

THE EVALUATION MODEL OF THE SUSTAINABLE RECEPTIVE CAPACITY IN TOURISTIC LIGHTHOUSE BUILDINGS

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ABSTRACT

The analysis of the sensitivity of the touristic micro location, in the context of receptive capacity, is a criterion, which determines the efficiency of the destination commercialisation for the long-term. The performance management of tourist destinations means achieving a sustainable level of spending on resources while retaining underlying competitiveness. In the development the project Stone Lights, this is an evaluation of the tourist value of Adriatic lighthouses. The authors of the project aim to determine the exact approach to the sustainable capacity within a controlled expenditure in the selected locations. Commercialization and the presumed legality of the project are confirmed in practice.

Experience is designed to model a pragmatic evaluation of the receptive capacity of the tourist destinations. The contemporary tourist practices often define the receptive capacity and access to the destination, primarily from the aspect of established competitive advantages. Format models with the aspect of destination management and allowable receptive capacity, means the purpose of customized marketing information systems, and known development opportunities of the specific tourist destinations.

The tourist evaluation of the Adriatic lighthouses, and the fundamental variables of the selected models, ecological sensitivity of the site, receptive capacity, hygienic disposal of waste water, ambient attraction of the destination, and the sensitivity of the each lighthouse considering the number of max number of people staying there, needs to be determined.

JEL clasiffication: Q01, Q56

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1. INTRODUCTION

The state – owned Croatian lighthouse authority **Plovput Ltd.** is the legal follower of the **Office for Maritime safety** in the Austro-hungarian empire that started lighthouse construction in the Adriatic. Due to the exceptional natural, cultural and historical value of the lighthouse buildings, managing this precious Croatian heritage incorporates multidisciplinary approach, where the evaluation model of the sustainable receptive capacity in *touristic* lighthouse buildings contributes significantly.¹ After the first commercial phase of the project *Stone lights – touristic use of Croatian lighthouses*, they were worldwide immediately recognised as a particular destination.² Thanks to the all new approach of *touristic* lighthouse management, and nature friendly solutions in power and water supply and disposal, the *Stone lights* project was awarded a prize from the Ministry of environment in the category *Tourism and environment* in 2001. Lighthouses in the Croatian Adriatic were soon recognised as a global trade mark in tourism.³

Environmental sensitivity in the context of receptive building capacity is a problem that *Stone lights* project had to tackle with from the very beginning of the project concept.⁴ Establishing criteria of the sustainable receptive capacity for each *touristic* lighthouse is the crucial step in long-term touristic use of these exceptional lighthouse buildings. The success in their management means that each and every one of them has to be evaluated separately. To do so is a challenge which Plovput decided to deal with on a multidisciplinary level and in continuous cooperation with the scientists from the Faculty of economics in Split.

While developing the project *Stone lights – touristic use of Croatian lighthouses*, precise and sustainable receptive capacity was established in order to monitor the *degradation* of natural resources on these attractive locations. In the commercial course of the project the assumed theories were proved in every day use.

The preparation of the 2nd project phase meant that the experience gathered was summed up in a practical model used in evaluation of every single *new* lighthouse to be potentially used as a tourist destination. The model, presented in this document, is based on the evaluation of the particular characteristics of every microlocation and indoor lighthouse space at hand.

Nowadays, destination's receptive capacity is determined primarily thru assessed advantages over competition.⁵ In this particular case, regarding accommodation in lighthouses, this approach would not be compatible efficient and profitable long-term destination use.⁶

Shaping destination management model from the aspect of the sustainable receptive capacity includes adequate informational system of marketing, and knowledge of the exact location – lighthouse building.

The implementation of the evaluation model we here present, in the context of the sustainable receptive capacity, includes good knowledge of market orientation of the clients that visit these antique sites. Keeping this in mind, the evaluation model of the sustainable receptive capacity in sustainable receptive capacity is based on 10-year-old observations and experience.

Long term succesful management of *touristic* lighthouses also depends on monitoring of the consequences of location degradation and pollution levels as well as all other consequences.

Howver, it remains fairly difficult to determine how successful the management of these attractive and valuable locations is.⁷ To be absolutely successful, the project would have to take into consideration the usage of all resources of the location. That makes synthetic analysis even more difficult, and more dependant on special research of the effects tourist have on lighthouse evironment. This document presents exactly these special observations and researches.

2. THE EVALUATION MODEL OF THE SUSTAINABLE RECEPTIVE CAPACITY IN TOURISTIC LIGHTHOUSE BUILDINGS

2.1. Determinatives in model variable selection

In the former years of commercial project *Stone lights* interactions were determined, meaning that continuous monitoring and analysis of the change in these interactions of the location's receptive capacity and intensity are necessary.⁸ These experiences were the basis for testing the possible determinatives in variable selection of the future model of the sustainable receptive capapcity on one single lighthouse. By analyzing the factors, which, in a given time frame, can permanently define the receptive capacity of every single lighthouse building, we can obtain many useful data.⁹ By carefully selecting these the following determinatives for the model variable at hand were assessed:

1. The efficiency of waste water disposal on a lighthouse
2. The visitors' impressions recorded in high season
3. The size of natural beaches in that area

4. Costs, complexity and capacity of fresh water storages on a lighthouse
5. Cultural and historical artefacts in that microlocation
6. The diversity of marine life both above and under sea surface near lighthouse
7. The indoor space capacity of a lighthouse

These determinatives were partially evaluated while selecting the variables that might represent the model structure. The implementation means we have to understand the market orientation of the lighthouse clients. In this analysis, we focused on the practical needs which had to be satisfied by offering the proper service in lighthouse accommodation. Speedy and stressful lifestyle and long working hours affect everyone's life seriously. Relaxation in lighthouse seclusion is *the therapy* that, in the 10-year long course of the *Stone lights project*, proved to be the proper answer to such a lifestyle.

To offer as little similarity with everyday life as possible, and yet to provide comfortable stay was our motto. Perhaps the main reason for choosing a lighthouse as a tourist destination is its seclusion.¹⁰ In that context the conservative approach to receptive capacity evaluation is proportional to higher pricing and therefore to larger profit as well.

2.2. The model and its variables

The defined research problem determined the choice of scientific methods used to shape the evaluation model. The research methods at hand were chosen in order to fully comprehend the significance of the sustainable receptive capacity evaluation regarding the microlocation sensitivity. The methodology is applied in order to clearly derive the determinatives for the efficient use of the described model of destination management with special ambience value.¹¹ The research was in part conducted as a *desk research*, and in part as a field research, by visiting the *touristic* lighthouses and by interviewing the tourists that took accommodation in them.

Except for general research methods – analysis and synthesis, induction and deduction, description, explication and comparison, other methods were also used – case-study method and functional analysis method. Although the environment of every *touristic* lighthouse is regarded as unique, we have tried to focus on comparative and measurable characteristics of all destinations in the context of the assumed standard, resulting in the evaluation of the sustainable receptive capacity. The factors used in this method are based on the environmental value to be com-

mercially used, water tank capacity, the capacity of the waste water disposal system, main supply capacity (220V) supported by alternative energy sources, marine life sensitivity, etc...

Taking all that into consideration, and by analyzing the gathered information as the key variable in the evaluation of the sustainable receptive capacity of lighthouse buildings, we defined:

1. Location's ecological sensitivity – dynamic receptive capacity
2. Fresh water supply options
3. Waste water disposal options
4. Location's ambience value
5. Location's value regarding possibilities for tourist activities
6. Ecological sensitivity regarding the quantity of dwelling persons

Ad1) The ecological sensitivity of the location is determined from the number of the human dwellers on the lighthouse and its surroundings and the possible negative effect their presence could represent. Grade 1 defines that no negative effects (no sensitivity) occur by using the full lighthouse capacity, and grade 5 means that the risk of negative effects that occur by using the full lighthouse capacity is high (high sensitivity).

Ad 2) The fresh water supply is determined from the fact whether the lighthouse is connected to the main pipeline, the annual precipitation quantity that fills the water tank, water tank capacity, possibility of water resupply by ships or vehicles. Grade 5 means that the lighthouse is connected to the main pipeline, and grade 1 means that the water tank is small (no possibility of improvement due to ground configuration) and that the annual precipitation quantity is exceeded by tourist demand, thus water supply costs are very high.

Ad 3) Waste water disposal depends on the way waste waters are disposed of. Grade 5 means that the lighthouse is on land and connected to the sewage system. Grade 1 means that disposal pits (on small islands) are limited (no possibility of improvement due to ground configuration) in size, and that artificial biological waste containers are also limited in size. Waste waters are never led directly to the sea.

Ad 4) Location's ambience value means that there is a presence of natural resources in abundance both above and under the sea surface, natural beaches, archaeological sites, endemic life forms, etc... Grade 5 means there is an abundance of these resources, and grade 1 means they are scarce.

Ad 5) Location's value regarding possibilities for tourist activities defines the entire location's potential for tourist activities such as hiking, bathing, vehicle approach etc...

Grade 5 means there are different sorts of such possibilities, grade 1 means such possibilities are very limited (restricted access to sea, no vehicle approach, etc...).

The model is based on partial evaluation of these variables and management potential of a *touristic* lighthouse in the context of probable effect on that microlocation. The model incorporates the continuous monitoring of natural resources in the context of redefining the receptive capacities of lighthouses that are already being used for toutistic purposes. The model also incorporates an adequate marketing system and already determined devolpment possibilities of a lighthouse as a tourist destination.

3. CONCLUSION

The complex commercial project *Stone lights – touristic use of Croatian lighthouses*, is much more than a display of natural resources such as lighthouse buildings governed by Plovput – Croatian lighthouse authority. The complexity of the project implementation is best shown in the acquired ecological standards that form the basis for the model of sustainable receptive capacity of the lighthouse buildings used for touristic purposes.

The practical evaluation of competetive advantages of a microlocation in the context of the permitted receptive capacity in developed economies is considered a must for efficient long term commercial use.¹² Regarded strategically, such evaluation represents a guarantee for preservation of natural resources on a level recquired to enable long term commercial use.

The interactive monitoring of this level means that the necessity for quick and decisive reaction, in case these natural resources are compromised, is tackled in an easier way. The evaluation model presented in this document is successfully applied in the 2nd phase of the *Stone lights* project. It is the basis for strategic business decisions and for the reports made for Croatian government and Ministry of Maritime affairs. The model can also be used for practical measures in case the monitored lighthouse's environment is compromised. This approach recquires institutional management of *touristic* lighthouse buildings.

The model we describe has established itself as an efficient basis for relevant pricing policy.¹³ This quality pricing enabled additional profit in those microlocations where criteria we described were upheld. Within the function of status monitoring it was necessary to establish one additional base for planning, coordination and activity control in order to functionally manage such a tourist destination. The systematic approach in destination management in the context of the evaluated receptive capacity in sensitive environment is an advanced feature in market definitions.¹⁴ Finally, when the evaluation model of a tourist destination is clear in all its forms – dependent and independent variables, the researcher is at the very beginning. Further research steps assume that the model is tested in everyday life, meaning that the model can potentially be used in other cases for other destinations of specific ambience value. Actually, one of the model goals is to encourage special research on attractive lighthouse locations that have the potential to become *touristic* lighthouses as well.

And finally, the hypothesis that an adequate evaluation model of the sustainable receptive capacity of a tourist destination with special ambience value is confirmed as it permits additional profit for already established accommodation price.

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