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IS THERE ROOM FOR ECO GOLF RESORTS IN THE CONCEPT OF SUSTAINABLE DEVELOPMENT OF TOURISM IN CROATIA?¹

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ABSTRACT

Introduction: The concept for sustainable development of tourism in Croatia for the period until the year 2020 suggests the establishment of a favourable relationship between economy, ecology and tourism development. Croatia has predicted to connect strategic development to building mega golf resorts on the coast in order to increase accommodation capacities and overcome seasonality and to greatly increase income. **Aim and methodology:** The goal of this work is to show that building golf resorts might lead to long term unsustainability of the concept of sustainable tourism development. The method of terrain examination is used, as well as critical analyses of the available secondary sources. **Results:** Building an eco-golf resort on the island of Cres has been planned against the will of the local eco community. Although the whole complex is called “eco”, the project may lead to the devastation of landscape, loss of biodiversity, with the enormous consumption of water and energy, possible exhaustion of underground drinking water reserves and finally, bioaccumulation of chemical fertilizers and herbicides. **Conclusion:** Qualitative principles of development should be considered equivalent to the quantitative ones, and any aberration most seriously threatens long term development of tourism economy of Croatia as well as sustainable development in the whole.

KEY WORDS: management of sustainable development of tourism, golf tourism, eco resort, environment pollution NATURA 2000

¹Review paper

INTRODUCTION

The concept of tourism development based on favorable climate, a large number of sunny days per year, and the unique, extremely clean sea in Croatia has, for decades now, been formed based on the syntagm “Sun and sea”, which is, still today, the dominant product of tourism, despite the fact that the relations have been changed on the world’s tourist market. Development of Croatia’s existing position on the tourist market requires facilities enhancement of all involved, as well as better quality of accommodation and hospitality services, with the aim to enlarge the destination chain of values and reposition itself on the regional and world market. When choosing the right path of development, it is important not to be primarily led by the economic development and growth, but by the concept of sustainable development. It can rightfully be said that the promotion of merely the “sun and sea” has led to a certain seasonality of tourist demand, but also to an encircled concentration of tourist market and offer to only the narrow coastal zone. That is the reason why, in the future, the majority of coastal destinations, especially the islands, will tend to enhance the development of new products which will then allow a more efficient activation of potential in tourism.

The fundamental document of development is “Croatian Tourism Development Strategy until 2020” as the basis of developing tourism in Croatia. Among other facts in this document, it is stated there that: *“in the segment of products which are highly perspective in development, the intense development of golf tourism is planned”*, since Croatia is a country which has a great comparative advantage as the closest warm destination with almost unspoilt nature where golfers from the big markets of middle and eastern Europe can play golf practically throughout the whole year. (1) Political elite, who are blind to the link between the development and the environmental hazard, only see golf tourism as encouragement to the development of elite tourism and believe that building golf courses would gain Croatia’s tourism the attraction and exclusiveness of the offer and thus achieve the desired shift from unwanted tourists to the ones who fill accommodation capacities in the desired period with very little non-accommodation. (2). Legal and programme basis to reinforce the development of golf tourism despite the lack of thoroughness and failure of a part of the project, derives from the “Programme and legal basis for reinforcing golf tourism as the element of development politics of Croatian tourism”, (3) which was used to make the frame

for planning and building the golf course, but the problems concerning the usage of space and intervention in the environment haven't been solved. Final goal of the so conceived development should be sustainability, which would be prosperity for present and future generations, without it, there would be no long term sustainability of development in tourism. The latest initiative of building an eco golf course on the island of Cres on the area which is completely a part of Natura 2000 and presents one of the most beautiful island landscapes, miles of preserved dry stone walls, exceptional vegetation and so far, unspoilt natural coastal harmony, predicts building two golf courses with 18 holes and accompanying facilities, as well as hotels, villas and other accommodational capacities of 1300 beds in the five star category objects.

AIM AND METHODOLOGY

The aim of this work is to, through the paradigm of sustainable development management, critically analyse sustainability of planned development and the possible building of eco golf courses on the island of Cres from the aspect of ecological, sociocultural, economic and technological sustainability.

Hypothesis of the research assumes that the predicted building of the eco golf resort on the island of Cres is not thoroughly adjusted with the concept of sustainable tourism development and the real possibilities of the environment.

In the work, secondary information sources were used, including urbanist planning, development strategies by the Republic of Croatia, spatial planning of the Town of Lošinj and its District, changes in the spatial planning, decisions made by the local authorities, the media etc. In the practical part, the insight of the location of the eco golf courses terrain has been done.

RESULTS AND DISCUSSION

The area around the eco golf resort is planned to be set on the south third of the island Cres, on 325 ha out of which the course takes up 245,50 ha. Possible harmful aspects of the project are seen through the degradation of scenery due to big ground works and changes of the landscape, big water contamination and consumption, destroying former pastures and farming fields, but also

unfavourable impact on the animal and plant species habitats as well as the alterations of the character and the image of the area.

The analysed project documentation implies that the system of water supply intends to have three components, water supply system for sanitary needs, system

for irrigation and for fire safety measures, with the supposition of approx. 600 m³ per day of water, for sanitary needs alone. It is a lump sum stated in various Case studies which have researched the question of what the impact of building golf courses in Croatia is on the environment, although each golf course is specific and the yearly consumption of irrigation water depends on climate conditions (temperature, humidity, wind, precipitation, exposure), morphology and soil structure, type of grass, the way the grass is handled, the pressure of traffic and the range of watering ground (4), all of which hasn't been elaborated or included in the study. The average daily consumption on a yearly basis of approx. 600 m³ would come to the consumption of approx. 220 000 m³ a year, which can be greatly underestimated since the standards of the World fund for nature protection should be looked into, which state that golf course irrigation consumes between 6.500-10.000 m³/ha per year. Given the fact that golf courses take up approximately 80 – 150 ha, and consume water of about 1.000.000 m³ per course a year, which would equal the consumption of a town with the population of 12.000 people. The amount of sanitary water is estimated to approx. 400 m³/day with the collection by a separate system of drainage and supply to the receiver. The problem is precipitation water from the golf course which should be collected autonomously and handled on location the same way or be taken to treatment. Due to the geological composition of the ground, trial boreholes which have been made on the area in question, have been valued as of relatively small moisture, with the regard that the extraction has been short (5). The estimate, with this short extraction, has shown moisture of from 1-3 m³/h, and the estimated amount of water which can be gained from the existing holes is 5 l/sec, that is 450m³ per day which is far less than the estimate of the average daily supply, and ten times less than the estimate of daily supply in the dry period (5). Furthermore, hydrological analyses, of the water potential of infiltrated precipitation water from the surface to the edges of the island's aquifer on the wider area, has been done and it is assessed that for average circumstances it amounts to 8 l/s/km², which represents a limiting factor to the possibilities of a more intense exploitation of water in dry periods (5). Additional precaution is pointed out by the fact that Lake Vrana on the island of

Cres has no visible inflows and outflows from the lake, and from the beginning of the extraction to the middle of 2015, around 80 million m³ of water has been extracted, which is approx. 40 % from the whole middle volume of the lake in relation to the middle volume of the lake (5). Along with the fact that the existing water supply system is being burdened and it directly increases the usage of already limiting amounts of drinking water from natural reservoirs, golf also increases the possibility of contaminating underground layers of drinking water and open channel flows by applying fertilizers, pesticides and herbicides. The amount of fertilizers used depends on the type of grass (specific needs), type of soil, type of fertilizer (e.g. fertilizer that contains nitrogen can be releasing it slower or faster), how fast the grass grows, the method of appliance (e.g. liquid or hard), nourishing ingredients which are already present in the soil and – removing cut grass (6,7,8). According to some studies, to treat parts of the golf course per each hectare, per year, around 400 kg of N, around 200 kg of P₂O₅, and around 300 kg of K₂O is used. Together with the fertilizers, large amounts of plant protection products are used, which can also harm nearby under and/or surface water. On the island of Cres, due to geomorphologic particularities of Lake Vrana and the non-existence of permanent water flows, the above mentioned can potentially cause a major problem. Golf courses also intrude on numerous habitats of many different plant and animal species, some of which are slowly disappearing from their natural surrounding as a consequence of disappearance of the natural areas they need, due to hunting and phytosanitary products, which are used more often by day in farming. Botanical part of the study states about the rich flora found in the narrow point of location intended for building, and as a conclusion is the belief that the whole island of Cres, for its rich fauna, could be included on the list of few Important Plant Areas of Croatia (5). What's more, while doing terrain research, important discoveries were made and they give even more importance to the protection of that area: sea thrift (*A. Maritima*), which is a rare plant was found, in the ponds on the eastern part of the narrow location of Cres, a community with a small water lens, which hasn't been discovered yet, also an important type of grass, valuable wild olive trees and a kind of holly plant, and finally the shift of three types of vegetation on such a small area with holm oak (5). Also, on the area of the narrow location of Cres, 16 types of habitats were found (like coastal lagoon, natural eutrophic water with the vegetation of water lenses, evergreen forests of holm oak...) which are protected by the European Habitats Directive (Directive 92/43/EEC) (5). That very abundance of flora, its peculiarity and uniqueness on

the area planned for building on Cres, could be lost and the situation can easily be called an ecocide. Research done on the fauna has also revealed the existence of at least three species which are on the list NATURA 2000: tortoise, leopard snake and four-lined snake. The richness of ornithofauna of that area is even more important when taking into consideration the information that the area in question is in the middle of very important bird habitat “HR1000033 Kvarner islands”, 35 different species have been detected, out of which 33 are protected by the Nature Protection Act and whose endangerment presents a potential ecocide. Along with that important bird protection area “HR1000033 Kvarner islands”, there are three other areas of the ecological range NATURA 2000 which encircle the area of the future golf course, and they are the area for protection of species and habitats on land – island Cres HR2001358, area for protection of species and habitats in the sea – island Cres - cape Suha – cape Meli HR 3000007 and the area of dolphin nature reserve Cres HR 3000161(5). Summing up possible impacts on the nature, in order to question justification of such a project from a bioethical and pluri-perspectivist point of view, potential hazards should be taken into consideration since the planned project can, if very complex and effective protection measures are not taken, lead to physical ruin of habitat through removing the existing vegetation surface, leaving only 170 ha out of 320 hectares of autochthonous. Fragmentation and alteration of existing habitats is expected to occur when building facilities and roads, concrete, building water supply lines, retention and also changes of the ecological parameters like the temperature, humidity, sun exposure and similar, and finally permanent loss of vegetation due to tree damage by heavy machinery, physical damaging and cutting trees which has already begun on the location (5). Another danger is the import of allochthonous plant species, especially invasive ones which can overpower autochthonous flora (5). When controlling noxious weed and pathogens, it will be inevitable to use protective chemicals which may harm environment. Possible harmful impact can also occur when fertilizing grass surfaces. The project will surely lead to loss of forests, and there are possible harmful impacts on the pedosphere due to improper disposing of inorganic and organic waste, gas pollution, waste water and chemicals, all of which can have a negative impact on ornithofauna, as well as on underground organisms and habitats. When building, there are also possible negative impacts on the existing elements of agrobiodiversity, from physical destroying and damaging to the extinction of certain species and breeds (9,5). Furthermore, underground water and coastal water can be polluted when not only building, but later when using

the water as well, because of the possibility of releasing unpurified waste water and using fertilizers and pesticides. Potential danger is the impact of overusing underground waters from boreholes and the consequences on supplies of other users in the wider area (5). In case the increasing extraction on one part of the water aquifers does occur, it can lead to alteration of local gradients of underwater flow and the decrease of level, and thus higher risk of saltization underground water on the surrounding area (5). It is not possible to ignore possible air pollution, may it be only locally and of limited duration, higher level of noise, the need to dispose of big amounts of waste and the occurrence of light pollution (5). All of the above mentioned questions responsibilities of authorities, who decide on the matter of allowing such a project to come to life, regardless of its impact on the environment, decision which should be made from a biocentric perspective, bearing in mind the welfare of all living creatures and the environment as a whole, and not thinking only about the profit of individuals or business groups, placing public interest before the particular one. If the project comes to life, if the uncritical development of eco golf resort is to be approved, it will be like Saluting while the ship sinks. (10). Case of „eco“ golf resorts in Croatia confirm Dwyer necessity for tourism paradigm change, in spite of huge literature promoting various benefits from golf tourism(11,12).

CONCLUSION

The purpose of this work was to, through critical analyses of the existing condition and the estimation of the possible influence of the project for developing golf tourism on the example of the island of Cres, give a certain, maybe even symbolic, theoretical contribution to predicting, shaping and directing the development of tourism, space and human environment, and to encourage development of a possible alternative to the existing plan of tourist destination development. The concept of sustainable development of all society's segments assumes forming positive relationship between economy and ecology, along with the bioethical responsible behaviour of all involved. Along with that, in the tourism sector, development which is exclusively focused on increasing the degree of efficiency of the existing or/and building new tourism capacities, through development and implementation of facilities which aim to prolong the tourist season and overcome seasonality, possibly leads to short term increase of economic profitability of the whole destination of the island of Cres. However, in the medium term and especially in the long term, sustainability of

such development is questionable, since planning which has not been done according to the concept of sustainable development, can in the end lead to development which is harmful for the environment, and thus cause permanent negative consequences on the environment. By applying the concept of sustainable development of tourism, the benefit of tourism should be maximized and at the same time minimize damage or expenses, and also direct or, if necessary, ecologically and socially responsible, limit tourism development, in accordance with the needs of sustainable development of tourism. Interdependency of tourism and the environment with the aim of reaching sustainable development includes integration of development politics with the management of natural resources based on projects, plans and programmes, integration of tourism development and management politics of natural resources on local, regional and state level and finally the increase of local capacities in accordance with real environment possibilities, especially in the areas where more intense tourist circulation is planned. It is necessary to critically examine the present version of development which is based on the development of eco golf tourism and the building of hyper-luxurious hotel capacities for affluent guests. That is particularly important in considering all dangers which, in the medium-term and long term, the development of that tourism segment in this area, not only on the environment, but on the whole of natural, cultural, historical and social surrounding. Through the analyses made, it is shown in the work that the planned building of the eco golf resort with accompanying tourist and hospitality facilities, may not be completely in accordance with the concept of sustainable tourism development, especially from the aspect of ecological, economic and technological sustainability and that the development of golf tourism with certainty cannot guarantee short term development and profit, but it may be that potentially, in the medium term and long term, the sustainability of tourism development of the whole area is at risk. Furthermore, the conversion of space and the increase of local capacities through building the eco golf resort with the building of golf course cluster, is questionably completely in co-ordinance with the real possibilities of the environment. Due to all that, the opinion of the author is that the plans for building the eco golf resort, should be seriously questioned by independent experts, and maybe even cancelled. Critical questioning of today's focus of tourism should be parallelly followed and the operationalization of the new vision and strategic developing goals, which of course requires action on several key areas, which will ensure enhancement of competitive abilities and

perception of tourism, along with the strong effort of authorities. Successful differentiation of the island of Cres from competitive destinations should be mostly based on nourishment of natural and experienced authenticity, with the stress on creativity in developing products, destination positioning and communication with the market with complete implementation of all management postulates of sustainable development with an ensured environment protection. Promotional activities should be focused on the so called ecologically aware experience researchers who can be found in all age groups, levels of income, geographical locations and period of travel throughout the year. Along with a clearly thought of segmented approach with targeted messages and promotional activities towards differential interest groups, it is possible to raise both attractiveness and competitiveness of the destination. Considering that the existing dominant image of the destination which offers only “sun and sea”, within the limiting few summer months, and market communication which it stresses continuously, at the moment, represent a limitation in the merge towards new spending segments, which with their needs and preferences can benefit the extension of tourist season, the development of segments of ecotourism which are not necessarily limited to only the period from June to September can add to overcoming the problem of seasonality. Therefore it is necessary to conduct professional structuring of the tourist brand (with the stress on yearly usage of possibilities which Croatian islands have to offer in means of ecotourism) in order to change the perception of northern Adriatic islands as destinations exclusively summer holidays. The awareness and visibility of local destination, not only in the season but exactly in the early and late season should be given special attention in the following years in order to develop a positive image and to develop ecologically sustainable destination which requires thought out, intensive and coherent action on all key markets.

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