). Soliku & Schraml (2018) suggest that PAs should not exist as islands, divorced and isolated from the social, cultural, and economic context in which they are located. PAs in most developing and independent countries have paid attention to the issue of communities deriving benefits from them and they have made this phenomenon become a more practical and ethical necessity: practical, because to survive, PAs in the poorer nations must be seen as a land-use that contributes positively to sustainable development as the other types of land-use, and ethical, because human rights and aspirations need to be assimilated into national and global conservation strategies if social justice is to be realised (Riehl et al., 2015).

Meilby et al. (2014) and Musavengane & Simatele (2016b) state that biodiversity conservation has come to be seen as a viable option to support sustainable community development particularly in the rural areas of developing countries. They further argue that many of the rural poor in the world live within or in close proximity to biologically diverse areas (included designated conservation areas), with the majority of them highly dependent on natural resources for meeting their basic needs and engaging in income generating opportunities (Anthony & Swemmer, 2015). In recent years, after a period of strictly centralised wildlife management and exclusive wildlife conservation, there has been a commendable attempt to balance the needs for conservation with those for rural development (Snyman & Bricker, 2016). In an effort to redress the colonial injustices, well-meaning conservationists have embraced the paradigmatic shift in the conservation of wildlife from the historical separatist conservation approaches termed conservation against the people (Matseketsa et al., 2018) to present day community-based natural resources management (Muboko, 2017). Thus, the modern movement in conservation now recognises PAs to be socio-ecological systems as it has been proven beyond doubt that no PA can succeed for long with local opposition at the community level (Swemmer et al., 2017). Beyond these advancements, narrowing down to the South African case study, post-apartheid (especially after 1994) has championed the resurgence of restoring the right to own and manage wildlife that had been denied in the colonial and apartheid era to rural communities (Kepe & Hall, 2018). In this regard, the state pioneered the People and Parks initiative under the then Department of Environmental Affairs and Tourism (DEAT) and now Department of Environmental Affairs (DEA) (Pelser et al., 2013). However, there is limited research that examines the extent to which local communities neighbouring PAs benefit or incur losses due to conservation efforts in general.

Additionally, among the growing and important body of knowledge that examines community perceptions of the conservation areas and the impacts of living in close proximity to these locations, there is a dearth in the number of studies that compare issues in relation to community-owned or state-owned PAs. The objectives of this study were therefore to establish the nature of costs incurred by communities living adjacent to the two conservation areas, determine the benefits local communities derive from the two PAs, and assess local communities' attitudes towards the two PAs. In light of the above, this study examines costs and benefits derived by local communities neighbouring selected PAs in northern KwaZulu-Natal pursuing wildlife conservation with development goals. The ultimate aim is to assess whether neighbouring communities to two conservation areas derive any crucial benefits or suffer the costs of residing next to PAs. Research on wildlife conservation and livelihood in South Africa has not addressed the question of whether community-owned or state-owned PAs contribute negatively or positively to the livelihoods of adjacent communities. This paper, therefore, attempts to add to literature on how state-owned and community-owned PAs in South Africa are positively and negatively contributing to livelihoods of local communities in their immediate locality. A comparative analysis using two case studies of the Somkhanda Game Reserve (SGR), which is a community-owned conserved area and the Hluhluwe-iMfolozi Park (HiP), a state-owned, provincial park in northern KwaZulu-Natal is undertaken.

CONCEPTUAL FRAMEWORK

This section presents the theoretical underpinning for examining biodiversity conservation in relation to the political ecology and sustainable livelihood approach in both the respective PAs in South Africa. The political ecology perspective is used to understand the social, economic as well as environmental dimensions of conservation with respect to biodiversity and rural development. The article draws from the political ecology and sustainable livelihoods framework (SLF) as theoretical guides to understand and discuss of the links between PAs' costs and benefits towards the sustainability of rural livelihoods. In this article, a political ecology framework is used to aid the interrogation of community conservation policies and practice in South Africa and the ideological perspectives that underpin them. In particular, attention is focused on the extent to which current natural resources management and governance policies, institutional frameworks and practice are largely a product of history and reflect the interests of various actors with varying agendas; how the new discourse of sustainable development has gained ascendancy in environmental policy and is reconfiguring the relationship between the environment and livelihoods; and the extent to which policy derivatives of this discourse represent local realities and interests surrounding livelihoods costs and benefits in relation to biodiversity conservation. The questions that arise through this framework as outlined by Barr et al. (2009) include:

- Who the actors involved in natural resource policy processes and management are?
- How they shape local access to natural resources?
- What power do they hold?

This power, according to Barr et al. (2009), include:

- The power to create or modify rules and regulations;
- The power to make decisions about how a particular natural resource should be used;

• The power to implement the policies, rules and regulations and ensure compliance; and

• The power to adjudicate disputes that arise in the implementation and enforcement of rules.

However, it is important to note that although political ecology has been useful in providing an understanding of broad-scale factors that shape access to natural resources, it is limited in providing a critical reflection of how local livelihoods are constructed on a day-to-day basis (Dube, 2019). It is argued that in addition to these external factors, individual agency and local factors are important in shaping access to natural resources (Green, 2016). This is also relevant in the South African context where powerful actors (conservation agencies) tend to overpower weaker actors (local communities) in the name of conserving biodiversity and in the process local communities loose their livelihoods.

Initiatives such as community-based conservation (CBC), community-based natural resources management (CBNRM) and others focus on devolving power to the local level and ensure that local communities partake in decision-making processes. However, in reality the literature shows that communities are usually told what is going to happen (Fletcher, 2017; Green, 2016; Riehl et al., 2015). To complement the political ecology approach, the SLF is also used. According to Su et al. (2019), a perspective that best represents local agency is the SLF. This perspective overlaps with political ecology in several ways. Like political ecology, a livelihood perspective is highly interdisciplinary and not bound by the intellectual restraints of narrower disciplines (Wei et al., 2018).

The perspective is also committed to the analysis of complex factors shaping access to natural resource management at the local level (Musinguzi et al., 2018). There are three major reasons for drawing on a sustainable livelihood perspective in addition to insights from political ecology (discussed earlier) as articulated by Harbi et al. (2018):

• A livelihood perspective provides a more critical reflection of local livelihoods that can enhance human understanding of rural livelihoods and how natural resources such as forests constitute an important part of diversified rural livelihood strategies.

• A livelihood perspective has a more developed body of concepts that this study can easily draw on (that is, it provides organising concepts for local level studies).

• Livelihoods is an important entry point in any discussion of socio-ecological issues.

The focus on livelihoods is crucial because adequate and secure livelihoods are central to people's concerns about well-being in developing countries and, as such, society's relationship to the environment in these countries must be seen in the context of broader capacities and strategies for livelihoods construction (Downie et al., 2018).

In this regard, a livelihood perspective allows the article to focus on the extent to which natural resource policies and strategies are in harmony with the organisation of local livelihoods (costs and benefits) in study sites. Enhanced livelihoods in rural areas such as HiP and SGR can be measured using the SLF. Some studies (Adeleke & Nzama, 2013; Nsukwini & Bob, 2016) in KwaZulu-Natal have used the SLF to understand the role of the ecotourism sector in the development of rural areas. Adeleke and Nzama (2013) used the SLF to assess the participation levels of marginalised rural communities in the HiP. These studies have, however, not adequately examined the benefits and costs of protected areas to local communities. The SLF has become popular to the discourse on poverty reduction, rural development and environmental management (Scoones, 2009). According to Chambers & Conway (1992: 7), "a livelihood comprises capabilities (resources, claims and access) and activities required for a means of living". Furthermore, Downie et al. (2018) state that a livelihood comprises assets (natural, physical, human, financial and social capital), the activities and the access to these (mediated by institutions and social relations) that collaboratively determine the living gained by the individual or household. The SLF is, therefore, a suitable approach for analysis of livelihoods in this study as it links the broader socio-economic components of household assets, livelihoods activities, outcomes of livelihoods activities and factors mediating access to livelihood activities (Downie et al., 2018; Scoones, 1998). The SLF shows how in different contexts and through various strategies people support themselves through access to a variety of resources or assets such as natural, economic, human, financial and social capitals (Chambers & Conway, 1992; Downie et al., 2018; Scoones, 2009). In this article, the extent to which the case study communities use natural resources (found within protected areas) such as wildlife, forest resources, grass, firewood, wild food and fruits to improve their livelihoods is analysed using the SLF and the political ecology perspectives.

MATERIALS AND METHODS Description of study sites

The research data was collected from local communities (at household level) and the management staff (conservation officials) of the two PAs, HiP and SGR, one representing a government managed provincial game reserve and another one representing a community managed game reserve, respectively. Both study sites are found in KwaZulu-Natal, one of South Africa's nine provinces which has a high spatial footprint of conservation areas and rural populations. The HiP is a 90 000 hectares game reserve in the Province of KwaZulu-Natal, managed by the Ezemvelo KwaZulu-Natal Wildlife (EKZNW) which is the conservation authority responsible for the management of all state-owned PAs in KwaZulu-Natal (Figure 1) (Ezeuduji et al., 2017). It is known as the oldest game reserve in Africa, established in 1895 (Michel, 2019). Furthermore, Nsukwini & Bob (2016) assert that HiP is the oldest game sanctuary in Africa. In terms of historical significance, iMfolozi can be seen as the site where Zulu war victories were celebrated as well as the royal hunting ground of King Shaka (Adeleke & Nzama, 2013). Local traditional authorities through amakhosi (the chiefs) are central in the management of natural resources in HiP (Adeleke, 2015). The Mpembeni community under the Hlabisa Traditional Authority and the KwaSeme community under the AbakwaHlabisa Traditional Authority were chosen as the focus of the study and are referred to in this article as communities surrounding HiP. The HiP was chosen as a study area because it is surrounded by dense human populations and has increasingly degraded subsistence agriculture which typifies the situation in which many conservation areas exist in developing countries, especially in Africa (Nsukwini & Bob, 2016).

To enable a comparative analysis, the SGR is a 16 418.82 hectare community game reserve, owned by the Gumbi community who are also referred to as the Somkhanda community located in UPhongolo Local Municipality in the Zululand District Municipality in northern KwaZulu-Natal Province (see Figure 1). SGR is surrounded by five settlement areas: Zonyama, Cotlands, Hlambanyathi, Bethal and Candover. According to the local Headman (*Induna* in the local isiZulu language) as cited in Musavengane & Simatele (2016a), there are approximately 312 households in the Gumbi community. The Gumbi people who were forcibly removed from their land in 1960s were restored land under the land reform process in 2005 (Musavengane, 2019). The Gumbi is the main tribe that resides in the Gumbi community and now proud owners of the land that was previously settled by white game farmers (Musavengane & Leonard, 2019).



Figure 1. Map of KwaZulu-Natal showing the location of study sites

After claiming the land, the Gumbi people decided to keep large portions of the land under conservation and create a consolidated game reserve, SGR, for economic and social development in the community. According to one of the founders and beneficiaries

of SGR, the community partnered with the Wild Trust (referred to as Wildlands henceforth) after failing to manage it on their own for the first five years after successfully claiming the land. The Emvokweni Community Trust contracted Wild Trust to manage and transfer skills to local community members. The Emvokweni Community Trust is a legally, constituted board responsible for operations of the SGR. They are the owners of the game reserve and members are voted in by land beneficiaries.

The Emvokweni Community Trust also leased a tourism section to African Insight so that they oversee all tourism operations. Both entities (the Wild Trust and African Insight) are operating on a 5-year lease agreement. They established collaborative necessitated skills development projects that would ensure transference of skills from conservation groups to local people. The reserve is the first community-owned private wildlife reserve to be created from land reform processes in South Africa (Musavengane & Simatele, 2016a). According to Wildlands Conservation Trust, the game reserve spans 16 418.82 hectares of land, settlement and grazing area has 5 209.40 hectares and still 11 508.72 hectares are still pending land claim (Dudley et al., 2014).

Methodological approaches

Both quantitative (questionnaire) and qualitative (interviews, group discussions and observation) data collection techniques were used in gathering primary data for the study. Mixed methods research or triangulation enables the use of multiple methods in data collection which paves way for collecting credible, reliable and valid data. The questionnaire targeted the residents adjacent to the two conservation areas, and solicited information on livelihood costs and benefits from the HiP and SGR, respectively.

Communities adjacent to HiP have an approximate household population of 1 200 while communities neighbouring the SGR have 312 households. One hundred and fifty households were selected for questionnaire interviews from each of the two communities through simple random sampling. Key informants were also interviewed so as to collect in-depth information on livelihood costs and benefits from the two conservation areas.

In HiP, the key informants included the community conservation officer. conservation manager, park ecologist, Amakhosi (the chiefs), ward councillor, and executive committee members of the Rhino Ridge Lodge. In SGR, key informant interviews were held with the park manager, tourism manager, community conservation representative, Emvokweni Community Trust committee representatives and the traditional leadership. The key informants were selected using the purposive sampling technique. To obtain further in-depth information on livelihood costs and benefits from the conservation areas, two focus group discussions were held, one in HiP and another in SGR. Each of the two focus group discussions had a total of 12 participants, chosen carefully so as to ensure representativeness in terms of gender, age, level of education and socio-economic status. Observations were also crucial in getting first hand information on the livelihood costs and benefits from the conservation areas to the case study communities. Information was collected as it happened or as it had happened, for example, concerning human-wildlife conflicts, the use of natural resources, construction and others. Quantitative data was converted into percentage and frequency tables, while qualitative data was analysed thematically.

RESULTS DISCUSSIONS

The study sought to establish the livelihood costs and benefits incurred by the communities neighbouring the HiP and SGR. These are presented and discussed below using the comparative approach. Understanding and incorporating the social backdrop in which community conservation initiatives are implemented allows a more robust analysis

of project outcomes. As such, data reveal that communities adjacent to HiP and SGR can be classified as having high levels of unemployment (70.7% of the respondents for HiP and 80% for SGR were unemployed). Unemployment was highlighted as a major concern among in both communities during the focus group discussions and key informant interviews as well. These results are disconcerting, given that the majority of respondents (21% for HiP and 37% for SGR) were between 26 and 35 years old (economically active age category). Additionally, the heavy reliance on state grants (social aid) (59%) and pensions (42%) as a sources of household income further highlights the economic instability and vulnerability experienced by respondents. This also suggests high levels of dependency amongst respondents. These findings align with census data that show a 54.3% dependency within the two communities under the study.

The high levels of poverty that characterise both of the communities were also reinforced during the focus group discussions and key informant interviews. This resonates with other researchers who have highlighted the vulnerabilities and poverty experienced by communities residing adjacent to conservation areas (Bragagnolo et al., 2016; Chigonda, 2018; Munien et al., 2018). In this regard, biodiversity conservation initiatives have the potential to significantly enhance local development and socioeconomic benefits through job creation. Incorporating the immediate needs of the local communities as part of project outcomes may also improve community participation through acceptance and the appeal of improved income generating potential.

Table 1 summarises livelihood costs to the communities adjacent to HiP and SGR from the two conservation areas. Slightly more than half of the questionnaire respondents in HiP (50.7%) and SGR (52.7%) indicated that the conservation areas have restrictions on acesss to, and use of traditional resources.

Conservation challenges to community		SGR	Total
		(n=150)	(n=300)
Restriction on access to, and use of traditional resources	50.7	52.7	51.7
Loss of land and livelihoods	51.3	43.3	47.3
Damage to property and crops by wildlife	72.7	54.7	63.7
Human harassment by wildlife	33.3	37.3	35.3
No consultation by conservation authorities on boundaries	22.0	43.3	32.7
Hostility and harassment by conservation enforcement agents	12.7	29.3	21.0
Competition with wildlife for water and grazing	35.3	14.7	25.0
Cannot expand agricultural land	38.7	14.7	26.7
Were moved out of the conservation area when it was formed	96.0	90.7	93.3

Table 1. Costs to the community from living near conservation areas (in %, yes responses only): multiple responses

Access to traditional resources from the natural environment is critically important in rural areas since they are a source of food (thereby contributing to food security), fuelwood, medicine, inputs for homestead construction (such as thatch grass for roofing and poles), materials for arts and crafts, etc. (Meilby et al., 2014). In addition, 51.3% of the respondents in HiP and 43.3% in SGR indicated that the conservation areas had led to loss of land and livelihoods. Additionally, 72.7% of the respondents in HiP and 54.7% in SGR indicated damage to property and crops by wildlife with a further 33.3% in HiP and 37.3% in SGR stating human harassment by wildlife. In relation to livelihoods, 35.3% of the respondents in HiP and 14.7% in SGR identified competition with wildlife for water and grazing while 38.7% in HiP and 14.7% in SGR noted that they cannot expand agricultural land. While differences are discernible in the two case study sites, especially greater costs for people residing near the government game reserve than the community managed game reserve, the results indicate that substantial proportions of community members have negative experiences associated with the PAs which impact on their livelihoods. This is in agreement with conservation literature stating that most communities adjacent to conservation areas historically predate the PAs, have pre-existing rights to resources in them and have often been adversely affected by their designation. As noted earlier, the setting up of most PAs in South Africa has resulted in the displacement and resettling of the people who originally inhabited these areas.

It is important to note that both the HiP and the SGR have been established in areas that were previously inhabited by people. Both study sites (HiP and SGR) have some evidence of graves and old buildings that prove that people once settled the conservation areas. In the case of SGR, during the focus group discussions and key informant interviews it emerged that the area now occupied by the community conservation area was once settled by the people who now stay in five villages around the Gumbi community and some relocated to neighbouring towns of Jozini, Nongoma, Magudu, Hluhluwe and Mtubatuba. The people were displaced and resettled during the colonial and apartheid era in the 1920s and 1940s when the apartheid government took over from colonialists and the responses in Table 1 are a clear indication that such memories are still fresh and embedded in communities' minds with almost all respondents (96% for HiP and 90.7% for SGR) stating that family members were moved out of the conservation area when it was formed. Furthermore, one resident of Cotlands village adjacent to the SGR indicated that:

The land now occupied by SGR was forcefully taken from us by the apartheid government in the 1960s and we were forced to work for them without being paid.

Some respondents from SGR further indicated that the land in villages where they were relocated to was more infertile land compared to those inside the SRG. This was confirmed in an interview with the *induna* (headman) for the area. After 1994 when the democratic government took over, the Gumbi community successfully claimed the land from the previous white farm owners who took the land from them.

The people of Gumbi agreed to establish the SGR in anticipation of benefiting from conservation and tourism activities in the park. However, many respondents and participants during the focus group discussion in SGR noted with concern that, since the establishment of SGR, they have not benefited from it except for the few community members who are connected to Emvokweni Community Trust committee members.

Furthermore, community respondents also cited concerns of lack of tangible benefits from the SGR and accused the current Emvokweni Community Trust committee members of corruption. This is an important finding in that while it is generally understood and accepted that in South Africa public and private conservation areas are products of apartheid and colonisation which neglected the rights and needs of indigenous local people, the results from this study reveal that community-based game reserves also fail to address community needs and aspirations.

Political and power dynamics in the community, as alluded to when adopting a political ecology lens, are evident. There are also concerns in relation to the lack of consultation by conservation authorities on park boundaries. Additionally, more respondents in SGR (29.3%) compared to HiP (12.7%) stated that they experienced hostility and harassment by conservation enforcement agents. This is surprising given that the SGR is on claimed land by the community. Thus, caution should be exercised to

assume that community-based PAs are better positioned or will be more sensitive to community needs. This is reinforced by the findings which indicate that competition with wildlife for water and grazing areas, damage to property and crops by wildlife and cannot expand agricultural land had substantially lower responses from the SGR compared to HiP.

For all other costs examined, almost equal proportions or more respondents from SGR compared to HiP identified aspects covered (access to traditional resources, loss of land and livelihoods, human harassment by wildlife, attitude of conservation enforcement agents and forcibly moved) as concerns. Community respondents in HiP and SGR were also asked whether they require access to the two conservation areas for various activities and natural resources that are central to their livelihoods. The community respondents from both conservation areas showed that some people desired having access to the two PAs for various resources and activities. The most identified resource/ activity in Table 2 was food gathering. There was a substantially higher need for access to resources from the SGR than HiP with more than 60% requiring access for fuelwood collection, grazing, cultivation, irrigation and for cultural/ social purposes. Less than 30% of the respondents in HiP identified the need to access HiP for these resources/ activities. This can be attributed to the fact that the HiP is surrounded by ten tribal authorities and that it occupies the larger piece of land than SGR. Furthermore, HiP relocated a significant number of community members during it proclamation in the 1800s than the SGR that only relocated the Gumbi community (Musavengane & Simatele, 2016a).

for various resources/ activities (in), yes responses only), mattiple responses				
Becourse (activity required in concompation areas		SGR	Total	
Resource/ activity required in conservation areas	(n=150)	(n=150)	(n=300)	
Grazing	25.3	62.7	44.0	
Recreation	-	15.3	7.7	
Food gathering	88.7	78.7	83.7	
Cultivation	20.7	61.3	41.0	
Fuelwood collection	28.0	66.7	47.3	
Irrigation	20.0	61.3	40.7	
Cultural/social	19.3	61.3	40.3	

Table 2. Whether respondents required access into protected area for various resources/ activities (in %, yes responses only): multiple responses

The community responses indicate that the proclamation of the conservation areas had resulted in loss of land and the curtailment of residents from accessing traditionally used natural resources, which are central to the livelihoods of communities.

The conservation authorities in both conservation areas, however, indicated that no one was allowed access into the PAs for any activities, except for recreational and cultural/ social activities. Furthermore, the community conservation officers in both PAs indicated that local communities are allowed free access to the parks during the month of September for a week as part of the national people and parks initiatives. Local schools from the communities adjacent to the two PAs are also allowed free access at any time of the year as promoting environmental education. In order to allow comparative analysis, community respondents from both HiP and SGR were asked whether any of their household member worked/ work in a PA and the majority (91.3% in HiP and 90% in SGR) of respondents from both study sites indicated no. This continues to be a major issue in relation to conservation efforts in developing contexts which communities are often persuaded to support on the basis that they will provide economic benefits, linked to tourism opportunities. The high levels of unemployment noted earlier together with the lack of job opportunities in the area are a major contributor to rural poverty.

Results on benefits show that a higher proportion of the respondents from the household survey (compared to those who identified costs earlier) do not perceive community benefits associated with residing near the respective conservation areas which reflects dissatisfaction with the nature of benefits derived from the two conservation areas (Table 3). The main benefits identified were being able to see and know different kinds of wild animals and business opportunities. The latter is again associated with the perception that PAs create income-generating opportunities for communities.

Fewer respondents identified firewood, employment opportunities and getting game meat. Differences in both the case studies are discernible. Furthermore, the findings of this study indicate a different situation to what was discovered by Simelane et al. (2006) in their study on the six national parks under the South Africa National Parks (SANParks) about their knowledge and understanding of resources that occurs within the six national parks. More community respondents from both HiP and SGR cited the knowledge of different kinds of wild animals in the two parks as one of the benefits of residing next to a conservation area. It can be observed that the demand for fuelwood by adjacent communities in both study sites emerged to be low compared to other studies conducted elsewhere in Africa. The employment opportunities cited by focus group discussion participants and key informant interviews in both PAs were mainly seasonal employment which are created by both parks through their expanded public works programme (EPWP) initiatives which are funded under the working for water and the working for fire initiatives. These are the programmes that create employment opportunities for women and youth in surrounding communities to PAs (Adeleke, 2015).

Benefits of residing next to a protected area		SGR	Total
	(n=150)	(n=150)	(n=300)
Able to see and know different kinds of wild animals	62.7	42.0	52.3
Get game meat	1.3	36.0	18.7
Help with transport	-	4.0	2.0
Firewood	12.0	20.0	16.0
Business opportunities	48.7	36.0	42.3
Employment opportunities	10.7	21.3	16.0

Table 3. Community benefits perceptions of residing next to a conservation area (in %, yes responses only): multiple responses

It emerged during the focus group discussions and key informant interviews that the dissatisfaction expressed with regard to benefits derived can be due to the awarding of benefits at community level and not at the household level. Other studies have demonstrated that local people hold favourable attitudes toward wildlife conservation when personal benefits are derived from PAs. Hansen (2013) suggests that communities dislike communal benefits; rather, they enjoy them at individual and household levels. This is largely because most wildlife-induced costs (such as crop raiding and livestock kills) are borne and felt at the household level rather than the entire community (Spierenburg & Brooks, 2014). Essentially, community benefits undermine people's short-term needs and create a loophole for free riders as they barely address that question of who pays for and who benefits from wildlife (Godfrey, 2013).

Ngubane & Brooks (2013) argue that benefits from conservation initiatives targeting the entire community rather than the individual households are condemned

as they are termed public goods which the culprits and non-victims get to enjoy. Also, given the definition of community conservation, both study sites satisfy the definitional parameters on paper but not on the ground, as community members are highly antagonistic which can be attributed to the poor flow of benefits to the communities as noted by Pailler et al. (2015). Depoliticising conservation issues in the two study sites is imperative so as to ensure solidarity among multiple stakeholders which is vital for integrated conservation and development. Also, failure of community leaders in particular and community members in general to recognise laws and policy frameworks authorising them to profit from conservation outcomes further impedes the derivation of concrete benefits from the two study sites. In HiP, the business opportunities that few of the respondents identified are the sale of crafts to tourists (Table 4).

Fewer respondents stated sale of vegetables and other food to lodges and access to foreign currency. The low response rates in SGR can be attributed to the fact that the reserve has only limited accommodation for visitors and that is it does not receive many tourists like the HiP. Furthermore, the sale of crafts to tourists (the main income generating opportunity available for community members living close to conservation areas that attract large numbers of visitors as is the case of HiP) in SGR emerged to be significantly low because the area does not receive many tourists and it can also be attributed to the state of infrastructure (specifically limited road infrastructure and poor quality where roads are in existent) that do not favour tourists with small cars travelling to the area. During the focus group discussion it was noted that communities in Somkhanda are offering home stays to tourists that visit the park to learn about the history and culture of the Gumbi community. The extent to which households benefit from these home stays requires further investigation.

opportunities for communication (in 70, 900 responses only), multiple responses				
Business opportunities	HiP	SGR	Total	
business opportunities	(n=150)	(n=150)	(n=300)	
Selling of crafts to tourists	37.3	5.3	21.3	
Selling of vegetables and other food to lodges	7.3	5.3	6.3	
Access to foreign currency	1.3	3.3	2.3	

Table 4. If conservation areas have stimulated any business

 opportunities for communities (in %, yes responses only): multiple responses

Table 5. Alternative community development activities to be funded
by conservation areas identified (in %, yes responses only): multiple responses

Alternative community development activities	HiP (n=150)	SGR (n=150)	Total (n=300)
Agricultural expansion	25.3	73.3	49.3
Expansion of rural service centres	22.7	51.3	37.0
Livestock rearing	9.3	48.0	28.7
Infrastructural development	34.7	42.7	38.7

In relation to responses regarding the types of community development activities that should be funded by the conservation area, Table 5 reveals that more respondents in SGR identified areas that need to be supported than respondents in HiP. Specifically, 73.3% of the respondents in SGR and 25.3% in HiP would like the PA management authorities in their respective areas to assist with agricultural expansion. Furthermore, 34.7% of the respondents in HiP and 42.7% in SGR indicated that they would like to see the development of infrastructure funded, while 22.7% in HiP and 51.3% in SGR indicated that they would like to see the funding for the expansion of rural service centres.

Additionally, livestock rearing was identified by 48% of the respondents in SGR and 9.3% in HiP. Alternative community development activities that should be funded by conservation areas in their communities also relate to strengthening livelihood options and infrastructure that will have benefits at the household level as well.

The findings suggest that the majority of the people in HiP and SGR want the two PAs to support agricultural activities and expansion of rural service centres so that there would be sustainable and meaningful development in their respective communities and this is in addition to infrastructural development.

Some focus group discussion participants in both study sites identified aridity as a major challenge to farming. They indicated that it would be beneficial to both communities if the two conservation areas can assist with crops that are able to resist drought and also assist the two communities with rainwater harvesting tanks. These types of interventions are critical for sustainable livelihoods.

CONCLUSION

Contemporary conservation research argues for people-centred approaches that seek to provide multi-level benefits to local communities, especially within developing contexts. However, there is a dearth of information regarding local experiences and perceptions of community conservation initiatives within these contexts.

In this regard, the present study examined the benefits and costs endured by communities surrounding the two conservation areas in northern KwaZulu-Natal. From the study findings, it can be concluded that costs outweigh benefits for local communities living adjacent to HiP and SGR. Furthermore, both conservation areas have no formal benefit sharing mechanisms, leading to local communities having negative attitudes towards them and biodiversity conservation in general.

It is recommended that costs incurred by local communities can be offset by a number of actions such as putting in place formalised benefit sharing mechanisms to ensure more consistent flows of benefits to local people living on the edge; deliberate affirmative action where locals should be employed as a form of benefit of living close to a PA; and more detailed information on the economic, social, and opportunity costs of both study sites on local communities thus creating inventories.

These inventories can support the development of conservation and community development strategies to minimise the burden of the two PAs on local communities living in close proximity to these areas while sustainably managing biodiversity. The training of local residents to promote sustainable tourism activities that are integrated into the PA marketing strategies and product portfolio (such as tourists visiting local communities to engage in cultural tourism activities and purchasing arts and crafts as well as having the communities engage in agricultural activities to supply the PA restaurants and accommodation facilities) should also be initiated.

These types of activities will create income-generating opportunities for local people and improve their livelihoods thereby creating a more favourable climate for conservation. The management of both PAs should help to secure markets for local products; and holistically, management authorities need to have the capacity to embark on regular outreach programmes to dialogue with community members and to listen to their concerns. Regular dialogue will help induce pro-conservation attitudes, reduce acrimony, and curtail conflict situations.

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LANDSCAPE AND RECREATIONAL ANALYSIS OF YERTIS RIVER UPPER PART ON THE BASIS OF BASIN APPROACH (KAZAKHSTAN)

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Abstract: Structural-functional relationships of geosystems in geosystem classification in the river basin are relied on through systematicity concept. As single geosystem, river basin is supercomplex, exo-regulated, impulsively-dynamic geosystem, limited by two special types of surface: threshold - vertical (for example, glacial area) and contact - horizontal (floodplain). In our opinion, in studies of geosystems of seepage flow it is needed to considerate elements of macro and micro substrate levels of geosystems, not traditional component blocks because surface flow is differentiative factor besides of lithogeneus base. Elements of macro and micro substrate levels of geosystems are parameters of water and heat balance, productivity and yield capacity of phytomass. The purpose of the present article is to study geosystems of the basin of the Yertis river upper part. We regard the geosystems of the unified inter-continental rivers formed by water discharge as paragenetic and paradynamic complexes in the context of the increasing lack of moistening due to natural and anthropogenic factors. These natural complexes develop under the influence of two mutually conditioned leading differentiation factors – a lithogenic base and a river flow. These and other physical-geographical conditions forming the

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river basin enable to define the region as a unified mega-system. The article identifies basic regularities of the transformation of the natural environment of the Yertis river upper part basin. The methodological approach accepted by the authors to the study of modified systems is the theoretical concept of geosystem-basin approach to the study of anthropogenically-transformed systems. Either the following research methods were used: geosystem-basinal, statistical analysis, landscape-structural analysis and maps were compiled with the use of GIS on the ArcGis software.

Key words: research, landscape, river basin, geosystem, landscape, basin approach, macrogeosystem

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INTRODUCTION

According to V.N.Solntsev (Sochava, 1963), supercomplexity and impulsive responsiveness and exo-adjustablity of geosystems of low ranks on all the levels of geosystem organization of the whole macrogeosystem ground on three basic types of geosystem structures: 1) vector, 2) honeycombed, 3) iso-potential types (table 1) of geosystem structures. Such polystructure of geosystems is explained by availability in basins of complex structures of circulatory, radiating features which are fundamental in the system of interrelation - plain-mountain and due to availability of a "barrier effect", greenhouse effect and also other complex geographic processes arising in conditions of one macrogeosystem, with universally-oriented geoflow. The genesis of three types of structures is connected with types of physical-geographical processes occurring in the basin: the first type - structures with external (insolation) processes determined by solar power inflow, vertical flows generally conditioned by the latitude of the region, northern and south facing, the basin and water-dividing positions of geosystems. The second type is with intrashell (circulating) processes. Low-mountain reliefs and subgeosystems of foot hills refer to the second type. The third type is connected with intra-ground (gravitationaltectonic) processes. They include the geosystems of flow forming zones (table 1).

		-
Forming factors	Types of landscape structures	Physical-geographical processes
Zonal factors	Vector	External (insolation)
Zonal-azonal	Honeycombed	Intrashell (circular)
Azonal	Isopotential	Intra-ground (gravitational- tectonic)

Table 1. Types of landscape structures of geosystems according to V.N. Solntsev, 1948

This concept generalizes a range of old-established geosystem statements: independence of zonal and azonal geosystem differentiation A.G. Isachenko (Isachenko, 1981), genetic relation of altitudinal latitudinal zonality A.D. Armand (Armand, 1975) availability of catchment-based forms of geosystem orderliness F.N. Milkov (1967). Theoretical concept of relations of these three types of geosystem structures is well clarified by Solntsev books etc. Macrogeosystem of river catchment is considered by us as geosystem with territorial stability due to lithogenous frame with high biota plasticity which is connected with dynamics surface flow (Berdenov et al, 2016). In conditions of rivers basins of Upper part of Yertis river, simple lithologic and petrographic characteristics of mine rocks is not enough for clarifying of their systemically important role. It is needed to get compositional analysis and modes of occurrence of territorial composite of mine rocks Perelman, (1964) suggested idea on single and heterogeneous geosystems, the second one means geosystems, formed on different mine rocks; "geomorphological complexes"
(Isachenko, 1990). According to N.A. Solntsev (1975) these perceptions are unavoidably joined to famous definition of geosystem. All these factors, as in the case of other regions, affect the possibilities of tourism development, as is the case in the lake regions (Wendt, 2016; Atasoy et al., 2017; Mazhitova et al., 2018a; Nazarova et al., 2019).

AIMS AND BACKGROUND

Analysis of field expedition studies (July-August 2018), generalization of stock materials, excursion method, as well as methods of landscape mapping, interpretation of satellite images of key areas and route survey, geochemical and geophysical methods, paleogeographic ones, etc. (Mazhitova et al., 2018); Kabiyev et al., 2018; Ramazanova et al, 2019). All cartographic materials and models were made by ArcGIS 10 software. The territory of East Kazakhstan has passed a very long and complex way of geological development. In this regard it is characterized by structural-tectonic heterogeneity.

In view of that modern hydrogeological processes are determined by the nature of Paleozoic and pre-Paleozoic structures and ancient relief and the manifestation of young tectonics (Chlachula, 2011, 2017). The territory under study in the Alpine cycle of tectogenesis developed in isolation against the background of a larger geostructure which received the name of the Alpine geotectonic system of Altai. Within the latter three major tectonic structures of the first order are distinguished: the Altai arch uplift (Altai arch), the pre-Altai trough and the outer chain of the Altai uplifts (Nekhoroshev, 1914).

The described tectonic zones of Altai are at the same time its main orographic systems which play the role of watersheds of the largest Altai rivers. From the North, North-West, South-West and South the Altai arched uplift shares borders with an equally large young negative structure called the pre-Altai trough, which has a horseshoe shape facing the West with the convex (outer) side. Its foundation in the greater part of the area is composed mainly by Hercynides. As the structures of the second order within the Pre-Altai trough the following ones are found: the Kulundi depression, Semei-Scharsk structural closure, Zhaisan depression (Figure 1). Yertis macrogeosystem which is a constituent part of the Kara-Ob megageosystem on the territory of the Republic of Kazakhstan is represented by four subgeosystems which unite the basins of many tributaries of this river the permanent or temporary flow of which is directed to the river They include native Yertis, Yertis-Shulba, Yertis-Buktyrma, Yertis-Zhaisan Ob. subgeosystems. The North-Eastern watersheds of the Yertis-Buktyrma subgeosystem are represented by the Koksu ridge and Listyvaga whose morpho-structure is close to Alpine features. The tributaries Ertis, Uba, Ulba have their rise from the southern slopes of the Koksu ridge forming the native Yertis sub-geosystem. Along the southern slopes of the Listvyaga ridge and the Ulba ridge the rivers Buktyrma and Naryn flow whose basins form the Yertis-Buktyrma subgeosystem. The river Kurshym, a tributary, flows from the southern slopes of the Naryn ridge (abs. h. 3375 m). The Kaldzhir river, the right tributary of the Kara Yertis, the flow of which is regulated, has its rise from the high-mountain lake Markakol. The basins of these three rivers form Buktyrma, Uba and Kurchym subgeosystems, the functioning of which has an effect on physical-geographical processes of the whole Yertis macrogeosystem. The watersheds of the southern edges of the Yertis macrogeosystem are occupied by the mountain ridges of the Tarbagatai ridge having insignificant amplitudes of neotectonic movements. The south-west watersheds are represented by the low mountains Shyngyztau (Yedrei, Arkat, Murdzhick, etc.).

The north-east part of the subgeosystem is occupied by the edges of the West Siberian lowland - the Kulunda plain. Tectonically the southern part of the Yertis macrogeosystem presents an arch-like Neogene-lower Quaternary uplift formed on the location of Hercynian structures. In the Pleistocene these areas underwent glacial period (Djanalieva, 2010). The Northern edge of the macrogeosystem's region refers to the West Siberian plate.



Figure 1. Hypsometric map of South Altai

The high-altitude strongly dissected relief of the southern edges of the region gradually passes into the rolling-undulating plains of the middle reach of the Yertis. Absolute marks vary from 235 (the mouth of the Uba river and the Alei river valley) to 2000 m (at the tops of the "whites"). The surface of Yertis macrogeosystem with gentle incline to the North is characterized with rather compound form of the terrain. Often flat crests alternate with gentle slopes, small closed depressions, sometimes arranged in chains. The largest basins are associated with tectonic movements (the Teniz lake). Neogene deposits are represented by two suites - lower Miocene (Aral Suite) and middle Miocene (Pavlodar Suite) (Djanalieva, 2010). The first one is of lake origin – saline green clay with gypsum, the second one consists of lake-marsh and alluvial sediments of red color with gypsum. Quaternary deposits are widely represented, their thickness depending on local conditions of accumulation and destruction varies from 0 to 100 m. The most common deposits are sandy, alluvial, lake-marsh accumulations of different mechanical composition and cover yellow-brown carbonate clay loams of loesslike appearance.

EXPERIMENTAL

Groundwater, soil and climatic conditions, rivers, lakes and biodiversity play an important role in the structural analysis of the landscapes of the upper part of the Yertis river basin. The aim is to study the nature and dynamics of geoecosystems of landscapes of the upper part of the Yertis river basin impacted by modern anthropogenic factors (technogenesis and agrogenesis) on the basis of geosystem-basin approach. Groundwaters are non-saline. The most aquiferous are the Cambrian-Sulirian limestones where the water is of the fissure-karst type, hard. Clastic glacial and alluvial deposits are also aquiferous. Alluvial strata of ancient river valleys are characterized with formation waters. The waters have a weak chloride-sodium salinity. The Yertis macrogeosystem is characterized with great variety of soil and climatic conditions.

In the Yertis-Zhaisan subgeosystems with very dry North winds and the dominance of ephemeral desert vegetation the appraising points of soil and climatic conditions are less than 40. Mountain areas of subgeosystems of the Eastern edges of the macrogeosystems refer to the humid mountain agro-climatic zone and are estimated at 100-130 points. Further to the North, they drop to 60-80 points. In addition to these tributaries the Shar, Shagan, Aschisu, Kyzylsu rivers flowing into the Yertis are of importance in the physical and geographical situation of subgeosystems. Some of them have outlined above-flood terraces, but the flow in them is unstable (Shagan, Aschisu, etc.).

According to the regime the rivers refer to the Altai type. The rivers' feeding is mixed, due to the melting of seasonal snow and summer rains, with exception of the Buktyrma river which has a glacier-derived feeding. The rivers Kurshym, Buktyrma function as timber-rafting rivers. All the rivers (with exception of the Yertis) have a hydrocarbonate composition of water during the flood and a chloride composition during the water-low season. In the said period there is an increase in mineralization in 2-5 times. Modern glaciation is developed in the Katun ridge, in the sources of the Bereli and Sarymsakty rivers. The average annual runoff depth fluctuates from 1000-1500 mm (in the zone of macrogeosystems runoff formation) and decreases to 2-5 mm in the transit zone (Burlibaev, 2014). The average long-term water consumption makes up 895 m3 / s with a catchment area of 179 thousand km2. The average annual water supply of the Irtysh macrogeosystem, which is formed within the Republic of Kazakhstan, is 200 thousand km3 per 1 square km in the zone of flow formation (Zhakupov et al., 2014).

The average dates of the flood on rivers with average catchment heights up to 1000 m comes on April 1, with a height of up to 2000 m-on April 20, and with a catchment height of more than 2200-2500 m. The flood starts in May. The rise of the flood on the rivers and temporary streams on the flat, hilly-low-mountainous regions of the Upper Yertis basin is rapid. After 10-15 days the maximum is reached and after 15-20 days the flood is over. On the rivers of the second type the flood is less high, stretched in time. The maximum of its height the flood reaches in the period from April 25 to May 5, and ends in late June-early July. The type of flood is spring-summer. The floods commence in the period from April 10-March 31 in the zone of flow formation and April 5-10 in the transit zone. The flood is over on July 31 and May 15 respectively (Galperin, 2012).

The Kara Yertis River, which has well-developed valley, is the main water way of Kalguty-Takyr and Shorga-Kosty sub-geosystems. This river forms waterlogged estuary when flowing into the Zhaisan lake. The Zhaisan lake takes ancient valley of Yertis. Lake waters are nonsaline, flowing. After construction of Buktyrma hydro-electric power station and the reservoir, backwater effect in upper part expanded along the Yertis valley to Zhaisan, so the level of the lake rose up to 388m resulting in the flooding of low lands and the Kara Yertis delta. Kaldghyr, Kurshym, Kendyrlik and other rivers flow from slopes of the nearest mountains. Many of them dry up in low water season (Zhensikbayeva et al., 2017, 2018). Ghaysan big lake forms Yertis-Ghaysanskaya subgeosystem, also Ghaysan is young geological feature. Tourist resources such as landscape, climate, hydrographic characteristics, biological diversity, are very important for tourism development (Ilieş & Wendt, 2015).

The lake Markakol is located at an altitude of 1449.3 m. above sea level. Markakol-Karakaba subgeosystems function in a strongly dissected topography. The slopes of the middle height mountains facing the lake are occupied by mountain-tundra, mountainforest and mountain-meadow-steppe natural complexes. Geosystems function in conditions of increased humidity. Geosystems formed by 27 small rivers (Topolevka, Karabulak, Matabay, etc.) have a stable character. Ultra-fresh, slightly acidic water of lake areas forms geosystems of calcium group. To protect the biota, the Markakol natural reserve (Nekhoroshev, 1914) was organized in 1976 [12].



Figure 2. Devisualization in ArcScene 10 program of the Markakol lake area of the Southern Altai region

Geosystems at an altitude of 1760 m above sea level are formed by lake geosystems of the lake Rakhmanovskoe, surrounded by forests of larch, cedar and spruce. The lake is flowing, has the depth of 30 m, the Average annual fluctuation of the water level is 1.5 m.

Geosystems of the lowest rank are formed in the zone of flow formation in the conditions of mountain-tundra, mountain-meadow, mountain-forest, mountain-steppe high-altitude zones. The northern mountain ridges of the macrogeosystem are characterized with forests of Siberian fir and larch.

Geosystems, linked to the transit zone of the flow, develop in conditions of the steppe zone. Geosystems of flat plains dominate, with numerous suffosion and relict thermokarst depressions and runoff hollows that causes weak drainage and a complex combination of swamping and salinization processes. The instability of watering, its intraannual fluctuations result in an alternate strengthening of these or the other processes.

Markakol natural-recreational area. The allocation of this province is based on the location of the lake Markakol in it. In Kazakhstan, this is the largest high mountain lake. To the north of the lake is the high mountain ridge Sarym-Sakty, whose maximum height is 3373 m. Along the northern coast of the lake there is the mid-altitude Kurchum ridge, in its middle part an array of 2645 m high rises. Along the southern shore of the lake is the Azutau ridge with an absolute height of 1800-2300 m. The lake is of tectonic origin. The southern shore is steep, formed by the edges of the ridge that fall directly into the

lake. The northern coast is low, formed by the newest deposits. The length of the lake is 38 km, the width is 18 km, the maximum depth is 27 m. The catchment area is 1180 km2. The mirror of the lake is at an altitude of 1485 m. The landscapes of the area are picturesque. Larch forests predominate, on the northern slopes there are cedar-fir-aspen taiga, and on the southern slopes there are many rocks, between which are steppe lawns.

Tourism here should be of an ecological nature (Zhensikbayeva et al., 2017; Saparov et al., 2016). Nonsaline soils dominate in the Yertis-Buktyrma subgeosystem. Salt marshes are found on the shores of salt lakes, and meadow species - in the valleys of some rivers. The general direction of geochemical flow in this subgeosystem is from South to North, and the amount of saline soils in this direction gradually decreases. This situation is explained by a change in the precipitation-evaporation ratio, primarily due to a decrease in evaporation. This phenomenon is called inversion of salt belts. The main type of soil salinization is sodium sulfate. The tendency of increasing the area of saline soils does not cross the toxic threshold. The biological cycle and productional processes in the biota of the Yertis macrogeosystem are characterized by a high contrast associated with the diversity of habitat areas of communities. According to long-term stationary researches in Barabinsk forest-steppe, stocks of live phytomass of a meadow steppe on ordinary chernozems (tops and the top slopes of crests) make up 16.4 C/ha (including 2.2 C / ha above-ground part), annual productivity-19,0 C / ha (including 4,0 C / ha of the above-ground weight). The maximum productivity was noted for floodplain reedgrass swamps (63.7 C / ha), the minimum - for grass thickets on meadow salt marshes (3.1 C/ha). Birch outliers on crests produce 9 C / ha (7 C/ha of above-ground parts) of the phytomass, and in inter-crest depressions-13.8 C / ha. Reserves of ash constituents and nitrogen in the live and dead organic mass of the Yertis macrogeosystem make up 570 kg / ha in meadow-salt marsh communities, 1600 kg / ha in meadow steppes, 9200 kg/ha in reedgrass swamps. Up to 80% of mineral elements are concentrated in underground organs. 1013 kg/ha of ash constituents (CA, Na, K, Si), 175 kg/ha of nitrogen are consumed for the creation of annual production in the meadow steppe, in the birch outliers of the inter-crest depression it is much less (up to 454 kg/ha).

The meadow steppe is marked by a high intensity of metabolism, the biological cycle is almost closed (Dghanalyeyeva & Bayandinova, 2003). The soil cover in the hollows and lowlands is mottled. In the North of the Yertis macrogeosystem leached chernozems predominate in the watersheds under the settled meadows; in the South semihydromorphic meadow-chernozem soils are common under the meadow steppes. Various halophytic variants of meadow steppes are common along riverbeds, on floodplain terraces.

Grey forest solodic soils are developed under birch outliers on crests, soloth soils are developed on kettles. Floodplain terraces of all subgeosystems are represented by low-land alluvial clay and loamy plains, as well as ancient lake-alluvial plains with flow hollows. Low terraces, hollows, the lake basins of Markakol-Karakaba subgeosystems and Yertis-Zhaisan subgeosystems are featured with widely distributed halophytic types of the steppe - feather grass-fescue steppe with halophytic motley grasses and fescue goldilocks steppes on salt marshes. The Bugaz-Tebesty subgeosystem is characterized by low-land alluvial and Aeolian sandy plains along sandy flood-plain terraces and ancient estuaries, often with dune-bumpy and bumpy-ridge sands, semi-fixed groupings of sandy feather grass, fescue, meadow oat grass and psammophytic mixed grasses on underdeveloped dark chestnut and chestnut soils (Bayandinova, 2003). Yertis-Shulba, Yertis-Buktyrma, Yertis-Zhaisan subgeosystems cover geosystems linked to the Kara Yertis valley, the lake Zhaisan and Buktyrma reservoir. They have features typical to Central Asian semi-desert. Areas with the lowest elevations are presented with a hillside plain with tasbiyurgun-wormwood vegetation on brown soils. Valley geosystems of the Kara Yertis: Kalgaty-Takyr, Shagan-Ob-Zharmy, Shorga-Kosty, Bugaz-Tebesty, Zhuzagash have saltwort-wormwood plant communities, and lakeland winnowed sand massifs have erkek-takyr communities.

The high terraces of the Kalgaty-Takyr subgeosystem are occupied by sagebrushgrass associations formed on light chestnut soils. Higher according to the high-altitude zones of Shorga-Kosty subgeosystems they change their look from mountain-tundra, mountain-meadow to mountain-forest and mountain-steppe ones.

CONCLUSION

Previously geographical works on the study of the structure, dynamics and development of landscapes of the upper part of the Yertis river basin were as a rule through the example of long-evolving and at the moment relatively stable landscapes. The assessment of the landscape formation process and landscape functioning process of the upper part of the Yertis river basin is based on the features of their morphological structure. Having considered physical and geographical features of landscapes of the basin of the upper part of the river Yertis it is possible to draw the following conclusions:

The natural complexes of the Yertis-Zhaisan subgeosystems differ sharply from each other by modern physical and geographical processes owing to different conditions of formation of the entire geographical flow which is based on surface and underground flow;

Technogenesis factors modified the natural potential of the region and its ecological situation to different degrees. Buktyrma, Kurchym, Kalguty-Takyr subgeosystems develop impacted by toxic substances, which are decay products of emissions from the enterprises of nonferrous metallurgy.

Water and land resources, air basin of urban agglomerations of Ust-Kamenogorsk, Zyryanovsk, Ridder, Serebryansk are contaminated with zinc, lead, mercury, beryllium salts. Of particular note is the high rate of lead pollution (3.3 MPC); the Huge rate of industrial and agricultural production of the Yertis macrogeosystem intensifies the negative environmental situation;

Irregularity of modern technical equipment in the context of market economy, widespread destructive, irrational use of natural resources have caused the development of adverse natural and anthropogenic processes on large areas. All that resulted in the phenomenon, which received the name "ecological crisis" in the scientific literature;

The problem of protection of geosystems from negative processes of technogenesis has become one of the most important practical and natural - scientific issues in the Republic of Kazakhstan. However, there is a certain contradiction between the social nature of environment protection and private activities of many enterprises of non-ferrous metallurgy, which makes it difficult to solve the environmental problems of the region. Further research on the territory of the upper Yertis river basin with practical results will provide opportunities to improve the sustainable development of recreational activities in this unique Ecoregion.

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TOURISM GOVERNANCE IN KOMODO NATIONAL PARK, INDONESIA: BLESSING OR CURSE?

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Abstract: This study aims to explain the management of tourism in the Komodo National Park (KNP). Besides, this study portrays the impact of tourism management on the socio-economic life of people living nearby the KNP. This study employed qualitative research methods. The data were obtained from interviews with community leaders, naturalist guides, village heads, tourism managers, fishers, and tourism management communities in the region. Two villages in the KNP were chosen as the data collection sites. The results of this study indicate that the management of tourism in the Komodo National Park area is dominated by the KNP Officer, while the local people exclusively positioned as natularist guide. Besides, this study shows that the existence of tourism in the national park only impacts on people living in the Komodo island region which exclude people living in the island of Rinca from welfare and prosperity.

Key words: tourism, governance, national park, komodo, blessed, curse

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INTRODUCTION

Tourim sector is an alternative sector owned by each country to help increase Gross Domestic Product (GDP) (Eugenio-Martin et al., 2008), reduce poverty (Vanegas et al., 2015; Ramukumba, 2019) and have the potential to develop peripheral communities (Keyim, 2017). However, at the same time, tourism also impacts on environmental damage (Daby, 2003; Kurniawan et al., 2016), land grabbing (Zoomers, 2010), land acquisition (Kodir, 2018), water crisis (Cole, 2012) and often causes social conflict (Lee et al., 2010). In the context of Indonesia, the tourism sector is one of the alternative sectors to increase foreign income, increase investment, and develop the region. Each region is encouraged to develop tourism potential.

One of them is to establish policies through Government Regulation Number 50 of 2011 concerning the National Tourism Development Master Plan 2010-2025 (Bappenas, 2016). The follow up of the regulation is to establish ten priority tourism destinations with the protection of the Tourism Authority Agency (BOP). One of the areas determined is Komodo National Park (KNP). The determination of the Komodo National Park region as one of the priority tourism destinations in Indonesia because this region is one of the seven wonder of the world. This area was designated as the Komodo National Park on March 6, 1980 and was declared a Human and Biosphere Reserve in 1977 as a World Heritage Site by UNESCO in 1991, as a National Symbol by the President of the Republic of Indonesia in 1992, as a Marine Protected Area in 2000 and also as one of the Model National Parks in Indonesia in 2006. Not only that, Komodo National Park waters ranked second as Wolrd Best Snorkeling in 2015 (CNN Survey).



Park from 2010 to 2017 (Source: https://travel.tempo.co, 2017)

From figure 1, it can be seen that the number of tourists visiting Komodo National Park constantly increases every year. Even in 2018 (January – August), the number of tourists reached 126.599 people (https://travel.kompas.com, 2018). However, whether the management of tourism has an impact on improving life of the

people living in the KNP area is not very visible. Even so far, the management of tourism in the KNP region reaps the pros and cons on the part of the community.

As an example, one controversy aligned when the tourism management was surrendered to the private sector happened from 2003 to 2012, led by PT. Putri Naga Komodo (a private company managing the Komodo National Park).

After several years of operation, the company went bankrupt, and there was no clear public accountability. At this time, the community did not reap the benefits of this management. Given the aforementioned discussions above, this study aims to explain the dynamics of tourism management in the Komodo National Park area. This present study encompasses (1) who the actors that dominating in the tourism management and how this tourism is managed, and (2) the extent to which tourism management has an impact on socio-economic-political life of people living in the Komodo National Park, especially on Komodo Island and Rinca Island.

LITERATURE REVIEW

Tourism plays a strategic role and has served as one of the pivotal pillars in the framework of national economic development. As one of the industrial sectors, tourism can be utilized to increase state revenue apart from other commodities. At present, the development of the tourism sector also contributes to the country's foreign exchange earnings. In Indonesia, for instance, the tourism sector ranks in the 4th position after oil and gas, coal, and palm oil in terms of national foreign exchange earnings. Thus, the Indonesian government projects that by 2020 it can accelerate to be a major source of foreign exchange exceeding three other commodities in the country.

The projection of the tourism sector revenue is extremely optimistic inasmuch Indonesia is a country that holds a million natural beauty. One of them is the Komodo National Park. As one of Indonesia's tourism centers, this region is a central attraction for researchers to conduct tourism studies in the region.

One of the factors that encourage tourists to visit the Komodo National Park is due to the natural factors. A recent study conducted by Atahena et al. (2015) explained that most of the attractions for tourists to visit the National Park were natural factors and tour package prices (34.9%) and transportation and hotel factors (17.8%). Meanwhile, the existence of tourism in the Komodo National Park region directly or indirectly impacts on the local economy of the people living in the Komodo National Park area (Walpole & Goodwin, 2000; Jaddah et al., 2015). The impact is mainly on shifts in livelihoods, aside from benefits of fishing sector. Many of the poeple are involved in souvenir tradings and work as tourism guides (Jaddah et al., 2015).

Besiedes, human activities (tourism) in the Komodo National Park area have an impact on the pattern of distribution and activities of the Komodo dragon (Ardianto, et al., 2018). Albeit extensive studies have been enacted to uncover the socio-economic benefits of the Komodo National Park to the people in the region, little attention has been addressed to explore the extent of the impact of tourism on local communities within the Komodo National Park. It is for this reason that the present study is carried out. It attempts to unveil whether the tourim in the Komodo National Park entails positive impacts on the people's social life and the natural environment.

This study generates an issue raised by Cochrane (2013), contending that the Komodo Co-Management Initiative failed to design and implement tourism management policies, especially in involving tourists. This is because the management of tourism policies in the national park areas is different from those outside the national park. Tourism management in the national park areas remain very complex inasmuch

they have to maintain conservation activities (Eagles, 2010; Kalternbon et al., 2011; Puhakka & Sarinen, 2013; Kruger et al., 2017; Fredman & Wikstrom, 2017).

METHOD AND RESEARCH AREA

To obtain answers of the research formulation, this study employed qualitative method . The study was conducted from 2 June to 29 July 2019. The data were collected through two stages. First, conducting interviews with several related stakeholders such as Komodo National Park Officer, community leaders, village heads, hamlet heads, village officials, traditional communities, naturalist guides, Kompas Community, Kogetta Community, fishing communities, and entrepreneurs in the field of tourism.

Second, initiating a focus group discussion with the local community. In addition, observations were also geared to capture tourism activities in the region. The data collection process was carried out in Komodo and Rinca Islands. These islands have become tourist destinations due to the existence of Komodo dragons.



Figure 2. Geographical Location of the Research Area

The analysis of this study was carried out within several processes in the qualitative approach such as (1) data reduction which covers the process of selecting, focusing, abstracting, and transformating data, (2) presentation including a description of the conclusions of arranged information that makes it possible to draw the conclusions, and (3) conclusion and verification.

RESULT AND DISCUSSION

History of the Determination of the Komodo National Park

The national park is a nature conservation area containing native ecosystems. It is managed with a zoning system and is utilized for research, science, education, supporting cultivation, tourism, and recreation. Based on its management objectives, the use of interest is focused on science and tourism for the interests of parties from outside the region (Kosmaryandi, 2012). However, it is not easy to accommodate all the interests of various actors in management in protected areas (Rotich, 2012).

Komodo National Park is one of the national parks in Indonesia located between the Province of West Nusa Tenggara (Sumbawa Island) and the Province of East Nusa Tenggara (Flores Island). The main attraction of this national park is the existence of Komodo dragons. Komodo is one species of animal whose existence is protected since the days of Dutch colonial rule until now. According to Minister of Forestry Decree No. 306/Kpts-II/1995, this animal was discovered by JKH Van Steyn in 1911 and was named Varanus Komodoensis by PA. Ownes in 1912. In order to protect these endangered animals, various attempts were made by local and international governments, one of them by giving names to the areas where these animals are based on their functions and purposes. This naming has been done several times starting from "Animal Sanctuary" to "National Park" as it is today. The following table describes the evolution of the Komodo National Park name from 1926 to 1992.

Year	Naming	Legal
1926	Animal Sanctuary	Besluit van het Zelfbestuur van het Landschap Manggarai, followed the previous regulation on the protection of Komodo dragons in 1926 Rinca Island and Padar Island became part of the Wildlife Sanctuary in 1939 because Komodo dragons were also in this island (found on Zelfbestuur van Manggarai verordening No.32 / 24 September 1938 and Resident van Timor en onder horigheden No.19 27 January 27 1939).
1965	Wildlife reserve	Decree of the Minister of Forestry No.66 / Dep.Keh / 1965 dated October 21, 1965, concerning the Appointment of Komodo Island as a Wildlife Sanctuary. Based on the Decree (SK) of the Governor of KDH Tk. I. East Nusa Tenggara No.32 of 1969 on June 24, 1969, Komodo Island, Rinca Island, and Padar Island were designated as Forest Tourism in 1969.
1977	Man and Biosphere Reserve (Cagar Biosfer)	United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1977.
1980	Komodo National Park	Minister of Agriculture Announcement on March 6, 1980, regarding the Establishment of the Komodo National Park.
1991	World Heritage Site	UNESCO
1992	National Komodo Park	Minister of Forestry Decree No.306 / Kpts-II / 1992 dated February 29, 1992 there was a change in the function of Wildlife Reserves for Komodo Island, Rinca Island and Padar Island (area 40,728 Ha) and the appointment of surrounding sea waters (area 132,572 Ha) located in the Regency Dati II Manggarai Dati II Province East Nusa Tenggara became the Komodo National Park.

Table 1. Evolution of the Name of the Komodo National Park

Based on the table above, the name alteration of the Komodo National Park has been carried out six times both by local, central, and international governments. Precisely in 1992 which was the culmination of the naming of Komodo National Park President Soeharto set the Komodo dragon as a symbol of national animals through Presidential Decree No.4 of 1992 on January 9, 1992. The determination of Komodo Island as a national park area is one of the global symptoms that occur not only in Indonesia. But also in developing countries that have rich biodiversity (Rotich, 2012).

The main purpose of establishing it as a National Park area is to protect the Komodo National Park area from damage, one of which is caused by fishing activities when fishing. In general, zoning is a common tool in protected areas, especially for managing tourist visits (Thede et al., 2013). However, the determination of this zone does not take into account the existence of humans who also live in it, where most of them work as fishermen who depend their lives on the sea. Empirically, the zoning determination narrows and limits the areas inhabited by indigenous peoples (Li, 2001).

Conservation, Tourism, and Change of Livelihoods of Local Communities in the Komodo National Park Area

The main goal of establishing Komodo Island and Rinca Islands as national parks is conservation efforts. These efforts sometimes trigger different effects at one time. First, conservation contributes greatly to causing poverty to indigenous peoples because of the expropriation of their land and resources. On the other hand, in other cases, conservation projects offer opportunities for indigenous peoples to advance their perspectives on traditional land management and the natural environment (Popova, 2014), one of which is the tourism development project. Both impacts are logical consequences when conservation becomes a market expansion of neoliberalism (Kelly, 2011; Ojeda, 2012; Holmes, 2015; Rea, 2015; Suarez, 2015). The designation of the two islands as conservation areas plays an important role in changes in the livelihoods of the people in the area. However, the people who feel the most impact from the existence of a national park are only the people on Komodo Island, especially in Komodo Village, as is the case with the community on Rinca Island in Pasir Panjang Village which does not significantly affect livelihood changes. Pasir Panjang (a long beach) is a village on Rinca Island with an area of 19.625 Km² which consists of two hamlets namely the Komodo Hamlet and Bajo Hamlet, as well as two villages located on another island, one village located on Kukusan Island and one other village on Kerora Island.

From the north, the village is bordered by Papagarang Island and from the south, it is bordered by Kode Island and Motang Island, while in the east it is bordered by the plains of Flores Island and Labuan Bajo, in the west bordering Padar Island. The first indigenous people who lived in the village of Pasir Panjang were people who came from Komodo Island (Komodo Tribe) and Bajo Tribe. In addition to these two tribes, now many migrants settled in Pasirpanjang, they came from Bima, Selayar, Flores, Ende, and Java. Increasing numbers of migrants have led to an increase in the number of residents in this village. In 2016 there were 1,612 residents (BPS, 2016).

The majority of the population in Pasir Panjang Village work as fishermen. They catch fish using nets and trawl. This expertise was obtained after the arrival of people from the Bajo Tribe. Previously, the people's livelihood here was gardening in the fields. However, at this time, besides catching fish, they also catch sea cucumbers or so-called meting. Meting has a high sale value, usually marketed to collectors in Labuan Bajo and then sent abroad, such as in Hong Kong. Meting that is sold is black and brown, while white is consumed by the community. Besides the meeting, another catch that has economic value is *lure* (a kind of dried anchovy). The lure is sold to collectors in the village, and some others are sold directly to Labuan Bajo. The way to catch lure is very simple, using traditional equipment, such as nets, fishing rods, tide pairs, and tuba pairs.

This activity is carried out by almost all people in the village of Pasir Panjang, especially men, but it is not uncommon to see small children also joining their parents at

sea. The fishing activity is almost done every day with income that does not settle depending on natural conditions. The weather supports them to earn an income of Rp. 20.000.000- up to Rp. 30.000.000-, and then this income is shared between the shipowner and the crew, one ship usually has 3 to 5 crew members (Interviewed, 2019). However, if the natural conditions do not support the income that can be drastically reduced. Nevertheless, the people in this village have remained as fishermen to this day. For them, the sea is the source of life provided by God for them.

After the area has been designated as the Komodo National Park area, frequent turmoil between the local community and the government or the Komodo National Park Office (BTNK) based in Labuan Bajo raised exclusively. The disputes are mainly related to zoning arrangements affecting fishing activities since it has been widely known that the Komodo National Park has been under the management of the Komodo National Park Office (BTNK) since 1992. BTNK is a Technical Implementation Unit (UPT) under the direct supervision of the Directorate General of Conservation of Natural Resources and Ecosystems, the Ministry of Environment and Forestry. The main task of BTNK is to arrange to zone for nature conservation. And also as a key tool in strategies for sustainable tourism (Lane 1994). However, the government does not involve the community in the structuring process such as zoning points that cannot be trampled by humans except in the context of regional development. This rule causes people to lose fishing locations. In practice, the formal determination of national park zoning causes community access to natural resources to be limited (Kormaryandi et al., 2012).

A further impact felt by the community is to find fishing locations in places farther from their residences, with greater safety risks and higher expenses for fishing needs such as fuel, food, and other needs. In addition, they also often encountered unfavorable treatment from officers who conduct sea security, especially at zoning points when caught doing fishing activities. Even so, they remain as fishermen today. The difference, if around the year 2003 when PT. TNC is still involved in the management of the KNP area, and the movement of fishers is relatively limited by zoning. Afterwards, since 2010 after TNC decided to stop the TNK management permit, the policy began to fade, the level of sea security carried out by officers began to decrease, so that the community felt a little more free to catch fish in any location than before. Even so, the community claimed that there were still patrols that were sometimes carried out by officers, although not as strict as before. Aside from working as a fisherman, the people in the village of Pasir Panjang also have other jobs in the field of tourism. However, the number is scant. The types of livelihoods in the field of tourism include:

Communities in the rounism Sector (Data source: Interview, 2019)				
Types of Livelihoods	Naturalist Guide	Souvenir Seller	Homestay Providers	Sea transportation service provider
Numbers	30	1	3	3

 Table 2. Types of Livelihoods of Pasir Panjang

 communities in the Tourism Sector (Data source: Interview, 2019)

If calculated from the whole community in this village, there is only 5 % of the total population work in the tourism sector, while the rest still maintain their old occupation, such as fishing. Based on this fact, it is concluded that the national park has not had a significant influence on the changes in people's livelihoods in the village of Pasir Panjang on the island of Rinca. This is because the villagers who live on Rinca Island do not benefit from the existence of tourism. Such conditions are as described by Mutanga et al. (2015) that not all communities living in conservation and tourism areas benefit

financially from the industry. This is different from the community life in Komodo Village, located on Komodo Island. This village consists of 4 hamlets with a population of 1.714 people in 2016. The population in this village continues to increase from year to year, but the availability of residential land is very limited, this is because the Komodo Village is included in a "special zone" that does not require human existence inside, for they want to preserve Komodo dragons. This separation process is a form of control related to what can and may not be done by humans (Adams, 2019).

As a result, the condition of settlements in this village seems crowded with a distance of only 3 meters between one house and another house, meaning that there is little or no land that residents can use as their yard. The effort was driven by the pretext of guarding the wild animals against extinction (Adams, 2016). Supposedly, in controlling these wild animals, it is not necessary then to drive the people out of their places of residence, but instead use technology such as radio, satellite tracking, cameras and audion to control their movements (Adams, 2019). The inhabitants of Komodo Village are not only native to Komodo but also migrants from other areas such as Sumba, Atalabo, Bima, Ambonese, Bajo and Bugis people. The migrants live and mingle with native Komodo dragons and influence the type of livelihood of the people in this village. In general, the people of Komodo Village have experienced three changes in livelihoods.

Table 3. Changes in Livelihoods of community in Komodo Island (Data source: Interview, 2019)

Year	Before 1980	1980 – 1996	After 1996
Type of livelihoods	Hunting and gathering	Fisherman	Tourism services

Before 1980, the main livelihood of Komodo dragons was to utilize forest products by gathering and hunting and fishing using traditional methods such as nets. In general, they take branches from the forest, collect acids, and hunt deer. Gabang is a kind of wild tubers in the forest. At that time, community settlements were still scattered along the island. Some live in mountainous areas such as in Bukit Ara, and some live in coastal areas. The form of settlements is grouped according to the type of tribe. Their lives at that time mingled with Komodo dragons, although famous for being wild and wild, but the Komodo community did not feel threatened by its existence.

In addition to searching for forest products, they also hunt deer. During hunting, Komodo's people have a close relationship with Komodo dragons. Usually, the hunted animals are killed in the forest, then the head, legs, skin, and organs are left for the dragons, while the rest is taken home. For the Komodo community, this animal is not as extensive as one might imagine, but it can attack someone if it feels threatened.

In the same period, before 1980, some people in this village, especially migrants from Sulawesi, made a living as fishermen. In 1980 (the second period), along with the formation of the Komodo National Park Area, people's lives began to change drastically. This island is designated as a protected zone which requires that all human activities in the area be removed. Along with the determination of this zoning, another policy emerged that the Komodo Village community was prohibited from doing activities in forest areas such as gathering and hunting deer activities as they did before because they were referred to as illegal poachers. There was even a plan to relocate Komodo settlements to the mainland of Flores Island, but in the end, it failed because of resistance from the local community. Even though the policy was considered arbitrary, the people could hardly resist, because, at that time, the Suharto regime was in power with a militaristic approach that tended to be intimidating and not infrequently violent. This practice confirms that conservation as a form of accumulation by dispossession (Benjaminsen & Bryceson 2012). As a result of zoning, the form of community settlements has changed, from being initially dispersed to being forced to live in a limited location. Before the existence of KNP, community settlements could be found in Loh Liang, which is now the center of tourism on Komodo Island. The location which is used as a place for community relocation is on the coast of Komodo Village, which is made to extend along the coastline.

Initially, for the reasons of conservation the people who built houses here were monitored by the government, they could only use reeds as roofs, not allowed to use zinc roofs. Changes to the lives of Komodo dragons not only touch the form of the settlement but also affect people's livelihoods. At that time, the community began to turn into fishers and they learned how to sail from migrant tribes such as the Bugis and Bima tribes who had become fishermen first. Marine products in the Komodo National Park (TNK) are very abundant because geographically the TNK region is between the confluence of the Flores Sea and the Indian Ocean. Natural resources found in the sea area are coral reefs, various types of fish, and plankton. Because of this, it is not surprising that TNK has become one of the best diving spots in the world based on the results of a 2015 CNN survey (https://cnnindonesia.com, 2017).

In the past, the boat used by fishermen to catch fish was called bagang, a unique shape that was driven by wind power and was equipped with two right and left wings. This type of ship is called unique because there are two boats put together, then in the middle, there is a kind of small hut that is used to store lunch or a place to cook rice while waiting for the catch. In this period everyone has a butterfly because all the residents here become fishermen. Changes in livelihoods again occurred in 1997; some people in the village began working as artisans of Komodo statues and souvenir sellers.

At first, they were small groups that were getting bigger and bigger. Along with that, the number of fishers has also declined dramatically. Changes in livelihoods in this village are closely related to conservation management carried out by the government. This is very clearly seen when TNC and PT. Putri Naga Komodo (PNK) has been involved in the management of KNP since 1995. The privatization of TNK management was carried out by PT Putri Naga Komodo in 2004-2011, where its shareholders were PT. TNC. Based on interviews with local communities, the drastic changes that occurred in Komodo Village were based on at least three reasons. First, TNC and PNK encourage local people to work in the tourism sector. In realizing this, TNC gave a proposal to conduct training in the making of Komodo dragons and the manufacture of various types of souvenirs.

The reason used is because the fishing season is uncertain, sometimes fishermen do not go to sea due to unfavorable natural conditions so that free time can be used to make statues and souvenirs. At that time, the government brought artisans from Bali to train the local community. However, the transformation of tourism does not guarantee that local people are satisfied with their income in this sector (Lasso & Dahles, 2018).

The second reason is that there is a zoning system that helps accelerate changes in people's livelihoods. The establishment of zoning aims to realize an optimal KNP management system, which is stipulated in PP No.68/1998 and revised in 2011 in PP No.28/2011 (Mahmud et. al, 2015). As a result of zoning, the fishermen's movements are not as free as before, and fishing equipment is limited, they are not allowed to use nets as high as 20-30 meters, and are not allowed to do fishing activities in diving locations, such as at Pink Beach. Pink Beach is a beach which is approximately 1 hour from the village of Komodo and is a favorite place for fishers to catch fish. However, this place is used as one of the zone points because there are matta fish whose population is protected by KNP. This place is also one of the diving spots that is the destination of tourists, so fishing activities are feared to disturb or endanger tourists who are diving. The stipulation of this regulation is still carried out, although it is not accompanied by clear socialization to the public. The government, through a joint operation between TNC, BTNK, and the sea police often conduct security in the zoning area.

People often get abusive treatment such as beatings, torture, and some are even jailed if they are caught doing fishing activities in a designated zone area. The third reason, because the velocity of money in the business of making dragons and souvenir sales is much faster than catching fish. The sea products are abundant, but the distance from the market that is used as a place to sell fish is very long, namely in Labuan Bajo, which is about 5 hours away. As a result of the factors above, slowly many people are involved in a business in the tourism sector, namely as a maker of Komodo dragons and souvenir sellers. Most people have left their profession as fishermen, and now only around 5% of the total population still maintains these livelihoods.

Limited participation of local communities in tourism in the two Islands

The main task of the Komodo National Park Office (BTNK), as well as national parks in other countries, is to arrange to zone for the sake of biodiversity sustainability (Mules, 2015; Maidment, 2016; Cotoi, 2017; Fredman & Wikstorm, 2018). BTNK is also authorized to regulate all activities of local communities in the area, including tourism activities that are now being carried out by the community. As we know that before engaging in tourism, the local community worked as fishermen, but because of the zoning stipulation at various points, the community lost the catchment area of the fish. Not only in Indonesia but also the existence of a national park causes more complex problems for indigenous peoples and local communities (Perez & Bukluran, 2018).

Tourism policies that are increasingly pressing to encourage these communities to require them to switch livelihoods (Su et al., 2016a; 2016b; 2019). Along with these conditions, the government and the authorities possessed these conditions as opportunities in developing the tourism sector in the Komodo National Park (TNK). To support tourism activities, it is not enough for the government to rely solely on dragons as an attraction for tourists. But other supporting aspects are needed, one of which is humans who are in the region itself. This is then used as an opportunity for the government by involving the community in tourism activities to support the tourism industry in KNP. Specifically, in Komodo Village, the government through PT. TNC brought in senior artisans from various regions to train local people in making Komodo.

In order to develop tourism in the region, the government labeled the Komodo Village as a "Tourism Village," so that visitors are curious about the history of Komodo, which is not only an animal name but an ethnic name. If only Komodo dragons are relied upon to attract tourists, visitors are less likely to come back to this area. Therefore, the Tourism Village was formed as an effort to attract visitors to come back later. However, the labeling of the Tourism Village is only on the signboard for the entrance of this village and is not followed by the development of the settlement as a tourist village.

To support the Tourism Village label, the KNP manager provides a trading location for souvenir sellers and other businesses in Loh Liang, which is a core zone of the KNP region as well as a place where visitors can see Komodo dragons. According to residents, the government only provided 144 tables to sell, and this number was not considered proportional to the population in Komodo Village. Each table is given a serial number. Serial number 1 is in the entrance area of the selling hall, followed by a serial number table 2 and so on. Oftentimes, traders draw to determine what table they sell at. Traders here not only consist of the local community, but there are also cooperatives owned by BTNK that sell similar souvenirs, namely Komodo clothing and trinkets from marine animals. The place to sell between the local community and the cooperative is differentiated, so there is competition for consumers. This competition is not very influential if the tourists who come in large numbers are around 500-1000 people, but the local community will be unable to compete if the visitors who come are around 5-10 people. To reduce this gap, BTNK recruits a few native Komodo dragons to become naturalist guides whose task is to guide tourists to see Komodo in Loh Liang.

Not many residents are involved in this work, only 60 people. They were divided into two groups, and one group consisted of 30 people, the work schedule for each group was two weeks a month, if the first group was in charge of eating the other group was closed, and vice versa. This work is dominated by young people and requires certain qualifications that cannot be automatically fulfilled by residents.

These qualifications include mastering English, having the ability to communicate, the level of education that is prioritized graduating high school/ vocational majoring in tourism, as well as being physically fit. Although training has been given in advance, this requirement can only be met by a handful of people. Those who do not have the opportunity to work in this field, take another alternative, namely to become Komodo sculpture craftsmen or souvenir sellers. Nevertheless, BTNK claims that they have involved local residents in tourism activities in the KNP area and have provided employment opportunities for local communities. The amount of wages earned by the naturalist guide is 40.000 rupiahs in a one-time guide. The amount is the result that has been divided in half with the manager. Visitors who come must pay 80.000 rupiahs to the manager, and then the manager shares with a naturalist guide. Sometimes in one day, the naturalist guide guides visitors about 5-6 times. Those who are not involved in the tourism sector managed by KNP decided to look for work outside their territory, one of them being a tour guide. This profession is occupied by 25 village youths. His job is to guide tourists from one island to another, in contrast to naturalist guides who only guide in Loh Liang alone, the task of tour guides is more complex.

The islands that are usually visited are Padar Island, Pink Beach, Kelor Island, Komodo Island, Kalong Island, and other tourist destinations in the KNP area. The tour guide collaborates with an agent-based in the City of Labuan Bajo, the agent will contact them if there are tourists who need their services. This work is not under the KNP office but is purely their own business. One tour guide person can have one or even more agents, depending on their ability to find an agent.

Other jobs in the Komodo Village in the tourism sector are homestays. Providers of homestay in this region are still few, namely 13 people. The homestay owner claimed that the homestay's existence in his village was not very attractive to tourists. The reason is because of the existence of a cruise ship that provides bedroom facilities for tourists so that tourists are no longer interested in staying at residents' homestays. This is acknowledged by residents because of the lack of firmness from the government which frees the entry and exit of cruise ships in the village of Komodo so that the homestays that now stand are merely displays. The involvement of the local community in the field of tourism can also be seen from motorcycle taxi service providers. There are 19 people working in this field. However, the work is purely a community's effort, and they are not facilitated or compiled by BTNK to work in this field. They have agents in Labuan Bajo who provide information if tourists need their services. The tour packages provided are to Padar Island, Loh Liang, Kelor Island, Kalong Island, Pink Beach, and other tourist destinations both within the Komodo National Park area or beyond. The type of ship used is the open deck, which, when compared with the shape and facilities of the cruise ship.

the status of this ship is below it. The income obtained were around 2.000.000 rupiahs to 4.000.000 rupiahs in one tour. The results will be shared between ship owners and crew, and one ship usually has 3 to 5 crew members. Based on the data above, from all tourism jobs in Komodo Village, only two jobs were facilitated by BTNK, namely souvenir merchants and naturalist guides in Loh Liang. The number of jobs is also limited, only a handful of lucky people who can feel it. While those who are less fortunate, choose to work as craftsmen and work outside their territory. There are even some people who do not get the location of selling in Loh Liang, must peddle their wares directly by visiting tourists' boats. Because of their actions, they had to get rough treatment from government officials, they were beaten and their merchandise is thrown away. Nevertheless, the government still stated that the presence of KNP gave benefits to the local community. But if explored deeper, the region with its abundant natural wealth should be able to prosper the people more than that, not only as workers in the informal sector.

In addition to working in the tourism sectors which exclude local people, the management of tourist destinations on Komodo Island also does not involve the community. The community here has not been given the opportunity to manage tourist destinations in the region, except for tours around the village managed by BUMDES. Visitors who want to enjoy this tour must pay 10.000 rupiahs per person. Sometimes the villager's display shows to tourists or guests who come, and these shows are usually displayed that is Urugele. Urugele is played by a group of elementary school children in the village, and they will be rewarded after performing. Meanwhile, the tariff policy for tourist ships that enter or dock at the pier has not been carried out by tourism managers in this village. However, the village has made plans related to tariff management for ships that enter the village of Komodo, and they make a kind of tool as a place to put anchors on the edge of the pier. So if there is a ship that enters the village must anchor the ship in the area, and the village will determine the amount of the tariff. Furthermore, the village government plans to determine a policy so that ships that take guests to Loh Liang stop at Komodo Village, then the guests will be escorted to use small vessels owned by the village community. This policy is just a plan but has not been realized.

Not much different from Komodo Village, the involvement of village communities on Rinca Island in the tourism sector is very low, which is below 5%. As many as 30 people work as naturalist guides, one souvenir seller, three homestay providers, and three motorcycle taxi motorcycle service providers. The low level of community participation is recognized because the government does not open access to the community. The number of naturalist guides in Loh Buaya is limited to 30 people, divided into two groups, one group consisting of 15 people with the same duration of work as the naturalist guide in Desa Komodo, which is two weeks a month. The task of the naturalist guide is to guide both local and foreign tourists visiting Loh Buaya to see Komodo.

In addition to the naturalist, Crocodile Loh guide is also usually assigned to guide tourists around the village in the village of Pasir Panjang or to Goa Kalong (one of the tourist destinations in the village of Pasir Panjang) to see bat/bats. The wage obtained by the naturalist guide at Loh Buaya is 40.000 rupiahs, to guide five tourists in one track. Usually, they get a wage of 200.000 rupiahs - up to 400.000 rupiahs per day from several tracking times. The wages are the results that have been shared with the national parks, national parks get 40.000 rupiahs, and naturalist guides get 40,000 rupiahs. The amount of wages is the same as the wages obtained from guiding tourists around the village or to Goa Kalong. Wages earned can increase depending on the kindness of tourists who provide additional bonus directly. Other tourism service providers in this village are souvenir sellers. There is only one person who works in this field, namely Haji Ishaka.

He peddled his wares right next to the pier door in the hope that tourists visiting him would come and buy what he was selling. But very rarely there are tourists who stop by and buy because the number of tourists visiting his village is very small. The government also pays little attention to their fate, because it does not provide trading facilities in Loh Buaya such as in Loh Liang. All forms of trading activities in Loh Buaya are managed by cooperatives owned by the Komodo National Park Office. This is what causes the lack of community involvement in tourism activities. In addition to naturalist guides and souvenir sellers, the people of Pasir Panjang Village also provide homestays for tourists and visiting guests. However, there are only three people who are interested in this business. They set prices starting from 150.000 rupiahs up to 300.000 rupiahs per room in one night. Facilities provided include a bedroom, bathroom, and dining.

Cruise ships are special vessels provided by agents in Labuan Bajo to take tourists or guests in the Komodo National Park area. Its size is bigger than other tourist ships. The facilities provided are also more complete such as bedrooms, meals, small speed boats that are used to take tourists to the mainland when the ship is anchored, so the price is much higher compared to other ships in the range of IDR 10.000,000., and above. The completeness, which is owned by this ship makes tourists no longer need residents' homestays to rest. Usually, tourists only get off the boat to enjoy a tour around the village, after finishing they return to the ship and spend the night in it. The next community involvement in tourism is the provider of motorboat rental services for tourists.

There are three providers of this service. Ships are used to load open deck type passengers, which can accommodate 10 to 15 people. There are several tour packages provided starting from Loh Buaya, Padar Island, Strawbery Island, Kelor Island, and other destinations desired by tourists. To get passengers, they must work together with a travel agent based in Labuan Bajo. The process of cooperation is that tourists contact the agent, then choose the package tour offered, as well as making payment transactions with the agent. However, according to the participants, they would benefit more from getting direct passengers without an intermediary agent. However, it is very rare for passengers to contact him directly, because the presence of agents in Labuan Bajo is more strategic, making it easier for tourists to reach.

The involvement of local people on Rinca Island in the tourism sector is very low compared to Komodo Island. TNK processors only provide opportunities for the community as naturalist guides even though the number is not proportional to the total population. In addition, the management of tourist destinations on the island of Rinca also does not fully involve the community. There are only three tourist destinations currently managed by the village, namely Batu Balok, Goa Kalong, and tours around the village. There are two other destinations that will be managed but not yet implemented, namely Strawberry Island and Kalong Island. The party managing this destination is the Tourism Lover Community (KOMPAS). KOMPAS also has a management structure like other organizations whose positions are under the Village Owned Enterprises (BUMDES).

Tourism Lover Community (KOMPAS) was established in 2018, while BUMDES was only established in early 2019. During the trip, the two organizations argued over who should have the right to become a tourist destination in their region. BTNK gave the authority to BUMDES, but at that time KOMPAS was established first so that the village government gave that authority to KOMPAS. Every day alternately members of KOMPAS stand guard at the pier, waiting for tourists who want to go to Batu Balok, Goa Kalong, or tour around the village. Ticket prices to Batu Balok and Goa Kalong are 80,000 rupiahs for five people, the income obtained is divided between naturalist guide and KOMPAS. Meanwhile, for every boat that docked at the village pier, a tariff of 10.000 rupiahs per

person, as well as tourists traveling around the village are charged the same price. Income obtained by KOMPAS until this research was conducted has not been used for any activity, because there is no planning related to the work program of KOMPAS. Income obtained is managed by the treasurer of the organization and will be shared with the village government (BUMDES), but the distribution is still not done. Discussion of financial problems will be conducted every six months while BUMDES get income from the business of renting chairs for events inside and outside the village such as weddings, celebrations, and other events. The number of seats owned by BUMDES is 200, and for them, it is very little. Both KOMPAS and BUMDES have not yet thought about the issue of member wages, because there has been no careful planning related to the management of income received so far, so far they are still working voluntarily without being paid.

The problem currently being faced by KOMPAS is related to the legal status of tourist destinations being managed. KOMPAS once carried out the legality of the Kalong and Batu Balok Cave, but it still did not comply with the rules set by BTNK. So that the legality that has been completed is not considered valid, this is because BTNK's policy is to make BUMDES a tourist destination manager, but in reality, the destination is still managed by KOMPAS. BTNK, as the giver of legality, refuses to issue the legality process is recognized because the education level of KOMPAS members is still low. Furthermore, their lack of knowledge of tourism is one of the obstacles for them to participate more in the tourism sector (Sihombing et al., 2017). Even though the status is illegal, the two destinations are still managed by KOMPAS. However, according to several informants, the legality still needs to be done to avoid problems in the future. Meanwhile, for the other two destinations, Kalong Island and Strawberi Island, they are still in the planning stage for the management process, because KOMPAS and the village.

Based on the results of the previous presentation, it was concluded that community involvement in the Komodo Village and the Pasir Panjang Village in the field of tourism was very limited. Local people are only involved in several occupations. They have never been involved in decision-making and resource management efforts (Prabakharan et al., 2014) both informally and formally (Bello et al., 2018) since tourism is only centralized to the incorporated institutions (Yankholmes, 2018). On Komodo Island, BTNK only provides facilities for two jobs; souvenir merchants and naturalist guides, albeit the fact that these are very limited numbers. While other jobs related to tourism are purely the efforts of the community themselves, not facilitated by BTNK. Meanwhile, on Rinca Island, the community is only facilitated as a naturalist guide. The government holds full power over KNP and does not give the opportunity to the public to express their aspirations related to tourism activities in KNP as desired by the community.

The community is not involved in planning various tourism activities carried out. However, it is only as an executor that all the rules of the game have been determined by the government. Thus, the community is only as a complement to a series of tourism activities. It can be concluded that the management of tourism in KNP has not been fully carried out for the welfare of the people, only a handful of people employed in the tourism sector are not proportional to the large population on these islands. The management of tourism in the KNP region enriches large investors. BTNK does not consider building informal economic sector relationships like other formal sectors with large capital (Thomas, 2007). Those who have capital, are given the opportunity to make decisions, practice, and implement tourism development strategies in the National Park area (Xue and Kerstetter, 2018). In addition, tourism management in the KNP area also does not involve local communities. Instead, those who sit in the government assigned to manage the KNP are those who come from outside the area. Local people should be involved because they know what is best for the lives of the whole community in the area. Not only that, if the community is truly involved in tourism management participation, it will have an impact on increasing household income (Owour et al., 2017; Keyim, 2018) and uplifting of standart of living (Strydom et al., 2019).

CONCLUSION

Based on this study, tourism management in the Komodo national park does not bring significant blessings and benefits to the local communities living in the Komodo and Rinca Islands. There is a shift in livelihoods for people on Komodo Island in term of the tourism sector which does not correspond to people living on Rinca Island. The societies in Rica Island survive as fishermen inasmuch there is no access to tourism jobs, while the Komodo Island community has experienced five livelihood changes. Currently, the Komodo Island community engage actively in the field of tourism. Various types of jobs are found at the region, such as souvenir sellers, naturalist guides, tour guides, sellers at stalls/stalls, Komodo dragon artisans, tourist boats, and so on. Although there are more types of tourism jobs on Komodo Island, the Komodo National Park Office only provides jobs to be naturalist guides, while other jobs are purely community-owned businesses without the auspices of the Komodo National Park Office.

In addition, this study shows that the involvement of local communities in Rinca and Komodo Islands in the management of Komodo National Park tourism is relatively low. They only serve as a complement to the development of tourism. Tourism becomes a sector that seems to have no other choice for the community to choose from. Various systems and regulations are determined unilaterally by the government, such as zoning. Both Rinca Island and Komodo Island communities were only given authority to manage tourism in their villages. Menawhile, these two islands possess well established destinations such as Loh Buaya on Rinca Island and Loh Liang on Komodo Island, which provide quite high economic income for the region and country.

The present study is constraint to explaining the extent of community involvement in the tourism sector in the Komodo National Park and how the impact of tourism on improving the welfare of the people on Komodo Island and Rinca Island. Thus, further investigations on the relationship between local communities and BTNK who have full authority in managing tourism in KNP are encouraged.

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GEOTOURISM DEVELOPMENT FOR FOSSIL CONSERVATION: A STUDY IN AMKHOI FOSSIL PARK OF WEST BENGAL IN INDIA

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Abstract: Promotion of geotourism is recognized worldwide as a strategy for geoconservation. Fossil parks worldwide are one of the major geotourism attractions where in-situ conservation of fossil is encouraged. The angiosperm wood fossils have been discovered from Amkhoi, a tribal village of India in the year 2006. In order to prevent vandalism by the fossil hunters and antique thieves, a fossil park was planned that has been opened for the visitors from the beginning of 2018. This paper is an attempt to address the research gap on sustainable management of fossil parks while satisfying the geotourists with various facilities and amenities.

Key words: Geoconservation, geotourists, angiosperm, vandalism, sustainable

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INTRODUCTION

Fossils are paleontological treasures manifesting remains of organism that existed in past geological ages. The study on fossils provides important keys for learning about the diversity and evolution of life through time (Boonchai et al., 2009). Fossil are of different types e.g. invertebrate fossil, vertebrate fossil, wood fossil and stromatolite fossil. Stromatolites, the oldest among fossils are the unique occurrence of bia-strome structures produced by blue-green algae in association with carbonate rocks in shallow water (Mishra, 2008). They have provided earliest records of life on earth dating back to 3.5 billion years ago. Marine Gondwana fossil park exhibits a rich collection of marine invertebrate category of fossil from the fossiliferous bed of Satpura Range on the right bank of Hasdeo River at Manendragarh in Chattisgarh of India. On the other hand, numerous well preserved vertebrate fossil assemblages have been discovered

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from Siwalik hill region in the north and Quaternary fluvial deposits in the Peninsular region (Badam, 1979, 1988; Badam & Sathe, 1995). These vertebrate fossils belonged to Middle-Miocene or Early Middle Pleistocene in age. The paleoenviornmental histories and visualization of past ecological pyramids are among the motivations to draw the geotourists in fossil parks (Chakrabarty & Mandal, 2019). Wood fossils, usually found in sedimentary rocks form when the plant materials are rapidly buried under sediment cover and protected from decay by oxygen and organism in an anaerobic condition.

The process by which wood turned into rock is also known as permineralization or petrifaction. The original structure of wood is however normally preserved in such petrified woods and even sometimes the individual structure of cells could be distinguished. Tree rings for example can be observed on many pieces and tissues of the wood could be identified by using microscope. Cast fossil is another fossil group different from petrified wood genetically since it does not contain any part of the original wood material but represents wood in outer morphology. Filling of cavity by various sedimentary materials and subsequent process of cementation transformed the buried plant wood into cast fossil. Fossil parks are declared as protected areas for insitu conservation to combat fossil hunting arising from market value of fossils as semiprecious rocks as well as its collection value among the antique lovers.

With the rise of geotourism, many paleontologically important field sites are conserved in a variety of ways, e.g. from international or national to local and even private levels (Lipps, 2009). A genuine geotourism development strategy for tourism based on the local geology and palaeontology is the key in designing the fossil parks (Pagès, 2009). The fossil forest is considered to be non-renewable natural resource to be preserved not only for admiration of the future generation but also to impart the knowledge on the past climate, past depositional environment of sediments, past geographical conditions, relative age determinations and past ecology (Dietz et al., 1987). From geotourism promotion perspective, the fossil forests have exceptional heritage and scientific values as admired by UNESCO with its recognition under the Global GeoPark Network (Császár et al., 2009). However, the fossils are fragile and very sensitive even to the processes of weathering for which special care is mandatory while promoting geotourism in fossil parks. Geoconservation is a management strategy for the protection of various geoheritage sites with high scientific and tourism values (Gray, 2005). Aim of geoconservation is the dynamic preservation and maintenance of various geoheritage sites (Hose, 2003). With a focus on protection of geosites, geotourism puts emphasis on optimal utilization and diffusion of knowledge about earth heritage resources (Dowling, 2006). The knowledge of geoscience imparting through educative approach of geotourism ultimately benefits the community and the protection of environment at national and local level (Gordon et al., 2012).

The purpose of planning is to design fossil forest as living geomuseum in order to ensure the best possible protection (Pagès, 2009). It is also essential to involve the local communities in geoconservation because authorities are unable to protect the sites directly due to various constraints (Fedonkin et al., 2009). As geotourism yields economic benefit for the community imparting the education and awareness on geosites, it is praised for attaining sustainability perspectives.

OBJECTIVES OF THE STUDY

In preservation of a geosite, there arises the scope of appreciation of its scientific, educational, aesthetic, cultural and recreational values for the current as well as future generation (Yusry et al., 2018). Under such circumstances, Amkhoi fossil park $(23^{\circ} 37')$

25" N, 87° 34' 56"E) at Amkhoi village in Illambazar forest of Birbhum district in West Bengal is chosen for the present study with the following objectives:

1. To evaluate the status of Amkhoi fossil park in terms of scientific value, aesthetic value, historical value, education value and recreational value depending on visitors' perception.

2. To assess the aspects of ecological, economic and socio-cultural sustainability in geotourism development with a planning appraisal.

Being considered as geological treasure for experts, researchers, students as well as tourists for the heritage of a million years old buried forest manifested through the presence of both cast fossils and petrified wood fossils, Amkhoi fossil park is regarded as one of the most important destinations to know the geological and biological past of the country (Ghosh, 2019). This paper is an attempt to address the research gap on utilizing the unique characteristics and beauties of the angiosperm wood fossils through sustainable geotourism planning. How the park could contribute to social wellbeing satisfying both the hosts and the guests is the key research question in this context.



Figure 1. Petrified wood discovered while digging pond in Amkhoi village

BACKGROUND OF THE STUDY

A number of fossils discovered during various projects of pond digging (Figure 1) at Amkhoi village are identified as angiosperm wood fossils. In Late Miocene period (15-20 million years ago), a vast dry deciduous forest with some evergreen species existed in the uplands of Rajmahal hills and Chotonagpur plateau area. It has been speculated that due to natural calamities, the trees were uprooted in the upper catchment and carried forward to this area in the lower catchment of the drainage basin of present Ajay River by occasional floods before they became petrified.

Petrification generates two major types of wood fossils depending on terrain characteristics: silicified and calcified. In case of Amkhoi village area, a part of such trees which are extinct in this zone but found in other countries like Myanamar and Malaysia even today had been transformed mostly into silicified wood fossils. Geologically these fossil woods lie in the Late Tertiary sedimentary sequence called Santiniketan Formation, found in the western part of Bengal which have been exposed in several discrete patches (Ganguli, 1995). From cobble and pebble conglomerate strata as evident in Bonerpukurdanga section of Santiniketan Formation (Figure 2), angiosperm wood fossils have been discovered during digging operations.



LITHOSTRATIGRAPHIC UNIT OF SANTINIKETAN FORMATION (BONERPUKURDANGA) Figure 2. Presence of wood fossil in Santiniketan Formation (Source: Ganguli, 1995)

The park has been opened for public on 3^{rd} January in the year 2018 as the first fossil park of West Bengal for geotourism (Figure 3).



Figure 3. Amkhoi fossil park and its ambience

MATERIALS AND METHODS

Ethnographic methods have been applied to explore the perception of visitors while enjoying the flavour of geotourism experience during their visit at Amkhoi fossil park. Interviews have been conducted to investigate the behavioural intention of the tourists towards the following values based on a five point Likert Scale:

- Scientific value
- Aesthetic value
- Historical value
- Educational value
- Recreational value

While the tourists have entered the compound of the fossil park and photographing the objects according to their choice, they have been asked the reason of making particular photos with request to provide quantitative values in Likert Scale on the aspects already mentioned. After obtaining the data on factors motivating their visit, questionnaires have been distributed following stratified purposeful sampling of the visitors to derive their perception on the various aspects of geoconservation.

A special emphasis was also given to identify the problems of geotourism in Amkhoi fossil park. The tourists have been categorically asked to express their observations on the sustainability status of fossil park. A number of variables have been derived further for interviewing the host population on the aspects of ecological, economic and socio-cultural sustainability concerning the fossil park management. Taking into account a number of sustainability concerns put forwarded for different level of agreements (Table 1), a Principal Component Analysis (PCA) is attempted.

A planning map is generated for improvement of the fossil park and its ambience through instrumental survey incorporating both the demand of guests and expectations of the host population as derived from ethnographic surveys.

RESULTS AND DISCUSSIONS

Raising geoconservational awareness is precondition for the sustainable management of any geotourism landscape (Chakrabarty et al., 2019).



Figure 4. Visitors' response in Likert Scale on different value aspects influencing travel motivation (Source: Field survey, 2018-19)

Geotourism in Amkhoi is now in juvenile stage and the park is visited by 300-350 persons/week on an average. In order to find out the motivation of their visit along with awareness level, their responses have been recorded in five point Likert Scale. Figure 4 provides a comparison between such values obtained from ethnographic surveys.

From the analysis of the visitors' response, it is revealed that most important factor which motivated them is the scientific value of the Fossil Park. Scientific value arises from the interests on how such fossils were formed, what process shaped these fossils etc. When attraction of fossils have been given special geological and paleontological significance in their responses, there arises the educational value of geotourism. Further understanding of fossils as the evidence of climate change, linkages between the earlier organisms and the present day organisms generate the historical value of the fossils. As presently it is more a place for excursion of educational institutions and dedicated geotourists rather that recreational visitors, less score on recreational value than aesthesic value is obtained during survey. A number of issues related to the ecological, economic and socio-cultural sustainability concerning fossil park have been discussed with the host community during the interaction with them.

They have been agreed on varying percentages with the issues raised (Table 1), which is further analyzed with the application of reliability analysis followed by a PCA (Principal Component Analysis) ultimately deriving the grouping of variables into factor 1 (Socio-economic aspects) and factor 2 (Ecological and environmental aspects) for further analysis of their relative importance (Table 2).

Sustainability concerns					
Sustainability concerns	Rate of agreement (%)				
N= Neutral, A= Agree, SA= Strongly Agree	SD	D	Ν	Α	SA
1. Adequate preservation of petrified woods as common property resource	0	5.26	15.79	29.83	49.12
2. Provision of infrastructural expansion with GeoPark development	26.32	33.33	29.82	7.02	3.51
3. Adoptability of sound waste management plan	45.61	42.11	12.28	0	0
4. General cleanliness being improved after the development of GeoPark	7.02	8.77	19.30	42.10	22.81
5. Creation of new job opportunities in and around GeoPark	26.32	40.35	21.05	8.77	3.51
6. Increase in the number of commercial establishment after the development of GeoPark	47.37	38.60	10.52	3.51	0
7. Awareness on nature and cultural values of fossil increased after GeoPark development	0	7.02	17.54	47.37	28.07
8. Increase in the number of financial institution providing loan for business after GeoPark development	40.35	49.12	8.77	1.76	0
9. Landuse change for geotourism promotion reaping benefits for the host population	22.81	35.09	26.31	12.28	3.51
10. Economic condition of the local people being improved after the development of GeoPark	31.58	43.86	15.79	7.02	1.75

 Table 1. Agreement status of respondents from host

 population on sustainability concerns (Data source: Field survey, 2018-19)

From table 2, it appears that ecological and environmental aspects seem to outweigh the socio-economic aspects concerning the geopark management. The vulnerability of fossils is one of the key issues to be dealt with while studying the sustainability aspects. Though it is considered that geotourism can be a powerful tool for sustainable development but if it is not managed responsibly, it can constitute a direct threat to geoheritage resources (Burek & Posser, 2008; Newsome et al., 2012). The following facts are outcomes of the persistent observation for vulnerability assessment of the Amkhoi fossil park:

1. The local community is almost detached from park protection and management practices as the park is separated by an enclosure for geoconservation purpose by forest department of the government. There arises frustration in the community since among the 28 families in the village, only 17 members have been presently employed with a very low wage rate and their services are not declared permanent also.

2. The carrying capacity problem due to influx of large number of visitors at a time may lead to degradation of the geopark in near future. Fossils are also found scattered outside the park enclosure almost unprotected.

3. In weekends, the recreationists visit the fossil park and arrange picnic outside its present encloser polluting the environment contributing both bio-degradable and non-degradable wastes, particularly the plastics.

Sustainability concerns			Mean	Standard Deviation		
Factor 1: Socio- economic aspects	V6	Increase in the number of commercial establishment after the development of GeoPark	1.70	0.79		
	V8	Increase in the number of financial institution providing loan for business after GeoPark development	1.72	0.69		
	V10	Economic condition of the local people being improved after the development of GeoPark	2.04	0.95		
	V2	Infrastructural expansion with GeoPark development	2.28	1.04		
	V5	Creation of new job opportunities in and around GeoPark	2.23	1.04		
	V9	Landuse change for geotourism promotion reaping benefits for the host population	2.39	1.07		
Factor 2: Ecological and environmental aspects	V4	General cleanliness being improved after the development of GeoPark	3.65	1.13		
	V7	Raising awareness on nature and cultural values after GeoPark development	3.96	0.86		
	V1	Better preservation of petrified woods as common property resource	4.23	0.90		
	V3	Sound waste management plan undertaken with expansion of geotourism activities	1.67	1.29		

Table 2. Status of variables under study

From ideological perspective, geotourism assists sustainable development of geoparks and local communities (Hose, 2011). A geological itinerary is advocated for the purpose of geoconservation by raising the awareness of geological heritage within the local population (Rapidah et al., 2018). Any sound geotourism management plan should

aim at limited provision of the infrastructure and services/facilities involving local community in order to protect the geoheritages of the endangered fossils.

The involvement of local community in conservation and valuation of geological heritage is recognized worldwide because their perceptions may help to maintain and protect local geosites and raise public awareness of environmental aspects (Avelar et al., 2015). Involvement of local communities is not only positive for the local economy but also there arises the scope for utilization of indigenous knowledge (Farsani, 2009). Their indigenous knowledge and traditional lifestyle may offer aditional attraction for geotourists who are primarily attracted for the discovery of a million years old buried forest found at different layers in the region.

Establishment of a geomuseum may be a watershed development in attracting visitors by adding more scientific value in travel motivation. The geomuseum with multimedia interpretation techniques related to fossil and geology of the study area may address the following queries:

- 1) What is fossil and how it was created?
- 2) What could be known from these fossils?
- 3) What is the past geological history of the area?



Figure 5. Planning map for Amkhoi Fossil Park (Source: Prepared by authors, 2019)

The geoconservation training is essential to gain knowledge about geology and paleontology in order to be absorbed in geotourism industry as guide, who can interpret fossils and their geological characteristics evaluating the educational, historical and scientifical values satisfying the travel motivation. Interpretation is an essential provision for public understanding while experiencing about places which are visited (Wang et al., 2014). Effective interpretation system is required to promote sustainable tourism and recreation (Moscardo, 1998). Interpretation of the features should be well understood not only by the academic community but also by the common tourists for the interset of mass education. So the site based interpretation should be very transparent, so that such can diffuse the scientific knowledge making people aware about the geosites along with the increase of the interests in the field of geoconservation (Hose, 2012). Visitors may seek various information and knowledge about the area, the history of the fossils, scientific value of fossils from them. There may be homestay facilities for the visitors, who want to stay a night to enjoy the calmness of the forest after being enlighted on fossils. When local people get some benefits from the park, they feel proud to protect and manage the vulnerable fossils as geotourism resources.

In order to advance geoconservation and geotourism hand in hand, it is essential to create useful maps (Serrano & Gonzaloz Trueba, 2011). The planning map (Figure 5) is cognitive one arising from instrumental survey for existing land use combined with ethnographic survey outcomes. A trekking through the forest trail is suggested as mandatory for everyone to reach the destination in order to safeguard the environment from the future carrying capacity problems. The park is located about two kilometers away from the main road. A tourist complex with modern facilities and amenities at the junction of main road and forest trail is required. Willing visitors have to leave their cars in the parking area that has been specified at or near the tourist complex and opt to walk to reach the proposed park museum. Eco-friendly vehicles may also be provided for the older and incompetent visitors to transport them upto the park gate.

To avoid pollution within the park boundary and surrounding forest area, there is scope of the imposition of Polluter Pay Principles (PPP). Along the trekking trail, biodegradable and non biodegradable dustbins may be made available at an interval of about 100 meters. These dustbins should be cleaned regularly by the local community being involved in park management.

With an audio-visual fossil interpretation centre as geo-museum and a herbal garden for the rest and relaxation of visitors outside the protected area enclosure, Amkhoi fossil park may perform better from geotourism as well as geoconservation perspectives.

CONCLUSION

Lack of effective conservation management plan, the uncoordinated development, and the unsubstantial interpretation system are among the main problems of the protection of geoheritages (Wang et al., 2014). It affects geotourism directly since with the degradation of georesources, the geotourism destinations may not be capable to attract tourists (Schlüter et al., 2018). The adaptation of the strategy of geoconservation is considered as a positive element for local development and management plan implementation (Prosser, 2011). For conserving the geoheritage like fossils, it is necessary to mobilize local awareness. This awareness could be generated through increasing local sense and appreciation of local pride and respect towards geoheritage and also for mutual economic interests but it is not required to follow strict scientific criteria and divisions (Erikstad, 2012). This is very much applicable for Amkhoi wood fossil park, which is still in infancy stage. Before understanding the value of fossils, the local community used them as ordinary rocks for domestic use, even for

washing their cloths. No objection was usually made by them previously when outsiders came and collected the petrified woods from their area.

The situation is however gradually changing and it is very important from the standpoint of geoconservation because the presently protected site is only the core area of fossil discovery while its periphery extending about 10 hectares of area is endowed with such fossils. Effective community involvement in managing the fossil park is therefore vital for its sustainable utilization for geotourism purpose.

Sustainable development of geotourism centring Amkhoi fossil park may contribute to the wellbeing of the hosts and value orientation of the guests in term of scientific, aesthetic, historical, educational and recreational standpoints.

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THE STRATEGY OF THAI MEDICAL SERVICES PROMOTION AT FOREIGN MARKETS AND DEVELOPMENT OF MEDICAL TOURISM

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Abstract: Aims. The main aim of the research is to develop a preliminary offer of special medical tours to Thailand for the citizens of Russian Federation; to evaluate the limits of demand for Thai national medical tour-product in Russia, the potential key features of promotion and sales of Thai medical tours in Russia under the current economic conditions. Introduction. The relevance of the study is due to the fact that more than 50 countries of the world see the provision of medical services to international patients as the top-priority area of their national development. Leading approach to the study of this problem is the comparative method that has afforded revealing peculiarities of promoting Thai medical tours and potential sales to foreign patients. Results. The paper identifies the role of medical services in the process of Thai national tourist product differentiation and describes some of the special medical tours in Thailand specifically designed for overseas markets. The authors also evaluate the limit of demand for the national medical tour product of Thailand. Inerpretation. The authors emphasized the importance of promoting an excellent and high-tech service in promoting the Thai wellness product. The article

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also suggests checking the economic and marketing effectiveness of the business model of a sanatorium in Thailand. This model will be somewhat more expensive than a traditional hotel, but, unlike a hotel, it will have a number of strong competitive advantages in terms of Russian sales and will be able to actively earn additional services. The materials of the paper imply the practical significance for the university teachers of the economic specializations.

Key words: medical tourism, healthcare, medical services, insurance, overseas markets

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INTRODUCTION

Under conditions of globalization, the level and the quality of medical services have become rather levelled in many countries, thus, only the price factor becomes a determinating factor of country's competitiveness when it comes to medical services' provision at the world markets. In this regard, gradually forming is the flow of patients from the countries with well-developed healthcare systems to the emerging markets with the opportunity to obtain good quality medical services at more competitive prices (Table 1). Population of Russia has a big potential for health and medicine services consumption from abroad (Chistobaev & Semenova, 2018). A very important feature of these markets is wider perspectives for foreign (first of all, Western, then Asian) medical services' supply (Sukhova et al., 2018; Zhuravleva et al., 2018).

Under such conditions and preferences Thailand (while its healthcare industry is obtaining several global advantages) gets enough chances to participate in sharing these markets. This would provide more stabile income for domestic population from the inflow of more medical tourists, and at the same time this will also differentiate Thai national tourism products' range (Grasso, 2014; Chkalova et al., 2019).

1	USA	100%	5	Mexico	40-60%
2	Costa Rica	45-65%	6	Singapore	25-40%
3	India	65-90%	7	South Korea	40-45%
4	Malaysia	60-80%	8	Thailand	50-75%

Table 1. Comparasion of Price Rates for Medical Services in the Selected Countries of the World (%, 2016) (Keckley, 2017)

The main purpose of this research has helped us identify the complex of the related research objectives:

- To identify the role of medical services (plastic surgery, cosmetology and beauty industry) in differentiating of Thai national tourist product;

- To develop a preliminary offer of special medical tours to Thailand for the citizens of Russian Federation. To evaluate the limits of demand for Thai national medical tourproduct in Russia, the potential key features of promotion and sales of Thai medical tours in Russia under the current economic conditions;

- To develop a strategy for international marketing of Thai clinics, to determine the most salable features of Thai medical services at international markets;

- To present authors' own project on Russian customers' attraction to Thai clinic (including: the pricing strategy, promotion, extra services, international distribution, sales and services' modification etc.).

METHODOLOGY

The data collection has been made by means of survey of two large groups of people: the first were foreigners currently living in Thailand (in Bangkok and in Pattaya), and the second were foreigners, permanently living in Russia (Verdugo-Perona et al., 2016). The overall number of the respondents was 120 from 6 countries of the world. All travellers were chosen to be older than 18 years old. All surveyed travellers had made the decisions concerning medical treatments by themselves. All travellers needed some medical treatment, however, were able to travel by themselves and/or bought the tour packages independently (Aimagambetov et al., 2017).

Research Instruments (Including the statement of validity and reliability):

The questionnaire contained 29 questions overall, including only 2 open questions. The questions covered the respondents' personal data, trip details and also future plans information (Buathong & Lai, 2019; Font & Lynes, 2018).

Data Collection Procedures:

Places chosen for this survey were the following:

– hotels of different categories, located in various parts of both cities. To meet the objectives of this study we will focus only on the hotels of high category (the distribution of hotels of different categories in the total number of the hotels was as follows: 5-star hotels – 30%, 4-star – 35%, 3-star – 25%);

- tourist information centers (King & Lertnapakun, 2019);

- medical tourism exhibition (in Moscow, Russia);

- healthcare and medical tourism international congress (Moscow, Russia).

The questionnaires had been made in three languages (Thai, Russian, English).

THEORETICAL CONTEXT

Thailand Within the Global Medical Tourism Context Today

In recent years' medical tourism in Thailand has shown quite impressive growth rates. According to the official data, 20% of all foreign tourists are also the participants of medical tourism. In 2016, 1.85 million tourists visited Thailand for medical purposes, 33% of them were US citizens, 29% were coming from China and 18% - from Japan. In 2016, the total income of Thai clinics was over \$ 2 billion. It is important to mention in this regard that the price for medical services for foreigners and Thai residents is the same (Aizura, 2017), unlike in many other sectors, especially in tourism-related (De Arellano, 2007). In Thailand overall there are more than 1000 hospitals, 470 of them are private. The largest private hospital in Asia, and the first Asian hospital, certified according to the ISO 9001 and accredited by the JCI are also located in Thailand. Today 37 hospitals in Thailand have the JCI accreditation, and all of them are privately owned. The medical tourism industry in Thailand is promoted, firstly, by private hospitals. Thai doctors are happy to work in international clinics, where they earn at least 70% more than in public hospitals. Medical tourists come to Thailand from almost all countries of the world (Aizura, 2017). The most active countries and regions in this regard are: Japan, the Middle East, USA, China, Great Britain, Western Europe, Australia (Smith & Puczko, 2013; Momeni et al., 2018). Among the factors determining the inbound medical tourism development in Thailand we can identified the following:

- competitive costs of medical treatment overall. The cost of treatment in Thailand is only a small fraction of the cost of appropriate procedures in most Western countries. Prices for treatment are usually 20-50% lower than in most of the Western countries. Such low costs allow patients not only pay in full for all the related services, but also take some rest at Thai famous resorts after complicated medical procedures; - high quality of medical services in the country;

-well-developed tourist infrastructure.

Thailand is one of the leading tourist destinations in the world – a paradise with unique beaches and delightful views (Lerdsuchatavanich et al., 2016; Nonthapot & Srichaiyo, 2017; Saraithong & Chancharoenchai, 2017; Khan, 2017; Nonthapot et al., 2018). The country has a rich culture and an amazing cuisine, people are friendly and always nice to foreigners. Due to the tourism factor, the level of services overall is very high, this indirectly contributing to the success of medical tourism as well. Thais make every effort to provide the highest level of satisfaction with servies for all visitors. Accordingly, foreigners are happy to receive such a high level of service, whether in a hotel or in a hospital (Connell, 2006).

Russia as a Market for Thai Health Services

Interest in medical tourism in Russian Federation is quite high. About 6.2 million Russian-speaking users of Yandex.ru (the most popular Russian search engine) are monthly monitoring the offers of medical care abroad. For example, only the request "treatment in Germany", according to the search engine Yandex data, is searched for by about 10 thousand unique users (Vetitnev & Dzubina, 2013). This high interest is explained by the unsatisfactory state of medical care in Russia.

The Russians are extremely unhappy with the level of services provided by the national healthcare. According to the research carried out by Russian sociologists, 53% of the citizens surveyed in Russia assess the general healthcare status in Russia as "bad," "satisfactory" was chosen by only 40%, and "good" was the reply of only 5% of Russian respondents (Vetitnev & Dzubina, 2013). About 34% of Russian doctors consider the current state of the healthcare sector in Russia as unsatisfactory.

Wealthy citizens of Russia now choose other countries that are providing higher level of medical services. The leading positions in the list of countries popular among this category of Russian tourists take Israel (45%) and Germany (20%). Interest and trust for these countries when it comes to medical services' provision can be explained by several, rather external factors, inter alia: absence of language barrier (due to large numbers of emigrants in both Germany and Israel from Russian), relatively close geographical location (at least for those who reside in the European part of Russia), and by the overall popular image of medical successes affiliated to these countries. Further in the ranking of popularity go Turkey, Singapore, and Switzerland, France and then such countries of Eastern Europe such as Poland, Hungary, Czech Republic and Lithuania (Burkett, 2007).

The most popular medical services among the Russians (for many years by now) are such areas as cardiology and cardiosurgery, transplantology, eye surgery, oncology, orthopedics, plastic surgery, neurosurgery. All those areas require the availability of sophisticated and thus quite expensive equipment as well as highly qualified personnel with both skills and experience so that to carry out the needed diagnostics and then treatment. Other directions in medical services which are gaining popularity today are all services related to pregnancy and delivary and also all sorts of medical rehabilitation, including those for professional sportsmen. Among the foreign health resorts, Central and Eastern European countries are preferable for the Russians, including primarily the Balkans and the Baltics (66%), Western and Northern Europe, including Iceland (44%), and also the selected countries of North-East and South-East Asia (40%).

As a market for Thai tourist product sale, Russia is also interesting because of Thailand's tourism potential popularity at this market, the presence of Russian-speaking diaspora in many cities of Thailand. This, on the one hand, provides the demand for services among Russian-speaking consumers during the low tourist season, and on the other, this also creates more opportunities to find Russian-speaking staff for Thai clinics (for example, to provide translation of medical documents or for the interpretation of medical consultations). Equally important is the availability of regular transport connections of Thailand cities with some of the Russian regions (primarily via charter flights, which is very important since those are relatively cheap), as well as minimum visa formalities while entering the country (Abaydeldinov & Kala, 2016; Veretekhina et al., 2017). Meanwhile, there are also problems that limit the opportunities for further Thai health tourism promotion, for example, reduction of Russian tourism market capacity (including the medical tourism market) as a result of the economic crisis and devaluation of the ruble exchange rate in 2014, sharp increase in differentiation of Russia tourist demand structure (wealthier clients prefer to be treated in Europe, the United States, Israel etc., while middle-income consumers, for whom Thailand could be potentially attractive, as of today have reduced their family expenses on tourist trips. Additionally, we should mention weak popularity of Thai health tourism, especially in the regions of Russian Federation. For many Russians, Thailand as a destination in medical tourism, is limited only to massages and sex-swap surgeries (Balaban & Marano, 2010).

RESULTS AND DISCUSSION

After analyzing in details all the answers obtained from this questionnaire we have come up with the following conclusions:

1. Most Russian tourists (56%) are aware of the health tourism potential of Thailand. 42% of the surveyed tourists noted the positive attitude towards the treatment in the Kingdom of Thailand. However, it should be also noted that only 15% of the surveyed had any personal experience (or that of close friends, relatives etc.) with geting medical help (or undergoing medical examination) in Thailand. This shows that Thailand has a positive reputation as a place of treatment for the Russians, and Thai medicine initially (even before the direct, actual purchase of a service) has a positive image among the Russians (Ehrbeck et al., 2008).

2. The sources of information about the state of Thai medicine, mentioned by the interviewed, vary. As quastionnarie showed, scientific sources and articles, including those posted on the Internet, are the most popular sources of information about the state of Thailand medicine and treatment for Russian tourists in particular. More than 22% of the respondents stated they received information about the state of medical tourism in Thailand from television and expert interviews. Performance of national tourist offices in this regard is rather poor, their activities had virtually no influence on the choice of our respondents. This allows us conclude that tours to Thailand, sold in Russia, are concentrated in the hands of tourism operators of mass demand. And this does not contribute to forming the necessary information support for Thailand as a popular medical tourism destination. A Russian tourist who is accustomed to trusting his/her health to professionals, and in the understanding of most Russians, a professional must be necessarily affiliated to an official organization which has all necessary documentation, licenses, qualified personnel etc. This means that such a tourist will never consider the option of buying a treatment tour at the office of a standard mass tourism operator. This, in turn, determines the need to modernize the sales system for Thailand's national medical product on the territory of Russian Federation (Department of Health Annual Report 2016-17, 2017).

3. As the main advantages of health tourism in Thailand, Russian tourists identified, first of all, quality of the care provided (42%) and availability of necessary infrastructure (for example, when everything is nearby, there are no queues, patients

are able to plan all procedures in advance, ease of diagnostics etc) (18%), as well as the possibility of combining treatment with recreation, or treatment with follow-up rehabilitation (12%). The price advantage factor proved to be much less important for the Russians than, for example, for German or Australian tourists (8% against 37% and 34% respectively), which in general is easy to explain by the the exchange rate of Russia's currency falling in 2014 and rise in price of any imported services for the Russians by almost twice. And also because medical treatment in Thailand is mostly chosen by the Russians with medium incomes (wealthy Russians prefer treatment in European countries, Israel and the USA), for which the price factor remains of vital importance and the cost of treatment in Thailand remains to be perceived at high level (as compared with Russian prices for medical services).

4. Only 21% of the polled Russians believe that Thai medicine is more technologically advanced and overall better developed than Russian medicine. This low percentage can be explained, rather, not by the real state of affairs, but by the fact that the Russians prefer to do serious operations not in Thailand, but at home (which is cheaper or may be free for some categories of patients or in some cases of the quota of the Ministry of Healthcare of Russian Federation). Another common reason for such a stereotype is Russian patriotism and belief in Russian national exclusivity. At the same time, however, more than 85% of the surveyed respondents stated that the quality of medical services (rehabilitation, care, hospital infrastructure) in Thailand is many times superior to the same services in Russia (Awadzi & Panda, 2007; Heung et al., 2010).

The majority of Russians coming to Thailand for treatment specifically are interested in:

– regular health check (34%), which in Thailand can be completed in one day visiting more than 5 doctors and passing all necessary tests;

-services of manual therapists, including specialists in ayurvedic massage and special massages for recovery after surgeries (21%),

- cosmetic services (inoperable) (18%),

- dental services (12%),

- cosmetic services (operable) (9%),

– body adjustment services (8%).

From these results above it is rather obvious that the Russians perceive medical treatment in Thailand only as an additional service to accompany the standard leisure activities at the resorts. On the one hand, this opens up new opportunities for the tourist product oriented on Russian market modernization (for example, short-term programs for the whole family can be offered, such as a standard beach tour, but with the additional option to correct posture, cure platypodia, or normalize blood pressure, skin condition etc.) (Baimbetov et al., 2018; Tishchenko et al., 2018). On the other hand, this does not contribute to the development of high-tech medical tourism in Thailand, which would be always associated with the highest qualifications of specialists, modern equipment, specialized treatment (thus – with higher added value).

5. As the main problems faced by Russian tourists undergoing treatment in Thailand, they mention the following: the language barrier in the processing of documents' preparation (36%), language barrier in direct communication (21%), high cost of services (19%), difficulty with making a choice (16%), difficulty in further use of documents in Russia (15%), high turnover of doctors in Thailand (9%), narrow specialization of the local doctors (6%).

These shortcomings of medical tourism in Thailand, contributed in the answers of Russian tourists, should be considered in more detail, considering the fact that they are becoming more and more known (via the Internet). Moreover, 36% of the interviewed by us had already heard before about the possible negative consequences of treatment in Thailand and the shortcomings of Thai medical product. Such quick spread of negative for reputation statement can significantly restrict the inbound medical tourism from Russia (Herrick, 2017). So, if the first problem – the language barrier – is a traditional problem for any hospital in any country, and it can be more or less easily solved by internal resources (for example, by introducing the positions of translators into Russian, outsourcing medical translations, by introducing a system for translating documentation into Russian), then the problems of the second level – complexity of choosing the right place for treatment and further use of Thai medical documents in Russia – are relatively newer problems, however, already having their negative impact on the attitude of tourists to treatment in the Kingdom (DeNavas-Walt et al., 2010).

Also, the Russians note that there is so much information available about the possibilities of treatment in Thailand, there is quite a variety of sources of its origin, thus, it is often difficult for them to decide on the place of receiving medical services. A tourist often makes a decision based on feedback and unreliable advertising information, and then later gets disappointed after the actual visit to a hospital or a clinic. The second problem is related to the inability to use documents obtained in a Thai clinic (hospital) later on in Russia. Russian doctors do not take into consideration the results of the tests conducted in Thailand, for several reasons. First of all, there are several discrepancies between the diagnostic standards in Thailand and Russia (for example, due to different systems of units and/or different methodologies), there is also a language issue since not many doctors back in Russia can read medical documentation in English. And finally, there is some sort of reluctance simply because doctors in Russia do not want to "lose money" which could have been earned if the diagnostics and/or part of treatment had been carried out in Russia but not in Thailand (UNWTO Tourism Highlights, 2016).

Also, the Russians overall speak negatively about the narrow specialization of Thai doctors, considering this approach as some sort of trick to make more money. Of course, such an attitude of patients and the fact that doctors in Thailand often combine several work places and thus have a very flexible work schedule also contribute to the negative attitude. On the one hand, this requires more flexibility from the clients (who must be ready to spend more time on the treatment and contact more than one doctor). On the other hand, turning the treatment process into a succession of easily replaceable doctors makes the client feeling he/she is not needed that much and is abandoned by a doctor. This, again, will not contribute to the positive image (Anand, 2009).

6. As a very positive can be considered the result of the last part in our survey – concerning the prospects of Thailand as a place of treatment for Russian tourists. The majority of the respondents (71%) expressed their readiness to be treated in Thailand in the future, or regularly undergo medical examinations and diagnostics in the Kingdom. However, it is worth highlighting some recommendations readily provided by Russian tourists, which can be regarded as recommendations for action. Thus, a significant share of our respondents recommended introducing business models of spa hotels in Thailand with the option of medical treatment being already included in the cost. For example, the cost of living in such hotels can include not only full board, but also some of the selected medical procedures (thermal baths, manual and physical therapy, aromatherapy, herbal therapy etc.). This kind of health services in Russia is widely spread from the middle of the twentieth century, which suggests the popularity of the identical accommodation facilities and tourist services at Russian-speaking markets (not only in Russia but almost in all other former Soviet republics) (Junevicius & Albrektas, 2017; Anszperger, 2017).

CONCLUSIONS

The sale of Thai tourist product on Russian market should be carried out more professionally and in a more specialized manner. Sale of health-improving tours to Thailand in the places of selling standard beach packages is proved to be absolutely inefficient, moreover, even damaging the sales to some extent, as it does not contribute to forming the needed serious attitude to health tourism in Thailand among Russian consumers. We find it logical to consider the option of opening the Internet offices for the sale of Thai health products in the framework of the national strategy for promoting the tourist potential of the Kingdom. Such Internet offices must be able to consult Russian-speaking consumers $\frac{24}{7}$ so that to recommend them to choose a place of treatment or rehabilitation in Thailand, as well as several options for acquiring tours (only through Russian affiliated travel agencies in order to follow the law of the Russian Federation).

Based on the advantages of Thai health product, highlighted by the Russians, we believe that in its promotion it is worth emphasizing on the excellent and high-tech service. Advertising should not show smiling nurses and chic wards in Thai hospitals, but concentrate more on the certificates, achievements, equipment etc.

Such facts are truly able to deliver the message that Thai medicine is quite advanced. For example, in the advertising messages, the texts such as "we conduct ten operations of coronary shunting every day", "equipment like ours can be found in ten only countries of the world" or "we have legal stem cells" should be more preferable than traditional "with love and care in single rooms with a park view".

To simplify the procedure of choosing the place for treatment and diagnosis, we consider it logical to propose a national system for assessing the achievements of hospitals and clinics in various areas of medicine, and to provide the hospital rankings based on the number of patients accepted and cured, patient reviews, compliance with international and national standards etc. The official rating can be determined every vear or once in two years, and this rating must be freely available, so that any tourist in the world can look up in advance which hospitals in Bangkok perform the best operations on heart, which of them do best platics etc. A very important problem limiting the growth of Russian medical tourism in Thailand is the failure to accept Thai documents by Russian doctors. The reasons for this non-acceptance may be language, inconsistency of standards, unwillingness of Russian doctors to lose budgets for diagnostics. The first two problems from the above are easily solved through the introduction of a system for adapting Thai documents and diagnostic standards (this does not require significant expenditures, and each hospital can implement it independently after a series of consultations with Russian specialists, for example, during one conference). The third problem should be solved by Russian partners, actually. Options for its solution are seen only through the intensification of interstate cooperation in the field of medical care, development of partnership between Thai and Russian medical institutions. We can also recommend testing the economic and marketing effectiveness of a business model of a sanatorium in Thailand, that is, a modern accommodation facility that offers, in addition to traditional services, dietary and medical services (not medicamental, but for example, aromatherapy, homeopathy, physiotherapy, laser therapy, water, hydropathy, inhalation etc.).

This model will be somewhat more expensive than that of a traditional hotel, but unlike the hotel, it will have a set of strong competitive advantages in terms of Russian (and in the future, world) sales and will be able to actively earn additional services (diagnostics, treatment), use with the benefits of a medical facility in Thailand. This model, if successfully implemented, will open new prospects for the development of health tourism in Thailand, and maybe even form a whole brand new industry, directly connecting hospitality and medicine, and thus offering a new export tourist product with a potentially stronger demand from day one.

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GEOGRAPHICAL CONSIDERATIONS REGARDING THE TOURIST INFORMATION AND PROMOTION CENTERS FROM BIHOR COUNTY, ROMANIA

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Abstract: The present study aims to determine the role and importance of the tourist information and promotin centers from Bihor county taking into consideration the economic, social and cultural influence of tourism worldwide. These centers were established to provide tourists with the necessary and updated information regarding the tourist destination, thus to become a major part in the promotion of tourist attractions. The implemented methodology based on

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questionnaires helped us assess the role of these centers in the shaping of Bihor county tourist destination and the analysis of the existent web sites (8 out of 13 tourist centers have got one) gave us an insight into the significance of internet promotion as a powerful marketing tool of the 21st century.

Key words: tourist information and promotion centers, role and importance, tourist destination

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INTRODUCTION

In the last two decades, tourism has emerged as a key factor for the worldwide economic development. Therefore, in 2011 it contributed with 9% la to the global GDP and it involved 1 in every 12 workers on the planet (Shi & Li, 2013), whereas for 2018 the figures were higher - 10.4% of the global GDP, 1 in 2 jobs being done in the tourism sector (WEF, 2019). The outstanding growth of tourism especially in the second half of the 20th century and the beginning of the 21st century is due to the fact that the public has had more access to the tourist products (Armenski et al., 2012). If in the year 1950, 25 million people travelled outside their countries of residence for tourist reasons, in 2011 their number rose to approximately 980 million (Dahiya & Duggal, 2015), a sign that tourism is a sector in a constant growth and development. The tourist offer has also changed according to the considerable increase of the demand, on the tourism marked appearing a wide range of destinations (Ivanov & Webster, 2013; Antonescu & Stock, 2014) with varied offers and attractions. In a tourism industry which offers a variety of opportunities and in which only the best managed ones thrive, (Kavar & Kozak, 2010), the key word is competitiveness (Andrades-Caldito et al., 2012; Leung & Baloglu, 2013; Croes & Rivera, 2010). As a result, each torist destination tries to take advantage of its own assets to attract the greatest number of visitors. Such an advatage could be a healthy tourist promotion, which can offer tourists precious information about the destination, influencing their decision-making process (Shi & Li, 2013; Molina et al., 2010; Uysal, 2013). Alongside with the evolution and the individualisation of the human society as unrestricted regarding the free circulation of information, the limits of the tourist industry have extended continuously (Koo et al., 2015). Nowadays, understanding the way in which the information about tourism functions is vital, especially because recent studies in this field (Horng & Tsai, 2010; Chaiprasit et al., 2011; Jeaon et al., 2011; Standing et al., 2014) show that the information sources have a great impact on the tourists' preferences. The conventional sources, such as the tourist information and promotion centers are partially responsible for the spread of tourist information.

The tourist information and promotion centers represent a dynamic vector of tourism with profound implications in the creation and promotion of the image of the tourist destination, playing a key role in the first impression created by the visitor regarding the destination (Chaşovschi et al., 2016; Herman et al., 2019; Lyu & Hwang, 2015; Cox & Wray, 2011). The creation of tourist destination image is a delicate process that requires considerable time and resouces. Besides the TIPC, other local and international factors take part in the creation of this image. Among them, we mention: the organizations for the management of the tourist destination (OMD), The Ministry of Tourism (or similar structures), The Romanian Government through special institutions, the tourism agecies, the tourist service providers (accommodation, public food service, entertainment, recreation, treatment etc), public authorities (local,

regional, national) and the local population. From the above mentioned reasons, it is clear that the action of creation of a tourist destination image is of large-scale due to the human factor involved and above all, because of the benefits it can create for the local community and for the global one indirectly (Li et al., 2017; Fyall et al., 2012; Mendola & Volo, 2017; Sainaghi et al., 2017; Dwyer et al., 2014; Gómez-Vega & Picazo-Tadeo, 2019; Mariani, 2014; Saarinen, 2001, 2004; Dela & Aria, 2016; Więckowski et al., 2014; Lindner-Cendrowska, 2013; Toral et al., 2018). These are translated at local level by: the creation of a positive image for the tourist destination; the increase of the duration of the tourist stay; the development of new tourist planning sites; the rise of the social level; the development of local economy; the sustainable, responsible development of the territory; the preservation and protection of the environment etc.

The present study comes as a necessity to assess these centers responsible for the information dissemination and the role they play in the creation of the tourist destination image of Romania, in general (Bogan, 2014; Ilieş et al., 2018; Gozner et al., 2018; Lincu et al., 2018; Paicu & Hristache, 2013), and of Bihor county in particular. Taking into account the 131st place out of 136 studied countries where Romania was in the 2017 World Economic Forum report regarding the tourism competitiveness, marketing and branding efficiency to attract tourists, (WEF, 2017) the relevance of the study is the greater. Bihor county, situated "in the west part of Romania, right near Romania's state border with Hungary, at the contact between the morphological units of Tisa Plain (subunit of the Western Plain) with the Carpathian Mountains (The Occidental Carpathians), in the hydrographic basin of the Tisa River" (Herman et al., 2017), is represented by 13 TIPC located on the territory of 11 administrative units, in 11 localities (Table 1).

No.	TIPC name	TAU	Address
1	Bihor National Tourist Information and Promotion Center	Oradea	Str. Patrioților nr.2, Oradea
2	Oradea Town Hall Tower Tourist Information Center	Oradea	Piața Unirii nr. 1-2, Oradea
3	Oradea Fortress Tourist Information Municipal Center	Oradea	Piața Emanuil Gojdu nr.41, corp J, Oradea
4	Beiuș National Tourist Information and Promotion Center	Beiuș	Calea Bihorului, Nr.28, Beiuș
5	Nucet National Tourist Information and Promotion Center	Nucet	Str. Republicii nr.8, Nucet
6	Vașcău National Tourist Information and Promotion Center	Vașcău	Str. Unirii, nr.75, Vașcău
7	Aleşd National Tourist Information and Promotion Center	Aleşd	Str. Bobâlna, Nr.3, Aleşd
8	Bratca National Tourist Information and Promotion Center	Bratca	Str. Principala, Nr.126, Bratca
9	Cărpinet National Tourist Information and Promotion Center	Cărpinet	Str. Principala nr.80, Cărpinet
10	Mădăras National Tourist Information and Promotion Center	Mădăras	Str. Principala, Mădăras
11	Câmpani National Tourist Information and Promotion Center	Câmpani	Str. Principala nr.1, Câmpani
12	Vadu Crișului Tourist Information Center	Vadu Crișului	Str.Principală nr.693, Vadu Crișului
13	Bulz Tourist Information Center	Bulz	Str. Principala nr. 134i, Bulz

Tabel 1. The Tourist Information and Promotion Centers in Bihor County

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The present study aims to highlight some quantitative and qualitative aspects related to the role and importance of tourist information and promotion centers, previously mentioned, in the shaping and promotion of Bihor county as a tourist destination. Bihor tourist destination is defined by the existence of four tourist resorts: (Băile Felix, Băile 1 Mai, Băile Tinca, Stâna de Vale) and eight areas of maximum concentration of tourist resources and the necessary infrastructure for their operation: Oradea, Băile Felix, Pădurea Craiului (including Valea Iadului), Stâna de Vale, Padiş, Vârtop, Câmpia Crișurilor (pseudodestination), Ierului Valley and Barcăului Valley.

WORKING METHODOLOGY

In the current study we used the social survey method based on questionnaire (Babbie, 2010; Bar et al., 2016; Bryman, 2012; Chelcea, 2007; Ilies et al., 2015; Tătar et al., 2018a, 2018b, Herman et al., 2019a, b) and the websites analysis. The questionnaire used to obtain the data regarding the role and importance of information and promotion centers in the shaping and promotion of Bihor image as a tourist destination was administered in the time frame 01.10.2017 - 20.04.2018 and readministered in the period 01.11.2018 - 30.01.2019. Structurally speaking, the used questionnaire contained 10 items with reference to: tourist attractions; tourist promotion materials; accommodation infrastructure: access to public transport infrastructure: tourist guidance activity; events of tourism exhibitions; recommanded local tourist products; local tourist circulation; existence of tourist destinations and other defining aspects in the creation of the tourist destination image. The analysis of the centers' websites is a necessity as the internet has undoubtedly become the most powerful marketing instrument (Andreopoulou et al., 2014), with significant roles in the dissemination of information and promotion of tourism. Their analysis followed the same methodological pattern used during the sociological method of the questionnaire seeking to obtain answers to the 10 items mentioned above, from the content of the pages corresponding to TIPC Bihor. To quantify the responses received from the sociological survey and websites analysis, each of the 10 items was given a single value equal to 1, a proportion of 10% respectively. This value resulted from the summation of the given score of 0.5 for each typical category separately, questionnaire and websites analysis respectively at the level of each item (Table 1). Based on these values, a value scale was drawn up regarding the role of TIPC with ranges between 1 and 4 points (insignificant role); 5 and 6 points (minor role); 7 and 8 points (average role); 9 and 10 points (major role).

Regarding the quantity and quality of the obtained results, we have to state that the requested information, with the help of the questionnaire, is public information that the tourist information and promotion centers have the obligation to provide to anyone who requests it for free (Order 1096, 2008, para. 4.1), while according to the appendix 4 regarding the Basic Structue of the CNIPT specified in the Regional Operational Programme 2007-2013; Priority Axis 5 – Sustainable Development and Tourism Promotion; Major Intervention Field 5.3 – The Promotion of the Tourist Potential and the Creation of the Necessary Infrastructure to Increase Romania's Attractiveness as a Tourist Destination; Operation The Creation of the National Centers for Tourist Information and Promotion (CNIPT) and their equipment. This is public information that can be accessed from the web page corresponding to each tourist information and promotion center.

RESULTS AND DISCUSSIONS

Using the above mentioned methodology, 13 TIPC were questioned via the questionnaire method, out of which 10 centers followed that course of action. With regard

to the websites analysis, 8 TIPC were assessed, the other 5 having no web or internet page. The integrated analysis of the obtained information has highlighted the existence of some major malfunctions regarding the possession of information with respect to the local tourist circulation, recommanded local tourist products, access to public transport infrastructure, tour guiding activity and other marked aspects for the creation of the tourist destination image, while a better situation was registered at the chapters regarding the tourist attractions, tourist promotion materials ans accommodation infrastructure (Table 2, Figure 1). From the perspective of each analysed parameter, it was noticed the existence of the following typical categories of indicators: with major role (1 indicator, Tourist attractions); with average role (2 indicators, Tourist promotion materials; Accommodation infrastructure); with very low role (4 indicators; Local tourist circulation; Tourists access to public transport infrastructure; Tour guiding activity; Tourist exhibitions; Recommended local tourist products; Other defining aspects in creating a tourist destination image; The existence of tourist destinations) (Table 3).



As a result of the quantification of the TIPC role and importance in the shaping of the Bihor county tourist destination image, according to the methodology developed in the present study, it is clearly noticeable that TIPC play an insignificant role (Table 2, 3, figure 2). This resuted from the quantification of the obtained score (37 points, 37%) for each of the 10 analysed indicators, for the 13 assessed TIPC (1 point for each indicator, total 130 points). Bihor National Tourist Information and Promotion Center (major role) and Aleşd Tourist Information and Promotion Center (minor role) are exceptions from this rule (tabelul 3). Bihor National Tourist Information and Promotion Center obtained 9 out of 10 points, which placed it in the category of centers with major impact. From the analysis of the indicators taken into account in this study, a few malfunctins emerged regarding the recommended locat tourist products and the possession of information with respect to tourist circulation in the last 5 years.

Aleşd National Tourist Information and Promotion Center has a minor importance in the shaping and promotion of Bihor tourist destination obtaining 6 points. The individual study of each indicator, for Aleşd TIPC has highlighted a number of weak points regarding the tour guiding activity, recommended local tourist products, local tourist circulation and the existence of tourist destinations.

No	Contons		I	Num	ber	of it	em a	anal	ized			Total	Polo
NU.	Centers	1	2	3	4	5	6	7	8	9	10	TOtal	KUIE
1	Bihor National Tourist Information and Promotion Center	1	1	1	1	1	1	0.5	0.5	1	1	9	Major
2	Turnul Primăriei Oradea Tourist Information Center	0	0	0	0	0	0	0	0	0	0	0	Insignificant
3	Cetatea Oradea Tourist Information Municipal Center	0.5	0	0	0	0	0	0	0	0	0	0.5	Insignificant
4	Beiuș National Tourist Information and Promotion Center	1	1	1	0	0	0.5	0	0	0	0.5	4	Insignificant
5	Nucet National Tourist Information and Promotion Center	1	1	1	0	0	0	0	0	0	o	3	Insignificant
6	Vașcău National Tourist Information and Promotion Center	1	1	0.5	0.5	0	0	0	0	0	0	3	Insignificant
7	Aleşd National Tourist Information and Promotion Center	1	1	1	1	0	1	0	0	1	о	6	Minor
8	Bratca National Tourist Information and Promotion Center	0.5	0.5	0.5	0	0	0.5	0.5	0	0	0	2.5	Insignificant
9	Cărpinet National Tourist Information and Promotion Center	0.5	0.5	0.5	0	0.5	0	0	0	0	0	2	Insignificant
10	Mădăras National Tourist Information and Promotion Center	1	0.5	1	0	0.5	0	0	0	0	о	3	Insignificant
11	Câmpani National Tourist Information and Promotion Center	1	0.5	1	0	0	0.5	0	0	0	o	3	Insignificant
12	Vadu Crișului Tourist Information Center	0	0	0	0	0	0	0	0	0	0	0	Insignificant
13	Bulz Tourist Information Center	0.5	0.5	0	0	0	0	0	0	0	0	1	Insignificant
	TOTAL	9	7•5	7.5	2.5	2	3.5	1	0.5	2	1.5	37	Insignificant
	Role	Major	Medium	Medium	nsignificant	nsignificant	nsignificant	nsignificant	nsignificant	nsignificant	nsignificant	nsignificant	

Tabelul 2. The value of the score obtained by TIPC in Bihor according to the indicators used to quantify the role of the tourist information and promotion centers

Although we can say that quantitatively the information materials were satisfactory in number, qualitatively, these do not emphasize the destination and are not updated, a lot of them being done when the center was established, as part of the project from which they emerged. Moreover, the materials are not unitary at the level of Bihor destination, each one being done based on different concepts. Other information is hardly available (regarding the transport infrastructure and public transport, tour guiding or local tourist circulation). This fact shows that there is no monitoring system at the level of Bihor destination. The centers' websites are not completely functional, and the majority of those that function, do not contain updated information.

To render efficient the activity of the tourist information centers it is necessary to create a tourist network and to identify its best communication channel. This network must have a (institutional) coordinator and must include all the factors interested in tourism at local and county level. It is essential to create a unitary communication channel with the beneficiaries at the network level and other new opportunities for the tourist development of the communities where the information centers operate.

	Relevant criteria to assess	Nominal value Total value ¹						
Nr.	the role of the tourist information and	Questi onnaire	Website	Ratio	Questi onnaire	Website	Ratio	TIPC role
crt.	promotion centers in the creation of Bihor tourist destination image	No.	No.	%	No.	No.	%	TH C TOIC
1	Tourist attractions	0.5	0.5	10	5	4	90	Major
2	Tourist promotion materials	0.5	0.5	10	5	2.5	75	Medium
3	Accommodation infrastructure	0.5	0.5	10	4.5	3	75	Medium
4	Tourists access to public transport infrastructure	0.5	0.5	10	1	1.5	25	Insignificant
5	Tour guiding activity	0.5	0.5	10	1.5	0.5	20	Insignificant
6	Tourist exhibitions	0.5	0.5	10	2.5	1	35	Insignificant
7	Recommended local tourist products	0.5	0.5	10	0.5	0.5	10	Insignificant
8	Local tourist circulation	0.5	0.5	10	0	0.5	5	Insignificant
9	Other defining aspects in creating a tourist destination image	0.5	0.5	10	1	1	20	Insignificant
1 0	The existence of tourist destinations	0.5	0.5	10	1	0.5	15	Insignificant
	Total	5	5	100	22	15	3 7	Insignificant

Tabelul 3. The criteria used to quantify the role of torist information and promotion centers

The information centers network must facilitate the access to a complete and integrated set of information across the county, regarding the tourist destinations, tourist attractions, tourist services, including accommodation, support and working facilities. By enhancing such a network, we could improve the tourists' information and even satisfaction level, including tourist loyalty of all who travel in Bihor county.

CONCLUSIONS

The analysis of the tourist information centers from Bihor county (13 centers),

¹ Valoare totală **130** puncte (1 punct pentru fiecare criteriu aferent celor **13** centre de informare și promovare turistică analizate)

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using the methodology developed during the present study, has illustrated that these institutions have an insignificant importance at county level, except for Bihor National Tourist Information and Promotion Center (major importance) and Aleşd National Tourist Information and Promotion Center (minor importance). The analysis of these centers at item level has highlighted the existence of some serious problems at almost all the items, except for those regarding tourist attractions (major importance), tourist promotion materials and accommodation infrastructure (average importance each).



Figura 2. The TIPC role in the promotion of the tourist destination image

The TIPC in Bihor face the most serious difficulties at the chapters regarding recommended local tourist products and local tourist circulation (Table 1 and 2). Taking into account the fundamental role these entities play in the marketing strategy of the destination, the tourist information and promotion centers should possess a larger amount of information and carry out the local products marketing as well. As a result of the applied questionnaire, it is apparent that the centers face great malfunctions regarding the above mentioned responsibilities, fact that determines the limited role they have in the development of Bihor county as a tourist destination.

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GEOCHEMICAL MONITORING OF INDUSTRIAL CENTER FOR DEVELOPMENT OF RECREATIONAL AREAS (ON THE EXAMPLE OF KHROMTAU-DON INDUSTRIAL HUB, KAZAKHSTAN)

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Abstract: Landscape-geochemical assessment of the industrial areas is of particular interest. This paper describes the microelement composition of soils, investigates hydrochemical composition of surface waters and vegetation of the territory. A landscape-geochemical analysis of the Khromtau industrial zone was carried out. The article includes results of studying of the patterns of the profile distribution of the morphological, physico-chemical properties of soils and their transformation under the influence of the mining industry and urban loads. The study reveals main types of rearrangements of the ecological and geochemical structure of soil profiles, which sharply differ from the background soils of the region. During field research, key

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areas were laid. In the key areas, soil pits were laid for sampling soil from various horizons, for subsequent chemical analysis of the constituent components, and vegetation was selected for chemical analysis. Geoenvironmental analysis allows scientific justifying creation of technogenic reservations as a basis for protection of recreational areas. The work contains conceptual and methodological approaches to ensuring geo-ecological assessment of geosystems. The analysis of the interaction of the natural, economic, social subsystems and control systems with modern geosystems, based on the ecosystem services, provided by natural subsystem demanded by society and economy. A model of technogenic geosystem and a series of the indicators reflecting properties, quantitative and qualitative features of each block of subsystems has been developed. Structural variations which arise in geosystem as a result of anthropogenous transformation lets to establish quality of technogenic geosystem and to rank them from steadily functioning to the actively degrading.

Key words: technogenic load, soil, soil profile, heavy metals, geochemical analysis

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INTRODUCTION

Pollution with heavy metals has the most technogenic load on soils of industrial cities because fast self-purification from metal pollution to the level required for hygienic and environmental safety is complicated and in many cases impossible (Berdenov, 2014).

Industrial urbanization has special role in pollution of soil cover. Urbanization is a social phenomenon and geoecological problems are universal, general scientific. They are of great practical importance. We can talk about environmentally friendly situation in industrial hubs only when the science will consider problems from the positions of human life support and rational «Human-Nature» relationships (Dubrovskaya, 2012; Shomanova et al., 2017; Romocea et al., 2018). Urban areas are a special type of ecological systems when natural components change significantly and often irreversibly under various intensive anthropogenic loads.

Despite fundamental reconstruction of the most important properties according to a number of leading researchers (Stroganova et al., 1997, pp. 234-275) urban soils are recognized as the basic constituent of urbogeosystem, that implements the most important ecological and economical functions and determines living conditions in city.

MATERIALS AND METHODS

The study area is located between the southern spurs of the Urals and the northern ridges of Mugodzhary. The steppe here is hilly, the maximum height does not exceed 490 meters. The territory is located in the Ory-Ilek interfluve, refers to the basin of the Ural River. The considered territory is located in the zone of dry steppes. This zone is characterized by the spread of dark chestnut soils. Soil-forming rocks here are dark brown sandy loam, hard with rare interlayers of loam and sand. The territory of the object is located in the subzone of dark chestnut soils. According to the report (Technical report, 2017) about engineering and geological surveys the site consists of soil-vegetation layer - loamy, brown with plant roots, thickness – 0.2 m; sandy loam - light-brown, calcareous, solid, thickness – 1.8-2.0 m; sands of medium size - gray, medium density, thickness - 2.0 - 2.3 m. The complexity ma structural-tectonic structure of the South Ural causes lithological-mineralogical diversity, presence of the most important stratigraphic sections, wide exhibition of karst processes and others (Kotlyar et al., 2013). Mining in the region brings a serious danger for safety of the objects of geological heritage (Badiali

et al., 2018). Our research shows necessity of developing of unified interregional concept of saving of the objects of geological and geomorphological heritage of Ural and Mugodzhars. One of the research directions is geo-environmental analysis of methodological approaches, which is used for forecasting of technogenic situation in the industrial region and for protection of objects of geological heritage (Theng et al., 2014).

In the Aktobe region there are 19 geological nature memorials. 10 of them are placed within the Ural-Mugodzhar mountains, where mining industry is intensively developed. Some of the enterprises are of international significance, amongst them is global stratotype ma the board between coal and perm systems "Aidarlyasha river valley". The necessary of saving of objects of geological heritage is obvious, that is approved by scientific researches and by documents of government of the Republic of Kazakhstan (Pavleichik, 2015). On the studied territory the structure of geological nature memorials is different. There geomorphological component of the object becomes secondary, but stratigraphical and paleontological worth is more important.

In addition to well known geological nature memorials of republican significance, other 14 objects of geological heritage of Aktobe region (Kazakhstan) are waiting for getting an official status. A vivid example of geological nature memorial is necropolis «Oysylkara» standing 15 kilometers from Khromtau city (Figure 1).



Figure 1. Oysylkara ancient memorial

The memorial is named after spirit – protector of camels, and keeper of camels herd. The necropolis dates from the 18th - beginning of the 20th centuries, representing a cemetery with an area of 100 by 170 meters. In the center of the cemetery there is a high mound of stones piled round. At this place there is a monument of iron, painted in green. It is believed that it was here that Saint Oysylkar, who was a real historical figure, was buried. Oysylkara was a very religious person, distributing the hadiths of the prophet Muhammad. Unfortunately, the mechanism for giving environmental status to geological objects is not without difficulties. One of them is a complex and lengthy process of preparing the necessary documentation. This leads to the fact that many already recognized objects of natural heritage are not yet reflected in the schemes of territorial planning (land use), are not put on cadastral registration, passports and protective obligations are not drawn up on them. This may entail the loss of the value or integrity of natural objects. So, as a result of mining, the ancient Alabas volcano ("Shuyl-Dak paleovolcanic region"), the original karst landscape and the southernmost gypsum caves of the Urals, the reef valuable in stratigraphic and paleontological terms ("Algal reef limestones of the Lower Perm age of Aktastinsky reef" are partially destroyed).

Deposits of chromium, copper and nickel are the main technogenic sources and wealth of studied area. The second by quantity in the world deposit of chromite ore, extraction of which is carried out by both mining and quarrying (Figure 2), is placed here. Many environmentally hazardous objects are located on area of studied territory. In the structure of industrial production of the city mining industry holds 94.3%, manufacturing industry – 3.6% (LLP «Khromtau brick factory», JSC «Ceramics», LLP «Aktyubinsk bakery factory»), production and distribution of heat, gas and water -2.1% (Program, 2012; Shomanova et al., 2018). The main city-forming enterprise of the industrial hub is Donskoy Ore Mining and Processing Plant - a branch of T Kazkhrom MNC, which specializes in the extraction and enrichment of chrome ore. The enterprise extracts practically the entire amount of chrome ore in Kazakhstan. Every third family living in Khromtau is related with the city-forming enterprise. 68.4% of economically active city population work at Donskoy Ore Mining and Processing Plant. Anthropogenic objects quarries for extraction of chromium, nickel, copper and other – call special attention. Under this powerful technogenic load soils acquire new complex of properties and regimes determining abilities to effectively perform various environmental functions.

Recent geoecological researches in the region were mainly focused on studying of morphogenesis and pollution of water bodies adjacent to the territory (Khomyakov, 2011; Koshim et al., 2015). However, aspects of formation and current condition of soil cover remain underexplored. There is no information about character of intraprofile distribution of the most important soil properties determining processes of transformation, accumulation and outflow of technogenic substances in soil stratum.

The analysis of the geosystem functioning intensity degree of intensive technogenic pollution zones is created at the first stage of geo - ecological assessment. For the realization of this task we had to make a landscape map of the study area (Figure 2) (Berdenov et al., 2016). Conducting open-cast mining in scale leads to the greatest disturbances to the surface of the earth. In this case, the soil cover is destroyed up to the geological foundation, vegetation is destroyed, and the hydrological regime as a whole is violated. A man-made dump-quarry landscape specific to open mining is formed.

The technogenic geosystem consists of several subsystems, and the main of them according to time of formation and importance is – natural one. From the position of geo-ecological analysis natural ecosystem (landscape) is characterized by definite geo-ecological services and resources, which it provides to the society (this terminology is used in the fundamental work prepared according to UN International program «An assessment of ecosystems at a turn of the millennia»). This concept included various natural resources or properties, useful to the person, thanks to which in general there is possible an activity of society and the certain person as a species (Berdenov et al., 2017).

The application of the technogenic geosystem model for the geoecological assessment of specific geosystems requires indicators that describe individual components of nature, their properties and processes (soil, vegetation cover) (Kabiyev et al., 2018). Collection of information, its processing and formalization are necessary procedures for computer systematization of extensive volumes of information and creation of classifications of technogenic geosystems. As a part of natural subgeosystem it

is a series of indicators of a litogenny basis of a landscape (the morphological structure of a surface, the soil-forming material, etc.) the hydro climatic and biogenous indicators. They determine the natural and resource potential (NRP) of geosystem, on a basis by which series of the practical actions necessary for improvement of environment and further use of natural and resource capacity of the region are developed (Berdenov et al., 2016). The main agents at transformation and violation of interconnections in landscapes are the factors of a production activity: industries, development of minerals, residential systems. The results of functioning of production objects, exploration of natural resources can be agents of such types (for example, emissions of waste, volume of the biomass alienated with a crop, density of infrastructure networks) and others.



Figure 2. Map of modern landscapes of the study area (Khromtau industrial site)

It should also be borne in mind that, due to the great public outcry, today there is an increased interest of people both in the environmental problem as a whole and in specific environmental issues related to individual regions (Gozner et al., 2017, Ilieş et al., 2017; Ilieş et al., 2018; Lincu et al., 2018, Herman et al., 2019). The objective study of the structure and dynamics of landscapes industrial zones is particularly relevant in connection with the continued growth and expansion of the production of nonferrous metallurgy, which determines the special significance of environmental risk assessment. Inevitably, with the growth of mancaused impact, geosystems structure changes occur, including a change in their chemical

parameters under the influence of mechanical disturbances and pollution. Therefore, knowledge of the geochemical characteristics and chemical composition of the components of landscapes, their metabolism is necessary to support the effective implementation and environmental monitoring industrial regions (Perelman & Kasimov, 1999).

To assess the degree of anthropogenic impact on the landscapes into account the parameters of a violation of medium components were evaluated geochemical changes. Finally got the classification model, the parameters of which are linked to certain anthropogenic load, differ in kind and degree of exposure (Table 1). To determine the degree of technogenic loading and transformation of all types were introduced ballroom expert assessment showing the relative degree of anthropogenic transformation. For this purpose, the normalized indicators of anthropogenic pressures on ecosystems (Vaganova & Kovalchuk, 2012; Jasinski, 2000). The following rules limit the use of environmental landscapes allow us to rank the territory according to the degree of technogenic load on landscapes, and, moreover, reasonably use the results to optimize the structure of nature.

Index	Mark							
muex	0	1	2	3	4			
Area of settlements, %	not	≤ 10	1-3	3-7	≥ 10			
Population density, persons/km ²	not	≤ 10	10-20	20-30	≥ 30			
Transportation load km/km ²	not	≤ 0.1	0.1-0.2	0.2-0.3	≥ 0.3			
The area of technogenic formations, %	not	≤ 0.5	0.5-1	1-3	≥ 3			
The area of arable land, %	not	≤ 10	10-40	40-60	≥ 60			
The area of pastures, %	not	≤ 20	20-40	40-70	≥ 70			

Table 1. Scale of valuation indicators of technogenic pressures on landscapes

In assessing the degree of anthropogenic impact on the ecosystem of the quantitative indicators for each parameter were translated into scores (0 to 4), which are then summed. The result of the summation is an integral indicator (U), the proposed K.M. Petrov (Petrov, 1998), the formula (1):

$$U = \frac{1}{n} \sum x_i k_i \tag{1}$$

where n - the number of factors; x_i - Scoping i factor; k_i - i weighting factor.

The weights are established by experts, based on the ranking of indicators on the extent of human impact on geosystems. Indicators characterizing these factors formed the basis of the zoning (ranking) of the study area on the degree of technogenic impact. Upon receipt of the integral indicator (U), the following graduation degrees of impact on landscapes: 1-2 - mid impact; 2-3 - intense, 3-4 – extevely.

RESULTS DISCUSSIONS

Solid and liquid wastes that accumulate in open storage facilities, landfills, chrome dumps also affect the environment. Soils, surface watercourses are polluted due to the flushing of tailings by melt and rain waters. The dissected relief of Khromtau, characteristic of the industrial territory, slopes towards the Akzhar, Katynadyr and Zharlybulak rivers contribute to the discharge of water into the basin. Relief changes are facilitated by field development. Since 2000, waste rock has been used in the construction of roads to fill the treatment space of worked horizons and closed mines, pits, ditches. The landscapes in which mining enterprises are located are characterized by increased atmospheric air pollution as a result of the spread of fine-grained waste rock. Denudation of overburden in dumps, mines, quarries and the subsequent migration of the chemical elements contained in them with the formation of secondary dispersion areas are also an integral part of technogenesis. During storage of rocks extracted from the massif during the excavation of mines, as well as during overburden operations at quarries and open pits, dump embankments are formed.

Dump embankments can be diverse in scale and shape. Mining quarries and dumps in most cases are lifeless territories. Erosion processes disable extensive areas, contribute to the accumulation of material at the foot of the slopes (Ungureanu et al., 2015). Around the city of Khromtau there are several dumps on which overburden is stored in several tiers with a height of more than 20 m. The resulting artificial rugged relief is a combination of high embankments and shallow depressions. The slopes of the dumps are riddled with ravines. When we study the surface water in the area (r. Akzhar, r. Katynadyr and r. Zharlybulak) set a wide range of chemical elements in aquatic systems and the estimation of water pollution to sanitary protection zone, and after the sanitary protection zone. Studied in detail questions of technogenic pollution of surface waters and r. Akzhar, r. Katynadyr salts, heavy metals and other pollutants Table 2.

Appellations Substances (<i>mg/l</i>)	Average value in the river Akzhar	Average value in the river Katynadyr	Average value in the river Zharlybulak
Turbidity	3.5	4.4	1.42
Colority	28.3	45	27
Oxidability	3.5	3.7	3.1
рН	8.1	8.3	7.7
Polyphosphate	0.04	0.02	0.01
Total hardness	7.1	7.3	5.5
Ammonia	0.03	-	0.1
Nitrate	38	43	36
The chlorides	142	127	107
Sulphates	130	189	141
Copper (Cu ²⁺)	0.59	0.72	0.21
Manganese (Mg ²⁺)	0.07-0.01	0.083-0.03	0.03-0.04
Chromium (Cr ³⁺ , Cr ⁶⁺)	0.32	0.89	0.65

Table 2. The results of chemical analyzes of trial (average for 2019)

Analysis of trace-element composition of surface waters shows that the concentration of heavy metals in them exceeds the background value several times in the river Akzhar and in the river Katynadyr water and have the highest degree of concentration in soluble form. This is apparently due to the weather conditions in spring and autumn periods of observation. In the period of stabilization of the water regime of the rivers and the lack of strong surface flow changes in the composition of trace-element concentrations was observed. This suggests that the main factor influencing the change in concentrations of trace elements in surface watercourses draining industrial and

residential zone, is runoff from anthropogenic areas (Kasimov, 1995). Thus, condition of surface waters in the limits of the industrial area does not suppose development of the recreation. The fact is compensed by the presence in the region of two water reservoirs. Profound changes in the territory of the agglomeration undergo soil. The main feature of these changes is the change in soil-forming processes, soil functioning.

The process of forming a natural pedomass the city changed to 70-80%, no mortmass, reducing the additional application of nutrients, reducing the percentage of longitudinal substances. Under the influence of technogenic soils in the study region reduced bulk density of the natural soil, changed the structure of the soil horizons, increasing the amount of fine particles is their intensive removal of the soil profile, altered redox, acid-alkaline conditions and formed new geochemical barriers, not typical for zonal soil properties. The relief structure is undergoing major changes.



Figure 3. Map of sampling on soil pits within industrial hub

So in southern and northern parts of the city of Khromtau changed the percentage of nutrients, increased decay products of chromium, copper, manganese. Soil cover of industrial hub is a specific object of research. At initial stage on the basis of complex analysis of archive materials we selected key sites (Figure 3) reflecting variety of economical use of studied the area. During the field study (in summer, 2019) we laid out 15 full-profile open-pit mines, 10 by-pits and 4 half-digs, performed morphological description of profiles and soil sampling with further analysis by next parameters: granulometric texture, pH, humus level (by Tyurin), exchangeable base status, content of ready soluble salts in water extract, content of heavy metals by GOST 22036-2014.

We used the method of biotests for assessment of general soil pollution degree (Mendybayev et al., 2015; Berdenov & Dzhanaleeva, 2015). As reference standards, we used soil samples – southern black soil and dark chestnut soil from long-fallow lands of southeast part of Khromtau district near Kyzylzhar village. During the study it was defined that morphology of these soil groups even at minimal degree of disruption differs from zonal soils in variety of significant peculiarities. Chemically polluted soils are widely distributed (80% of territory). In building areas of inhabited localities soil cover becomes discrete as a result of architectural reclaiming. Soil profiles of open not sealed sites are characterized by absence of natural genetic horizons and represent artificial constructions of layers, which are consist of silty substrate of different thickness and quality with impurities of dumps, household and industrial waste.

N⁰		Ctuatification				Absorbed	bases, m	g-eq
Profile of	Horizon	depth cm	pН	Humus, %	C_{2^+}	$M\sigma^+$	Na ⁺	Base exchange
key site		ucptii, ciii		$\begin{tabular}{ c c c c } \hline Humus, \% & \hline Ca^+ & M \\ \hline Ca^+ & M \\ \hline nd slightly-disrupted soils \\\hline 3.50 & 25.20 & 3 \\ 3.10 & 28.50 & 3 \\ \hline 1.05 & 22.00 & 4 \\ 4.20 & 12.20 & 0 \\ 4.00 & 18.10 & 2 \\ 2.10 & 17.50 & 3 \\ 0.40 & 22.70 & 1 \\ \hline 5.10 & 12.50 & 1 \\ 3.70 & 12.60 & 2 \\ 2.50 & 12.20 & 2 \\ \hline 1.80 & 13.10 & 3 \\ \hline 0genic-modified soils \\\hline 1.20 & 18.50 & 7 \\ \hline 2.20 & 18.70 & 7 \\ \hline 1.00 & 17.10 & 6 \\ 0.70 & 16.50 & 6 \\ \hline 1.20 & 18.00 & 3 \\ 2.50 & 12.20 & 4 \\ \hline 0.20 & 5.80 & 2 \\ \hline 3.10 & 25.00 & 4 \\ 2.55 & 26.20 & 4 \\ \hline \end{tabular}$	wig	INA	capacity	
Natural and slightly-disrupted soils								
	Α	0-15	7.8	3.50	25.20	3.10	0.40	18
1	В	15-25	8.0	3.10	28.50	3.80	0.52	15
	BC	30-70	7.5	1.05	22.00	4.50	0.45	15
	А	0-10	7.5	4.20	12.20	0.50	0.30	20
0	В	15-30	7.1	4.00	18.10	2.50	0.57	22
0	BC	30-50	7.0	2.10	17.50	3.00	0.40	18
	С	60-100	7.4	0.40	22.70	1.40	0.45	22
	А	0-20	7.0	5.10	12.50	1.90	0.25	19
10	В	20-30	6.8	3.70	12.60	2.50	0.80	17
13	BC	30-45	7.2	2.50	12.20	2.10	0.74	15
	С	50-90	7.8	1.80	13.10	3.20	1.00	20
			Techno	genic-modif	ied soils			
	А	0-15	7.8	1.20	18.50	7.20	0.50	15
	В	15-40	8.2	2.20	18.70	7.40	0.60	26
4	BC	40-90	8.5	1.00	17.10	6.60	0.44	17
	С	90-150	8.0	0.70	16.50	6.65	0.65	19
	А	10-20	7.8	1.20	18.00	3.40	1.50	22
14	В	20-40	9.0	2.50	12.20	4.50	1.10	15
	С	40-150	7.5	0.20	5.80	2.50	0.85	15
	А	5-30	8.2	3.10	25.00	4.50	0.55	25
11	В	30-50	8.0	2.55	26.20	4.90	0.50	20
key site 1 8 13 4 14 11	С	50-80	7.2	1.70	19.80	3.45	0.42	18

Table 3. Results of chemical analyses of some samples of soil, 2019

Urbotechnosoils are characterized by maximal level of technogenic transformation, they are groups of soil-like solids assigned to industrial areas and

transport communications. Soil texture is forming under the influence of following factors: natural, mainly litho-geomorphological and technogenic factors (subsurface rocks, open cast mines, quarry banks), which are good observed on space images of medium magnification of apparatus Landsat. Natural (convential-disrupted) soils of researched territory are characterized by dominancy of heavy and middle loamy types.

Content of clay particles in upper horizons ranges from 40 to 60%, dominant fraction is large-silty (45-55%). Profiles of anthropogenic-modified soils are characterized by significant increase of lateral and radial non-uniformity of granulometric composition due to agitation of mass of overburden grounds, maternal rock and technologic substrates. Distribution of fractions through the profiles is irregular and often multidirectional. chemical analysis results are shown in Table 3. During the study of exchange-absorption ability of soils high saturation with bases of both slightly-disrupted and technogenic-modified soils should be noted. Some increase in relative quota of sodium was revealed in technogenic-modified soils from key site Nº14 located along the highway. The main reason of that excess of sodium in soil horizon, evidently, is entrance of salts from maternal rocks, that leads to extension of additional technogenic salting and salinization of soils. Results of chemical analyses (Table 4) shows increased content of some heavy metals on key sites near overburden grounds and highways.

	•	5 1		5
Nº key	Horizon,	Concentration of	Concentration of	Concentration of
site	stratification depth	chromium, <i>mg/kg</i>	lead, <i>mg/kg</i>	cadmium, <i>mg/kg</i>
_	A (10-20)	2.88	28.50	0.15
5	B (20-30)	2.80	20.10	-
15	A (5-20)	3.20	35.50	0.20
15	B (20-50)	3.80	15.50	0.06
10	A (10-20)	1.85	18.50	-
10	B (20-30)	1.10	10.80	-

Table 4. Results of chemical analyses of samples of soil on content of heavy metals

Estimation of gross content of metals (Pb, Cr, Cd) carried out at the Testing Laboratory LLP «RI Batysecoproject». As a result of detailed soil analysis in key areas in the city of Khromtau, we have identified the maximum permissible concentration of cadmium, lead, copper, zinc and chromium on the borders of sanitary protection zones of large industrial enterprises in the areas of major highways (Table 5).

Key areas	The average for 2019									
of the	Co	1	Pl)	Cu	L	C	r	Zı	1
territory	mg/kg	QMPC	mg/kg	QMPC	mg/kg	QMPC	mg/kg	QMPC	mg/kg	QMPC
Nº1	0.25	0.45	25.45	0.8	10.10	0.3	2.25	0.5	18.01	0.91
№2	0.07	0.1	12.01	0.4	9.72	0.3	3.31	0.5	11.20	0.3
Nº6	0.10	0.3	95.1	2.5	7.87	0.2	1.60	0.3	4.83	0.21
№7	0.09	0.2	11.65	0.5	10.75	0.35	2.05	0.3	8.10	0.30
Nº15	0.09	0.2	30.55	1.1	70.67	2.0	10.39	2.0	29.40	1.54

Table 5. The upper horizon of the soil research on the content of heavy metals

Note: Q - rate of excess by MPC

Using methods of A.G. Moshkalev (1988) and N.T. Smirnov (1979), study of vegetation in the study area conducted in trial areas of 10x10m² (Moshkalev, 1988; Smirnov, 1979). To assess the technogenic impact on the vegetation cover, a herbarium was collected for laboratory analysis to recognize the heavy metals in plants: zinc (Zn),

cobalt (Co) and chromium (Cr). The analysis was carried out in the laboratory of the National Center for the Integrated Processing of Mineral Raw Materials of the Republic of Kazakhstan, the state research and production association of industrial ecology "Kazmekhanobr". The results of chemical analysis are shown in Table 6.

The results in table 2 show that the average concentrations of Chromium and Nickel at all selected points are higher than the MPL, which confirms the presence of a natural geochemical anomaly here. Cobalt and zinc are within normal limits.

Dlaga of		Chamical						
Place of		Chemicais						
selection	Zn	Ni	Со	Cr				
Near the dumps career «40 years of the Kazakh SSR»								
Area 1	10.28/21.75	3.40/4.75	0.14/0.35	0.05/0.75				
Area 2	25.40/24.60	3.10/5.80	0.75/0.37	0.40/1.57				
	Dumps career «Poiskovyi» and «South»							
Area 1	12.65	1.54	0.35	0.21				
Area 2	9.80/16.35	1.16/2.25	0.30/0.27	0.18/0.30				
Area 3	27.94/19.52	4.70/3.62	0.46/0.35	0.38/0.52				
	Dumps car	reer «Ob'yedinenn	yi»					
Area 1	22.91/24.57	7.06/7.42	0.67/0.57	0.68/1.57				
Area 2	19.30	5.10	0.47	0.87				
MPL	50	1.00	-	-				
Notes: 1. Maxin	Notes: 1. Maximum permitted level of element content in plants							
2. Selecte	ed values in excess of the MPL in a	animal feed						

Table 6. The results of the analysis of plant samples tak	en
in the study area for the content of heavy metals (mg/k	J

In addition to geo-ecological problems in the study area, it is also necessary to note the availability of recreational resources for the local population. These include social and recreational resources, such as a complex of various buildings and structures (Children's Entertainment Center in the center of Khromtau, Central Park with coniferous tree planting), as well as other social and cultural facilities (Gornyak Club, Turgorodok). It can be also signed natural recreational resources, which are a part of the environment, designed for mass recreation and the implementation of recreational activities. So in 1961, the Jarlybutak reservoir was built (Figure 4a), which, in addition to providing water to the central boiler house of the city of Khromtau, is also a recreational area for the local population. The reservoir is located south of the quarries Ob'edinennyj and Millionnyj. In addition, in 2014, twelve kilometers south of Khromtau, a second reservoir (the third largest in the region) was built on the Oysylkara River near the village of Abay. Its design volume is 22 million cubic meters (Figure 4b). The Ovsvlkar reservoir area is 4 square kilometers, the dam height is 23.5 meters, the water depth is 18 meters. Firstly, industrial water is used for agricultural purposes. Secondly, a huge water spot affected the local climate, and this is the environmental value of the project.

Especially attractive are the many ancient volcanoes that are overwhelmingly preserved as separate fragments in South Mugodzhary. It is especially valuable that all these ancient structures, unlike many others, retained their primary orientation: the dykes are vertical, the covers lie horizontally or slightly inclined. A complex of parallel dikes is perfectly represented in the coastal cliffs of the river - these are numerous vertical bodies of frozen magma, which rose from the depths of the mantle and filled the opening cracks of the lithosphere. They are composed of full-crystalline basalts - the so-called dolerites. Dikes (from the English dike - stone wall) are vertical plates (0.1-3 m

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thick) of the frozen mantle basaltic melt, which was embedded in the opening axial crack of the sea basin. The length of individual dikes does not exceed several tens of meters, however, they replace one another, creating the impression of infinitely elongated bodies (Figure 4c, d). Dykes can be traced in the submeridional direction far beyond the borders of Kazakhstan along the entire Urals as traces of the Devonian ocean. Thus, the Khromtau and Shuyldak paleovolcanic region (Southern Mugodzhary) is already the site of numerous scientific research and professional excursions.



Figure 4. Recreational resources of studied territory

Dangerous for their toxic properties, are non-naturally occurring compounds such chemical elements as zinc, copper, arsenic, chromium, nickel and others. Almost all of them were found in the city. The highest concentration in the South part of the study area that is home to industrial enterprises' development, as well as intense vehicular traffic (Ramazanova et al., 2019). When the territorial characteristics of heavy metals anomalies, conducted a multi-element anomaly detection of heavy metals, determination of the concentration on the hazard classes and the total pollution of soils identified chemical elements so identified area of total pollution index (U). Square index (U) value of the content of chemical elements are divided into weakly contaminated, heavily soiled and extremely polluted landscapes (Dzhanaleyeva et al., 2017). On the basis of the functional zoning drawn landscape-geochemical map of 1:10 000 scale (Figure 5).

With a geoecological view of recreation, we propose to use the idea of technogenic reservations proposed by Yu.S. Velikanov and A.N. Pavlov (Velikanov & Pavlov, 2006). Man-made reservations - this is directly adjacent to the industrial facility, on which a system of certain prohibitive functions is carried out, aimed at limiting the values of

maximum permissible concentrations (MPC) and other environmental parameters (Velikanov & Pavlov, 2006). The man-made landscape created under such restrictions will prevent the spread of man-made changes related to the operation of the enterprise to territories beyond its regulated borders. Our proposed concept for creating technogenic reserves involves the creation of buffer zones, or environmental protection zones. This is a kind of border strip surrounding the technogenic reservation, beyond which an untouched natural landscape begins. Inside the buffer zones, it is recommended to carry out active environmental measures and strict monitoring control, which will allow urbanization of the natural landscape to be predictable and manageable. Thus, the creation of technogenic reserving the natural appearance of recreational areas, reducing erosion processes.



Figure 5. Landscape-geochemical map of the functional zoning of the Khromtau industrial site

CONCLUSION

As a result of the conducted researches it is possible to draw the following conclusions: 1. Unstable water regime of rivers, annual fluctuations in water availability caused significant changes hydromorphic landscapes. They endure various stages of change under the influence of technological processes and acrogenic changes.

2. Territory of Khromtau-Don industrial hub currently is an area of deeply modified nature where soil cover was radically changed and in reality represents a

complex technogenic geosystem consisting of combination of various anthropogenic modifications of soils and unnatural soil-like formations.

3. Chemical pollution (mostly with heavy metals) is the more characteristic and environmentally important process of technogenic modification of studied soils. This process appears already on the stage of morphological description of quarries and spans more or less practically the whole territory of Khromtau-Don industrial hub.

4. Characteristic attributes of technogenic transformation of studied soils are sharp increase, in comparison to natural zonal soils, of degree of stereoscopic non-uniformity of soil cover and variability of soil properties appearing as a result of complex combination of natural self-organizational processes and various technogenic influences.

5. The creation of technogenic reservations will make it possible to switch to a new environmental strategy for programming and managing technogenic landscapes in order to preserve recreational areas near the industrial center.

The developed model of technogenic geosystem and the cartographical model created on its basis in the ArcGIS10.1 program, allows to analyze one of the most important industrial regions of Western Kazakhstan for identification of the existing geo - ecological systems and their high-quality differentiation. The factual information obtained during the research is considered as a preliminary guideline for a more objective and scientifically sound assessment of the ecological state of landscapes and the organization of environmental monitoring of territories.

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