

BLUTOURSYSTEM

In depth interpretation of DSS result and
enhanced identification of CB

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Contents

1. In depth interpretation of DSS results.....	3
1.1. Interpretation of the Tourmedassets results related to the creation of the DSS	3
1.2. Interpretation of the Shapetourism results related to the creation of the DSS	6
2. Interpretation of SCBDS output in the perspective of the Croatian tourism socio-economic context with a focus on specific territorial assets and human capital features.....	12
2.1. Croatia's position with regard to the global competitiveness index and with regard to the travel and tourism competitiveness index	12
2.1.1. Croatia's position with regard to the global competitiveness index.....	12
2.1.2. Croatia position with regard to the travel and tourism competitiveness index	13
2.2. Croatian most important natural assets	14
2.3. Croatian most important cultural assets	18
2.4. Elaboration of the tourism supply state of the art.....	20
2.4.1. Transport infrastructure	20
2.4.2. Accommodation facilities.....	22
2.4.3. Other facilities.....	23
3. Basic tourism results in Croatia.....	24
3.1. Tourism demand.....	24
3.2. Tourism spending impact on GDP	25
3.3. Tourism employment.....	26
4. Identification of the challenges related to the use of cultural, natural and other assets in Croatia	28
4.1. Main challenges related to natural assets	28
4.2. Main challenges related to cultural assets	31
4.3. Main challenges related to other assets.....	32
5. Elaboration of the most important national tourism strategic documents, and tourism products proposed by them	33
Literature:.....	34
List of Figures.....	39

1. In depth interpretation of DSS results

Destinations need, as never in the past, to innovate in order to remain competitive in an increasingly global competitive tourism environment. A pre-requisite for such innovation is deep understanding of trends, territorial assets and dynamics. This opportunity can result from the capitalization of Tourmedassets and Shapetourism projects' DSS into the new SMART CROSS BORDER DATA SYSTEM (SCBDS). After the calibration of data and the integration of open data specifically concerned the Italy-Croatia CB area, it is possible to issue a market intelligence that can actually improve the framework conditions for blue growth and innovation. The DSS indicates directions and development trajectories, that must be interpreted and applied to the specific socio economic contexts taking into account additional qualitative variables, specific territorial assets, and human capital features.

1.1. Interpretation of the Tourmedassets results related to the creation of the DSS

The Tourmedassets (Enhancing the growth potential of coastal tourism concentration through an innovative, green and inclusive mobilisation of Med area local assets) project aims at identifying common levers in MED regions that can be used to improve tourist attractiveness, and contribute to the smart, sustainable and inclusive tourism development in these regions. This improvement/contribution should be achieved through the set of policy measures, and one of the outcomes of the project was the guidelines how to identify / formulate / develop / monitor these measures (for the homogenous sets of regions), as well as to propose tools supporting the formulation of the guidelines (DSS).

Tourmedassets provided a Data System (DS) and a Decisional Support System (DSS) to help stakeholders to interpret territorial and anthropic resources, to analyse the complex interrelation within economic, institutional, physical, environmental, social and cultural capitals, assuming that the balanced combination of those elements determines the level of attractiveness and sustainability of coastal tourism. DS and DSS have been issued through studies and applied wide-ranging econometric model with the final scope of exploiting the growth potentials of coastal tourism, promoting the inclusive mobilization of **Territorial and Anthropic Assets**. The DS covered 52 MED regions; the DSS have been used to study in particular the dynamics in pilot areas. The projects **started with the analysis of the existing indicators of the attractiveness of different components of the territorial capital**, i.e. it built up upon the results of the ATTREG project (considering the projects constraints in terms of time and financial assets).

The analysis was focused on the **identification of the factors/indicators** that influence to the greatest extent the attractiveness of the regions as perceived by the tourists, and also the tourism activity impact indicators. The analysis was carried out using the econometric models, showing direct and indirect relationships between the indicators and along the regions.

Global trends as well as the most important **EU policies** and their possible influences on specific regions and tourism were investigated. Finally, **four case studies** in partners' countries/regions were developed, where all the desk research results were tested and evaluated by the national/regional/local stakeholders.

Stakeholders were asked, according to the common questionnaire pattern, to evaluate the importance and performance of specific factors (assets) in their regions; they also had to evaluate the impacts of global trends on the main groups of tourism assets, as well as to evaluate/prioritise possible policy measures and their impact on the sustainable tourism development in their region.

The comparative analysis of all the four case studies has been done for a number of objects/actions simultaneously according to different criteria. Therefore, multicriteria decision method PROMETHEE (Behzadian, 2010) was used as the decision tool. The first step of the analysis was to *rank the destinations according to the IPA results* in each case study. In the second step, *the evaluations of the impacts of global trends were compared*, while the third step referred to the *comparison of the evaluations of the policy measures in each destination*, and also at the level of all four destinations. Finally, the analysis is made as to find out in which way state of the art of particular groups of assets as well as different experiences and management frameworks influence the perception and evaluation of policy measures, as to conclude whether common policy measures are feasible in the MED area.

IPA methodology provided the evaluations of the regions taking into account a number of different criteria (performance analysis). In addition, each criterion was evaluated according to its importance by all the decision makers. Considering the logic of the evaluation scale, the goal was to maximize the evaluations according to each criterion (the higher the values, the better is the ranking).

Therefore, it is possible, using PROMETHEE method, to rank regions according to all the criteria, and obtain their ranking based on the importance-performance ratio, taking into account all groups of tourism attractiveness factors. Importance values were taken as criteria weights, while the evaluations of performance were taken as action values according to each criteria. Thus, it was possible to see how stakeholders in each destination value each of their assets in comparison to the other assets. According to the PROMETHEE method, criteria weights were calculated as the simple arithmetic average of the importance values given to specific criterion in four destinations.

Stakeholders in each destination evaluated the impacts of global trends on the tourism assets. The global trends were also evaluated by the expert group, in terms of the intensity of each trend and its impacts.

Direction of the criteria is related to the **direction of its impact**. For example, it was assumed that the impacts of socio-demographic trends were negative in general (depopulation, ageing etc.). The model gave preference to those actions (assets) that were evaluated minimum values, since it was meant that these assets were least vulnerable to the negative impacts of global changes. Economic and technological changes, on the other hand, were concerned to have positive impacts on the assets; therefore, the assets with higher value were given higher preference over the others with lower values. Eventually, the highest ranked assets were those that were the least vulnerable to negative

impacts, and at the same time, could have yielded higher benefits from the positive changes and their impacts.

The values for each asset in each destination were taken over from the partners' case studies reports, while the values of assets used for the ranking in all destinations together were calculated as simple arithmetic average of values according to specific criterion in all destinations.

When assets in all four destinations were taken together in analysis, it seemed that climate and cultural heritage took the lead in resilience, while the transport and accessibility, as well as social capital were the most vulnerable to global changes.

As far as global trends were concerned, it might be concluded that stakeholders considered some trends out of their influence (e.g. climate) or given (e.g. cultural heritage), so they preferred to action those that were thought of as „reachable“ (e.g. economic and institutional assets).

The last task of the stakeholders in the case studies framework was to evaluate the impacts of potential development measures. Multicriteria ranking was done in such a manner that the objects/actions were policy measures (to be ranked). Criteria were the degrees of significance, and criteria weights corresponded to the intensities (1-5). Value matrix consisted of the percentages of responses for each value according to each policy measure (these were taken over from partners' reports as far as specific destination was concerned, while the values for all the destinations together were calculated as simple arithmetic average).

Destinations identified quite different policy priorities in terms of their significance / impact on tourism development. As far as the common evaluation and ranking was concerned, the logic of the model states that only the actions/measures with positive net flows should be considered for the implementation in all destinations. The question is, whether these measures would bring about positive effects in all destinations, or even better, should the resources spent in other measures produce better results in these destinations (effectiveness and benefits of measures). Thus, the answer on whether there are common policy measures that could provoke smart, sustainable and inclusive tourism development in all the MED regions, as judged on the experience of the four destinations/regions, is negative, i.e. there are no unique policy, or policy measures for all the destinations. In fact, common policy measures were specified only to the need of fostering education, awareness rising on the ecological and social issues related to tourism development, and fostering green and social entrepreneurship. Special measures or programmes in relation with development of the cooperation at all levels, and the development of the good governance model features at all levels were stressed.

However, in order to attain tourism development according to the EU 2020 strategy and its goals, it was stressed that additional efforts were needed so as to be able to suggest additional common measures. First of all, the need for additional **„clustering“ of the MED regions was stressed, taking into account not only „attractiveness“ criteria, but also institutional and social criteria, and development criteria as well. Having identified more homogeneous clusters or sets of regions, specific policy measures could be developed for each group / cluster.**

At the same time, it was concluded that **an outline of the monitoring system** (goal and progress indicators as well as data and data sources and collection methods) had to be developed. **The need of this system being connected with the decision aid tools, as to be able not only to monitor, but also to simulate effects of different policy measures, their spatial spill-overs, convergence effects etc.**, had been stressed too. Finally, it was concluded that such a system was not be used only for the tourism development management, but would have to **be integrated in other management systems** (e.g. water management data system, marine management and data system etc).

Based on the results and conclusions of the Tourmedassets project, the Shapetourism project has been developed, as a step further to create a more sophisticated DSS based on a more comprehensive set of information, i.e. DS. Its results are presented in the following text.

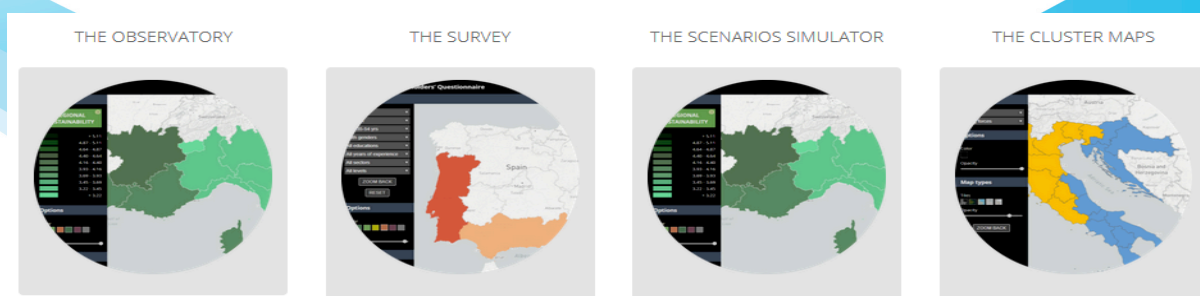
1.2. Interpretation of the Shapetourism results related to the creation of the DSS

The main output of the Shapetourism project (*SHAPETOURISM – New shape and drives for the tourism sector: supporting decisions, integrating plans and ensuring sustainability – Interreg Mediterranean, European Regional Development Fund*) was Participative Decision Support System (PDSS). This system of tools is designed to foster sustainable tourism development in MED region area by analysing available and reliable data and providing useful and user-friendly interpretation for decision-making.

The system comprises four vital complementary elements, namely:

- I The Shapetourism observatory
- II The Shapetourism survey
- III The Shapetourism carrying capacity scenarios simulator and
- IV The Shapetourism cluster maps (Figure 1).

Figure 1. Shapetourism Participative Decision Support System (PDSS)



Source: Retrieved from: <http://www.shapetourism.eu/main-output/>, accessed October 28, 2018

System integrates available Eurostat data and primary data collected through a transnational survey (9000 tourism related stakeholders from nine countries of MED area) to support Mediterranean regions private and public stakeholders decision making (management and governance).

I. The Shapetourism observatory

Observatory is an interpretative tool that consists of interactive maps representing four dimensions (Figure 2), namely **reputation**, **attractiveness**, **competitiveness** and **sustainability**, and covering 52 Mediterranean regions. The system enables user to explore inter regional similarities and differences at a macro, regional and single urban administrative division level.

The **reputation** dimension of observatory visualises the data on reputation for *attractions*, *rentals*, *restaurants* and *hotels* in analysed regions based on electronic word of mouth (eWOM), i.e. TripAdvisor online data. The interactive web tool enables users to comprehensively explore and compare cross border areas, visually throughout interactive maps, and in-depth analytically throughout "ranking chart", i.e. proposed *reputation index*.

Figure 2. The Shapetourism observatory



Source: Retrieved from: <http://www.shapetourism.eu/main-output/>, accessed October 28, 2018

The *attraction* encompasses various indicators, grouped into the five main categories: Rating and reviews (rating, reviews, total reviews), Traveller rating (excellent, very good, good, bad, very bad), Traveller type - people (families, couples, alone), Traveller type - purpose (business, friends), Time of year (March-May, June-August, September-November, December-February, Shannon for periods). By choosing specific indicator, users, i.e. tourism and hospitality managers can have reliable data of interest. For example, tourism board managers may be interested in how their preferred visitors (e.g. families with children) have rated various attractions, in a specific time of year. Following data can be used to create new product or services of improve the existing ones.

The *rentals* visualises the data on Rating and reviews (rating, reviews, total reviews), Price and bookings (price, booked days), and Capacity (rooms, bad places) for selected MED regions. Regions can be compared with regard to proposed indicators, i.e. prices, booking days etc. that could be important for both, DMOs and investitures.

The *restaurant* section reports on Rating and reviews (rating, reviews, total reviews), Traveller rating (excellent, very good, good, bad, very bad), Traveller type - people (families, couples, alone), Traveller type - purpose (business, friends), Time of year (March-May, June-August, September-November, December-February, Shannon for periods); and Other features (cooking, service, price, quality, environment, price category) for restaurants in selected MED regions. The system once again visualises the TripAdvisor data providing insight into the urban administrative division level.

Finally, the *reputation* dimension encompasses also the data on Hotels, i.e. Rating and reviews (rating, reviews, total reviews), Traveller rating (excellent, very good, good, bad, very bad), Traveller type - people (families, couples, alone), Time of year (March-May, June-August, September-November, December-February, Shannon for periods), and Other features (price, stars, rooms).

The **attractiveness** refers to destination perception by residents and visitors, and types of assets it has to offer. The Observatory delivers the *Attractivity index* based on previous results of ATTREG project and includes updated and new information to measure regional attractiveness in MED territories. The regions are ranked based on six indicators, namely attractiveness and anthropic, economic, environmental, institutional and social capital. The attractivity ranking can also be seen as potential indicator for cross border cooperation, considering it will point out converging regions and provide the partial explanation for convergence.

The **competitiveness** dimension of Shapetourism Observatory provides a mean to measure and compare regional performances. The proposed competitiveness index is a regionalized version of Travel and Tourism Competitiveness Index (TTCI) and encompasses following indicators, namely, business environment, safety and security, health and hygiene, human resources and labour market, ICT readiness, prioritization of travel and tourism, international openness, price competitiveness, environmental sustainability, air transport infrastructure, ground port infrastructure, tourist service infrastructure, natural and cultural resources and business travel. The observatory provides both, the ranking chart for all included MED region, and values of individual indicators for each region, fostering in that manner interregional comparison.

The proposed **sustainability** index encompasses indicators, which can be used to analyse regional sustainability. Included indicators (regional sustainability, stringency of environmental regulations, coverage rate of municipal waste, enforcement of environmental regulations, patents in green technologies per capita, sustainability of travel and tourism industry, arrivals of tourists/km², particulate matter concentration, heating degree days, environmental treaty ratification, baseline water stress, threatened species, forest cover change, wastewater treatment, coastal shelf fishing pressure) enable the interregional comparison, point down the “green leaders” and indicate key challenges that should be addressed. Furthermore, sustainability index delivers the regional ranking. Analysis that is more comprehensive would require in-depth interpretation of economic, ecological and socio-cultural pressures and development of unique single urban level sustainability indicators.

II. The Shapetourism survey

With regard to the Shapetourism project focus and scope, the main objectives of the survey were to (1) identify tourism dynamics and trends in each region, (2) evaluate local reactions to global trends and challenges, (3) compare the destination life cycle of the MED regions and (4) analyse tourism externalities at an economic, social and environmental level.

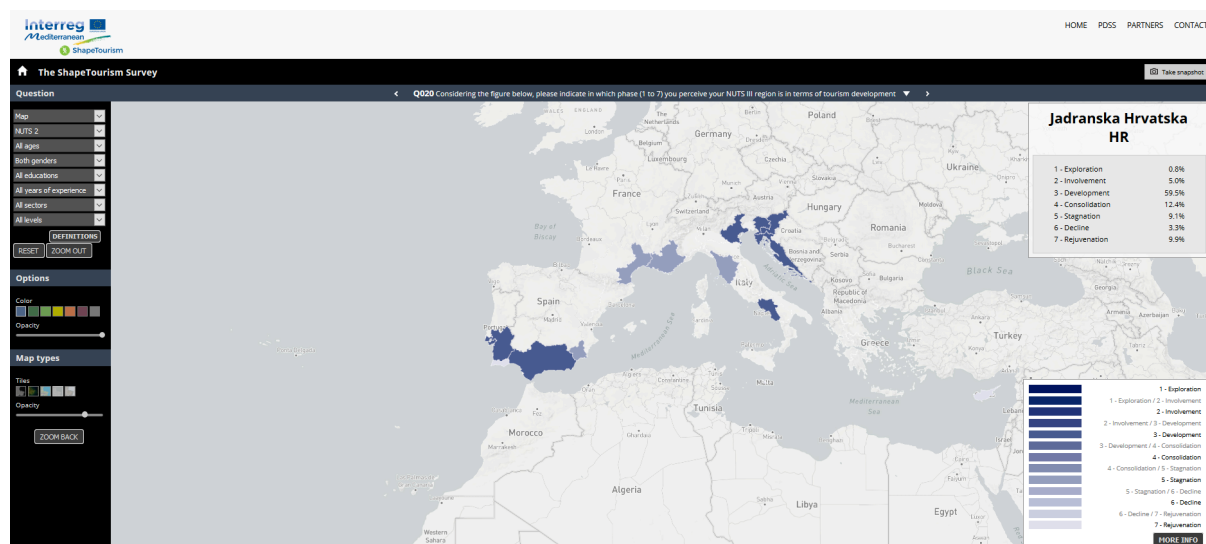
To deliver this mission, Shapetourism transnational survey, i.e. ShapeSurvey, was prepared and conducted in nine countries, i.e. Italy, Portugal, Croatia, Cyprus, Slovenia, Spain, France, Greece and Malta. Initially, invitations were sent to 9,128 stakeholders; however, the final sample encompassed 474 participants.

The developed questionnaire encompassed questions divided into the five sections, namely, (1) personal and organisational characteristics, (2) tourism dynamics and trends, (3) local reactions to global trends in tourism sustainability, (4) destination life cycle, and (5) tourism externalities.

The Shapetourism survey web tool (Figure 3), enables user to navigate throughout all of the questions within the survey to explore visually and analytically the responses from different regions. For instance, respondents were asked to indicate the perceived phase of tourism development for their NUTS III region. If we select the question Q20 in central part of the ShapeSurvey web tool, we can see the regions with regard to perceived phase of tourism development (from exploration to rejuvenation). Depending on identified pressures and challenges, DMOs can develop new and improve the existing policies. Furthermore, regions can be compared to foster the understanding on, among other, perceived tourism dynamic, trends and externalities.

The results can be explored on NUTS II and NUTS III region level, depending on respondents' age, gender, education, work experience, employment sector and level.

Figure 3. Shapetourism survey web tool



Source: Retrieved from: <http://www.shapetourism.eu/main-output/> accessed October 28, 2018

III. The Shapetourism carrying capacity scenarios simulator

The Shapetourism carrying capacity scenarios simulator (Figure 4) delivers a holistic view of global trends to enable private sector stakeholders to look outside their immediate categories and markets and observe direct and indirect impacts of change on their future. Despite a variety of trends can influence tourism stakeholders, simulator identifies and focuses on the most important ones, namely, **socio-demographic, economic, political, environmental and technological trends**, which potentially generate positive and negative, direct and indirect impacts. These global trends shape the future environment for, both global and Mediterranean tourism industry.

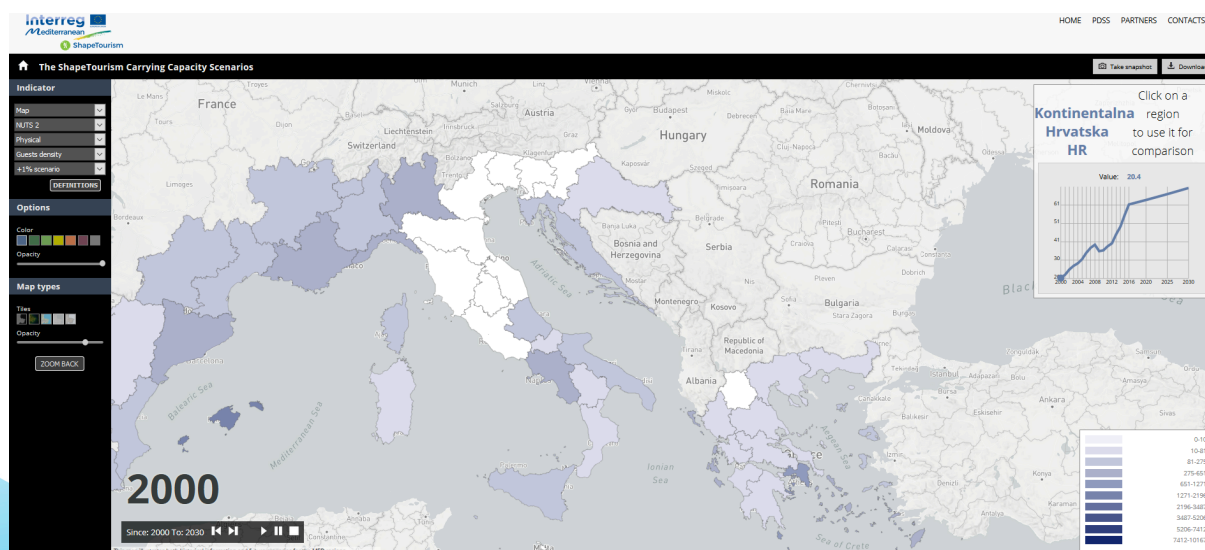
Following the identification of the trends, scenario analysis has been used to predict future. It should be noted, that in the Shapetourism project, scenario analysis produces the information on the effects

of tourism demand and supply growth on the carrying capacity indicators in selected MED regions exclusively. The authors utilise absolute measures of tourism (EUROSTAT data for NUTS II and NUTS III level regions) intensity and density, i.e. number of guests, number of nights spent and number of bed places.

Following, the indicators utilised in scenario analysis were organized into three groups, i.e.:

- I. Physical-ecological indicators
 - a. Tourism density: number of guests and area in km² ratio,
 - b. Tourism density: ratio of the number of nights spent and area in km² ratio,
 - c. Accommodation density: number of bed places and area in km² ratio
- II. Sociocultural indicators
 - a. Tourism intensity: ratio of the number of guests and the residents,
 - b. Tourism intensity: ratio of the number of the nights spent and the residents,
 - c. Accommodation intensity: ratio of the number of the bed places and of the residents,
- III. Economic indicators
 - a. Occupancy rate: ratio of the number of nights spent per day and of the bed places,
 - b. Average length of stay: ratio of the number of nights spent and of the guests.

Figure 4. Carrying capacity scenario simulator



Source: Retrieved from: <http://www.shapetourism.eu/main-output/> accessed October 28, 2018

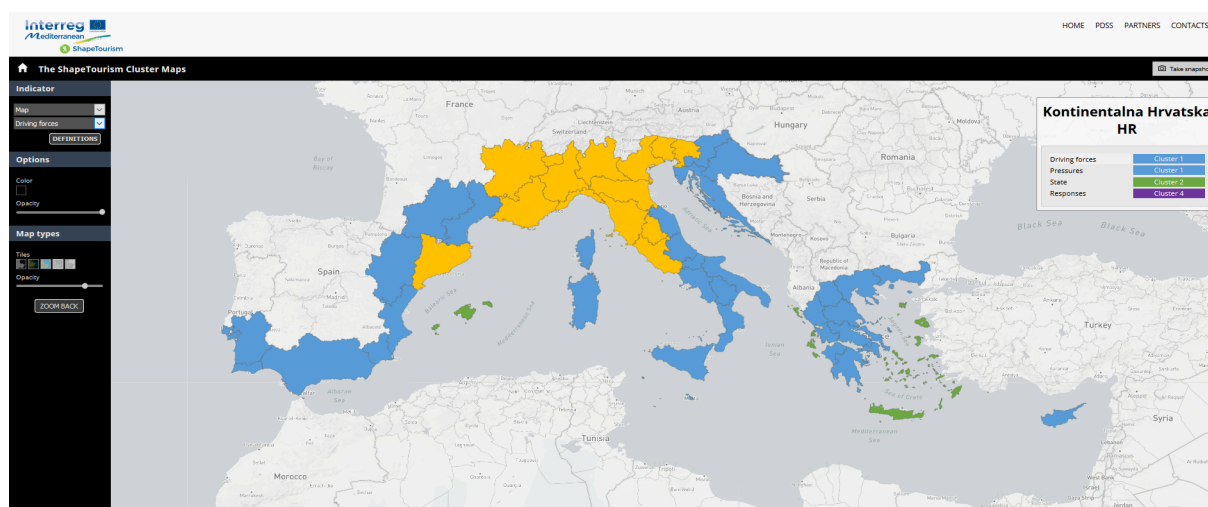
The main outputs of the analysis are future scenarios for selected performance measures for 2020, 2025 and 2030, considering proposed assumptions regarding the annual growth rate of the measures of tourism development. Furthermore, the simulator estimates the impact of the “business as usual” scenario and 1%, 2% and 5% increase of the number of guests, nights spent and bed places on sustainable tourism development in Mediterranean regions. Simulator provides “helicopter view” of the tourism development in Mediterranean regions that might be important for both, DMOs when planning future development policies and strategies and tourism industry, especially investors.

IV. The Shapetourism cluster maps

The Cluster Matrix utilises *Driving forces-Pressures-State-Impact-Responses* (DPSIR) methodology to explore the interregional differences and similarities. The framework is used for assessing the causes, consequences and responses to change in a holistic way.

The cluster matrix encompasses four vital dimensions, namely, **Driving forces, Pressures, State and Response**. Each dimension includes several unique internationally accepted indicators. Within each of the dimensions (DPSR), the indicators are grouped into the two factors (Factor analysis). Following, the cluster analysis has been applied on factors scores for each of the dimension to produce clusters of region that can be described and compared analytically and visually (GIS).

Figure 5. MED regions cluster maps



Source: Retrieved from: <http://www.shapetourism.eu/main-output/> accessed October 28, 2018

The major output of the Cluster Matrix are four cluster maps, i.e. (1) Driving forces, (2) Pressures, (3) State, (4) Responses (Figure 5). The user-friendly interface, enables mutual comparison of MED regions based on selected dimension. In that manner, cluster map of **driving forces** suggests that according to key *drivers*, i.e. *Factor 1*: Basic tourism resources and facilities and *Factor 2*: Tourism development precondition, MED region can be grouped into the three clusters. Furthermore, these two factors generate different impacts on specific cluster of region (positive - negative, stronger - weaker). The same logic is applied to other three elements of the DPSR matrix, i.e. pressures, state and responses. The cluster matrix web tool enables in-depth analytical interpretation of the DPSR maps by providing the definition for each indicator and factor integrated into the specific dimension.

2. Interpretation of SCBDS output in the perspective of the Croatian tourism socio-economic context with a focus on specific territorial assets and human capital features

In order to deliver tools able to support both CB networks and business ecosystem development in the blue tourism sector, it is important to analyse the nature and status of existing business ecosystems shedding light on how destination can be enhanced by a joint policy. With this aim the tourism development state of the art of Croatian coastal area, being one of the CB blue tourism partners, is to be elaborated in the following chapters.

2.1. Croatia's position with regard to the global competitiveness index and with regard to the travel and tourism competitiveness index

In order to obtain insights into importance of Croatian economy and tourism at the global scale, a short analysis of two indexes, Global Competitiveness Index (GCI) and Travel & Tourism Index (TTCI), is presented in this section together with a comparison between indices for Croatia and Italy as CB partners. While Croatia is medium ranked in terms of GCI it is highly ranked according to TTCI.

2.1.1. Croatia's position with regard to the global competitiveness index

GCI is composed of 12 pillars grouped in four themes: Enabling environment, Human Capital, Markets and Innovation Ecosystem, which are presented in the following table. Each pillar is composed of several indices. According to GCI Croatia and Italy were ranked in 2018 as 68th and 31st out of 137 countries respectively.

Table 1: Global Competitiveness Index (GCI) for Croatia 2015-16 and 2018

	Pillar		Croatia in 2015-16	Croatia in 2018	Italy in 2018
Enabling environment	1	Institutions	89	74	56
	2	Infrastructure	46	36	21
	3	ICT adoption		53	52
	4	Macroeconomic stability	107	106	58
Human Capital	5	Health	63	51	6
	6	Skills	51	65	40
Markets	7	Product market	105	71	30
	8	Labor market	105	96	79
	9	Financial system	88	62	49
	10	Market size	79	78	12
Innovation	11	Business	84	81	42

Ecosystem		dynamism			
	12	Innovation capability	92	63	22

Sources: World Economic Forum (2018) and (2015a)

Infrastructure is the best ranked pillar for Croatia. More closely, indicator *electrification rate* is 100% while quality of roads and railroad density is ranked at 17th place in 2018. Also, reliability of water supply is ranked as 28th. On the other hand, two pillars, macroeconomic stability and labour market, are poorly ranked in 2018.

On the other side, Italy is highly ranked for airport and liner shipping connectivity, as well as for railroad density. Furthermore, Croatia lags in relative terms behind Italy in health and market size while ICT adoption is closely ranked in two countries.

Croatian position in GCI ranking shows stable and positive trend demonstrated in the following table.

Table 2 : Global Competitiveness Index and ranking for Croatia

year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
rank/number of countries	81/144	75/148	77/144	77/140	74/138	74/137

Source: World Economic Forum (2018)

2.1.2. Croatia position with regard to the travel and tourism competitiveness index

TTCI is composed of 14 pillars grouped also in four different themes: Enabling Environment, Travel and Tourism Policy and Enabling Conditions, Infrastructure and Natural and Cultural Resources. Croatia is ranked 32nd, while Italy is ranked 8th out of 136 countries in 2017. Since modified methodology was applied since 2015, performance from 2017 was compared to 2015 when Croatia was ranked as 33rd out of 141 countries.

While Croatia is highly ranked across most of the pillars, it performs very poorly by two pillars, Business Environment where the worst indicators are *effect of taxation to work* and *invest* according to which Croatia is positioned at one of the last places, and pillar *price competitiveness* where Croatia performs poorly due to very high fuel price levels according to which Croatian is ranked as 107th.

On the contrary, according to tourism service infrastructure Croatia is ranked as 5th. This pillar includes the following indicators: number of hotel rooms per capita where Croatia is at 11th position, quality of tourism infrastructure (65th), presence of major car rental companies (1st) and number of automated teller machines per 100 of adults (15th).

Table 3: The Global Travel & Tourism Index (TTCI) for Croatia 2015 and 2017

Pillar		Croatia in 2015	Croatia in 2017	Italy in 2017	
Enabling environment	1	Business Environment	125	114	121
	2	Safety and Security	28	24	70
	3	Health and Hygiene	18	19	30
	4	Human Resources and Labour Market	80	85	67
	5	ICT readiness	38	47	37
Travel and Tourism Policy and Enabling Conditions	6	Prioritization of Travel and Tourism	74	77	75
	7	International Openness	19	26	29
	8	Price Competitiveness	101	100	124
	9	Environmental Sustainability	42	21	37
Infrastructure	10	Air Transport Infrastructure	53	52	23
	11	Ground and Port Infrastructure	44	46	22
	12	Tourism Service Infrastructure	6	5	11
Natural and Cultural Resources	13	Natural Resources	33	20	12
	14	Cultural Resources	36	39	5

World Economic Forum (2017) and (2015b)

Finally, in comparison to Italy, Croatia is better ranked in terms of safety and security, health and hygiene and environmental sustainability while Italy outperforms Croatia in terms of air transport and ground and port infrastructure, and natural and cultural resources.

2.2. Croatian most important natural assets

Natural resources play vital role in tourism development in Croatia, considering that the sun-sea-sand is major motive for arrival for 55%, natural beauties for 26% and sport and recreation mostly related to nature, parks and open spaces for 20% of visitors (Marušić et al. 2018). Over time, the beauty of nature and scenery has become Croatian trademark. Consequently, there is a desperate need to implement the principles of sustainability in tourism policies and industry.

No wonder, considering that tourism destinations are dependent upon “healthy” and preserved environment. Those destinations lacking environmental attributes find it difficult to compete against destinations that have a wealth of natural attractions (Chen et al. 2016). Furthermore, destination competitiveness is dependent upon, among other, natural resources and attractions (Park and Jang, 2014; Omerzel Gomezelj and Mihalič, 2008; Andrades and Dimanche, 2017; Dwyer and Kim, 2003), and can be improved by appropriate matching between destination features, and enhancement of the competitive destination strategies efforts (Chen et al. 2016; Andergassen et al. 2013).

The coastal area from Istria region to Dubrovnik is Croatian tourism development hub. However, due to various reasons, continental territories in the last decade face the development of tourism supply and increase of tourism demand. Despite these positive trends, 96.49% (Ministry of tourism, 2018) of overall accommodation supply is in the coastal areas; consequently, highest pressures are generated on natural resources in these regions. Additionally, tourism development is characterised with pronounced seasonality, i.e. June, July and August record 63.56% of the total arrival, and with May and September included, that share increases to 82.12% off overall arrivals in 2017 (Ministry of tourism, 2018).

There are various approaches that can be used to analyse natural resources, i.e. assets involved in tourism development. Despite previous research has proved that natural resources should be analysed and their potential explored on a smaller geographic area (Priskin, 2001; Alaeddinoglu and Selcuk Can, 2010; Douglas and Alie, 2014), this analysis utilises holistic approach, considering that the aim is to provide exclusively the overview of natural resources involved in tourism development, and not to elaborate specific features. That means that the attention has been given to the importance analysis of each of three dimensions constituting nature, i.e. biodiversity, geodiversity and landscape diversity (Figure 6).

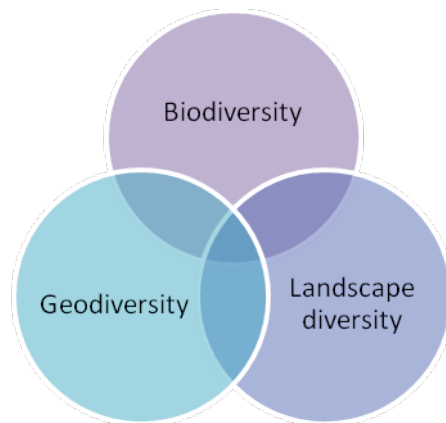
Biodiversity encompasses all living organisms, i.e. species. Its importance has been recognized with Convention of biodiversity (Rio, 1992), and most recently with new Strategic plan for biodiversity 2011-2020 including Aichi Biodiversity Target¹. Furthermore, the European Union Biodiversity Strategy² is in a line with decisions made on Convention on biodiversity from Nagoyi, Japan (2010), indicating the growing importance of various ecosystem service, including recreation. Moreover, the Agenda 2030³ in the Goal 14 (*Conserve and sustainably use the oceans, seas and marine resources for sustainable development*) and Goal 15 (*Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss*) highlights the importance of preservation and sustainable use of biodiversity.

¹ <https://www.cbd.int/sp/>

² http://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm

³ http://ec.europa.eu/environment/sustainable-development/SDGs/index_en.htm

Figure 6 Nature and its constituents



Source: Author's presentation

Geodiversity reflects geological and morphological features, i.e. different types of rocks, soil, and relief. According to Strategy and action plan of protection of nature in Republic of Croatia 2017-2025⁴ the karst relief, a specific geomorphologic feature, covers half of the Croatia territory, and shapes numerous unique and internationally recognized geo-sites. Finally, *landscape diversity* reflects the way environment is shaped based on impact of numerous interactions between natural and built element and various ecological, climate, geological, geomorphologic, cultural and sociological characteristics.

The most important natural resource for tourism development in Croatia is climate and water, i.e. the Adriatic Sea, rivers and lakes. In Croatian coastal area Mediterranean climate with warm summers and mild winters prevails. Despite this natural precondition, tourism is highly seasonal, with peaks between June and September. The fact that summers are getting warmer, and the supply is already being developed to a high extent, there is a positive trend of temporal redistribution of tourism flows. Due to good weather and warm days, spring and early autumn are pleasant for various adventure sports and nature based activities. Consequently, many micro destinations that are non-dependent on 3S (i.e. in the hinterland as well as in the continental counties), are focused on this market niche.

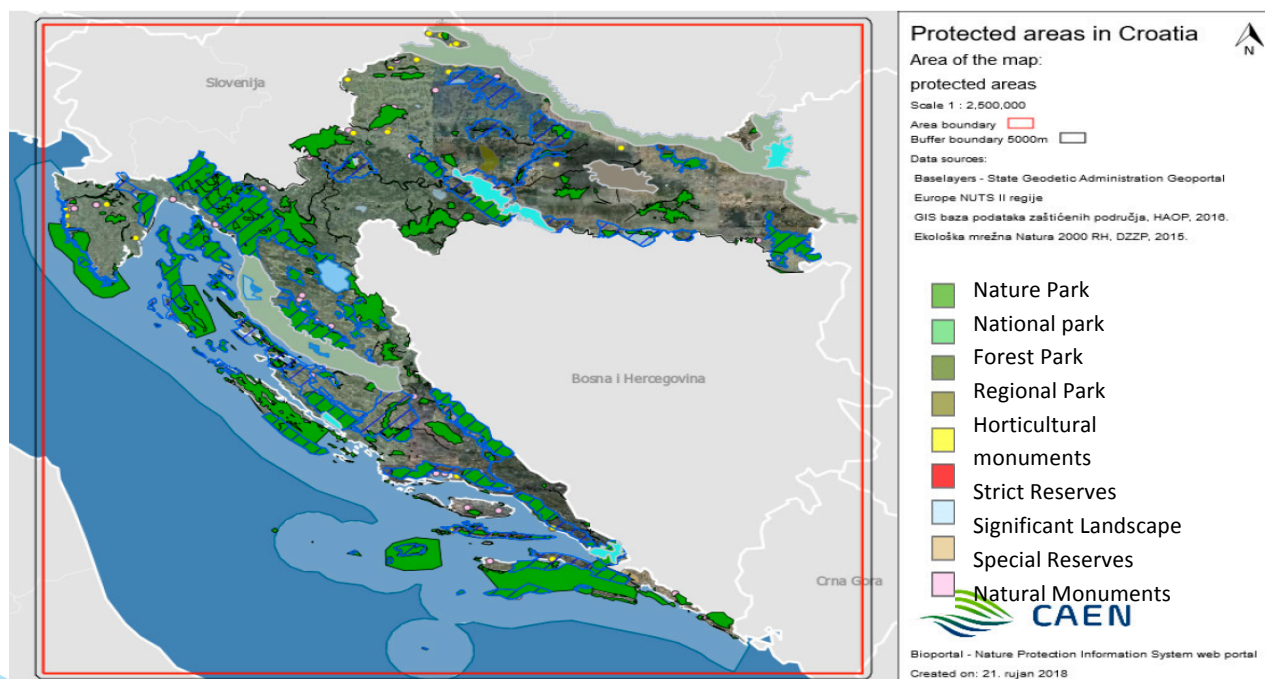
Furthermore, water, i.e. Adriatic Sea, rivers and lakes have an essential role in tourism development. The Adriatic Sea is important for transportation, as a source of food, for various forms of recreation and development of special interest tourism forms (e.g. nautical tourism, thalassic and wellness tourism etc.). Despite massive increase in number of visitors and a variety of supply, both causing numerous development pressures, the bathing water quality evaluation (DIRECTIVE 2006/7/EC of the European parliament and of the Council), regularly prove that water quality is excellent (93.88% of

⁴https://narodne-novine.nn.hr/clanci/sluzbeni/2017_07_72_1712.html

the samples prove it being of excellent quality, and 4.36% of tested samples have fair quality). Concerning the rivers, in continental part of the Croatia, Dunav River faces incising number of river cruises, while in a costal part of Croatia, rivers Cetina, Krka and Zrmanja enable the development of various adventure sports e.g. rafting, canyoning, kayaking, that have become significant elements of adventure tourism offer. Additionally, pristine natural environment attracts growing number of visitors into the rural areas and hinterland.

Due to unique geographical position, Croatia is exceptionally rich in terms of landscape and biological diversity. Unique aspects of biodiversity, geodiversity and landscape diversity have been recognized by The Constitution of the Republic of Croatia (Article 52.), and protected by laws and regulations. Consequently, in total, 408 protected areas cover 8.5% of Croatian territory, i.e. 1.9% of sea and 12.2% of mainland.

Figure 7 Protected areas in Croatia



Source: Retrieved from: <http://www.bioportal.hr/> accessed November 3, 2018

That includes Strict Reserves (2), National Parks (8), Special Reserves (77), Nature Parks (11), Regional Parks (2), Natural Monuments (80), Significant Landscapes (82), Forest Parks (27) and Horticultural Monuments (119).

Most of the protected areas, especially national and nature parks, face significant increase in number of visitors (Table 4), consequently threatening these fragile ecosystems. In 2017, the highest number of visitors was recorded in National park Plitvice Lakes (1.720.331), the highest annual growth rate in National Park Kornati (38.7%), while only National Park Brijuni has recorded 6.8% decrease in a number of visitors. Due to continuous threats and poor conservation and management, IUCN conservation outlook grade for World Heritage site Plitvice Lakes has deteriorated between 2014 and 2017 from good - with some concerns to significant concerns (Osipova, 2017). Consequently,

balancing recreation i.e. tourism development and conservation within protected areas remains the key challenge for public institutions in Croatia.

Table 4 Number of visitors in Croatian national parks

	Surface (km ²)	Altitude (m)	Number of visitors		Index 2017/2016
			2016	2017	
Brijuni	34	0-55	181560	169299	93.2
Krka	109	0-253	1071561	1284723	119.9
Kornati	217	0-236	165200	229061	138.7
Mljet	54	0-391	126699	140329	110.8
Paklenica	95	50-1.571	127848	140561	109.9
Plitvice Lakes	297	380-1.280	1429228	1720331	120.4
Risnjak	64	680-1.528	14346	16575	115.5
North Velebit	109	518-1.676	16913	22919	135.5

Source: Own presentation based on data from Ministry of tourism for 2017

Due to their uniqueness, several parks have been included in the lists of internationally valuable areas, i.e. National Park Plitvice Lakes is inscribed on the UNESCO World Heritage List, Nature Park Velebit - the territory that includes National Park Paklenica and National Park Northern Velebit is listed in the World Network of Biosphere Reserves, Nature Park Kopački rit, Lonjsko polje and Vransko Lake are included on the List of Wetlands of International Importance and Important Bird and Biodiversity Areas in Europe.

2.3. Croatian most important cultural assets

Republic of Croatia has a rich and diverse cultural heritage, scattered all over its territory. Due to its close bonds with the European and Mediterranean tradition, it bears particular significance. Research, analysis and evaluation of the cultural heritage in the Republic of Croatia fall within the scope of the Ministry of Culture, Directorate for the Protection of Cultural Heritage, in collaboration with 19 competent conservation departments and the City Institute for the Conservation of Cultural and Natural Heritage in Zagreb, in compliance with the Act on the Protection and Preservation of Cultural Goods.⁵ According to it, the cultural goods are divided into tangible immovable and movable, and intangible cultural goods. The immovable cultural goods are individual structures and structural ensembles, archaeological localities and finding sites, cultural-historical complexes and cultural landscapes.

⁵ Act on the Protection and Preservation of Cultural Goods ([NN 69/99](#), [NN 151/03](#); [NN 157/03](#) Amendment, [NN 87/09](#), [NN 88/10](#), [NN 61/11](#), [NN 25/12](#), [NN 136/12](#), [NN 157/13](#), [NN 152/14](#), [44/17](#) and [90/18](#))

Cultural goods are listed in the Register of Cultural Goods of the Republic of Croatia, which is a public register consisting of three specialized lists: List of protected cultural goods, List of cultural goods of national significance, List of preventively protected goods.⁶

The Register of Cultural Goods of the Republic of Croatia contains altogether 6699 entries of immovable cultural goods, out of which 6099 belong to the category of permanently protected cultural goods and 600 to the category of preventively protected goods (Ministry of Construction and Physical Planning of the Republic of Croatia, 2017).

From this total number, 578 cultural-historical complexes have been permanently and preventively protected, the most numerous among them being the urban (196) and rural (169) complexes, mostly settlements or parts of settlements, especially in the coastal area.

These areas, as well as the ones outside settlements, are rich in terrestrial and underwater archaeological finding sites and zones, 1140 in total, many of them researched and presented. Due to their extraordinary aesthetic and cultural-historical value, 12 cultural landscapes are listed in the Register of Cultural Goods of the Republic of Croatia. (Ibidem)

The extraordinary importance of immovable cultural heritage is corroborated by the fact that eight (8) immovable cultural goods in Croatia are listed in the UNESCO World Heritage List: Historical Complex of Split with the Palace of Diocletian (1979), Old City of Dubrovnik (1979), Episcopal Complex of the Euphrasian Basilica in the Historic Centre of Poreč (1997), Historic City of Trogir (1997), The Cathedral of St James in Šibenik (2000), Stari Grad Plain (2008), Stećci Medieval Tombstone Graveyards (2016), Venetian Works of Defence between the 16th and 17th in Zadar and Šibenik (2017), all of them being located on the coastal strip.

According to the Ministry of Tourism of the Republic of Croatia (2013), with regard to historical periods and specific locations of immovable cultural goods, the following may be singled out:

- antique and prehistoric heritage in all parts of Croatia,
- mediaeval and Romanesque heritage, mostly in the coastal area, under major influence of the Republic of Venice and the Mediterranean cultural circle, and
- predominantly baroque and modern age heritage, located mostly in continental parts of Croatia, under the influence of the Habsburgs and the Central European cultural circle.

The monumental heritage from the period of Antiquity is present in all parts of Croatia, however it is better preserved in the coastal area. The Diocletian Palace in Split is the most valuable monument from the Roman period, protected as UNESCO World Heritage. Other very important monuments from this period include the remains in Pula, especially the amphitheatre, in the ancient cities of Salona near Split and Naronna near Metković. From the ancient Greek period, the most significant monuments are the remains of the Greek *chora* (land division system) in the Stari Grad Plain on the island of Hvar, protected as UNESCO World Heritage site, and the findings on the island of Vis (Greek Issa).

The cultural-historical heritage of the continental mediaeval Croatia dates back predominantly from more recent periods. No cultural goods have been placed under UNESCO protection in that area so

⁶ Regulations on the form, contents and maintenance of the Register of Cultural Goods of the Republic of Croatia (NN 89/11, NN 130/13)

far. However, UNESCO Tentative List includes the Citadel of Osijek, Veliki Tabor Castle and the Old Town of Varaždin. The old city urban cores of Zagreb, Samobor, Čakovec, Karlovac, Požega, Đakovo are also very well preserved.

Numerous fortresses erected in Croatia as the borderland of many large European empires and states – the Roman Empire, the Republic of Venice, the Habsburg Monarchy, the Ottoman Empire - occupy a special place in the Croatian cultural-historical heritage. Some memorial sites from recent history should also be mentioned here, in particular the City of Vukovar.

Apart from immovable cultural heritage, the movable heritage exhibited in museums and galleries, as well as attractions of immaterial character focused on immaterial expressions of culture, traditions and skills of a community make an important element of attractiveness. According to the Ministry of Construction and Physical Planning of the Republic of Croatia (2017, there are 154 intangible cultural goods entered into the Register of Cultural Goods. The value of intangible heritage of the Republic of Croatia is corroborated by the fact that 13 Croatian cultural goods are listed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity (Lacemaking in Croatia, Two-part Singing and Playing in the *Istrian Scale*; Festivity of St. Blaise, Patron Saint of Dubrovnik; Spring procession of *Ljelje/Kraljice* (Queens) from Gorjani; Annual Carnival Bell Ringers' Pageant from the Kastav Area; Procession *Za Križen* (Following the Cross) on the Island of Hvar; Traditional Manufacturing of Children's Wooden Toys in Hrvatsko Zagorje; The Sinjska Alka, a knights' tournament in Sinj; Gingerbread craft from Northern Croatia; Bećarac singing and playing from Eastern Croatia; Nijemo Kolo, silent circle dance of the Dalmatian hinterland, Klapa multipart singing of Dalmatia, southern Croatia, Mediterranean Diet). In comparison, outside Europe, only Japan, China, and Korea have more registered intangible cultural heritage phenomena.

2.4. Elaboration of the tourism supply state of the art

2.4.1. Transport infrastructure

Although transport and transport infrastructure is not the main issue in this project, a short overview is given so as to get a general picture on the tourism development preconditions state of the art⁷.

Transport in Croatia relies on several main modes, including transport by road, rail, water and air. Road transport incorporates a comprehensive network of state, county and local routes augmented by a network of highways for long-distance travelling. Water transport can be divided into sea, based on the ports of Rijeka, Ploče, Split and Zadar, and river transport, based on Sava, Danube and, to a lesser extent, Drava river.

Croatia has 68 airports, nine of which are international, in Zagreb, Split (the highest number of passengers has been registered in Split airport, from 1.5 mil in 2013 up to 3.025 mil in October

⁷ https://en.wikipedia.org/wiki/Transport_in_Croatia accessed November 23, 2018

2018⁸), Dubrovnik, Zadar, Pula, Rijeka (on the island of Krk), Osijek, Bol and Mali Lošinj. Some of the smaller ones serve as international airports only during summer season. The most notable national air carrier is Croatia Airlines. Currently, the most important low cost airlines flying to Croatia are (among others): Jet2, EasyJet, Eurowings, TUifly, Ryanair, Thomson, Wizz Air, etc. Croatia has IASA's (International Aviation Safety Assessment) Category 1 rating and Croatian air carriers are authorized to establish direct flights from Croatia to the US.

Rail transport is fairly developed, with dual track and electrification not very common, although high-speed tilting trains are used on some routes. The railways need to be modernized because huge share of the railway infrastructure in Croatia dates back from the pre-WW2 period and more than half of the core routes were, in fact, built during the Habsburg Monarchy i.e. before the First World War. As a result, most of the routes are not electrified, are only single track traffic around 'bends' and lag significantly behind the West-European standards. Some limited improvements, however, have been made in recent times.

Croatian highways are widely regarded as being one of the most modern and safe in Europe. This is because the largest part of the Croatian motorway and expressway system has been recently constructed (mainly in the 2000s), and further construction is continuing. The motorways connect most major Croatian cities and all major seaports. As of 2014, the Croatian motorway network is 1,313.8 kilometres (816.4 miles) long.

In contrast to the fairly underdeveloped rail traffic, buses represent the most-accepted, cheapest and widely used means of public transport. National bus traffic is very well developed and it is very easy to reach even the remotest parts of Croatia by bus. Almost all buses on national routes are air-conditioned and offer pleasant travelling comfort.

Croatia has several large seaports. The largest seaport with the deepest channel to a port in the Adriatic is the port of Rijeka on the northern Croatian coast, followed by Ploče in southern Dalmatia. However the largest Croatian passenger port is in Split (Dalmatia) and it is also kind of a *gateway to the islands*, followed by Zadar. There are 66 inhabited islands along the Croatian coast which means there is a large number of local ferry connections.

The above presented data are much more clear when put into the context of the ranks given to them by the World Economic Forum, i.e. 52 position for the air transport infrastructure and 46 position with regard to ground and port infrastructure out of the total of 141 countries.

In terms of importance with regard to the tourism demand requirements, the most important mode of transportation is by road (85% of tourists), out of which 64% use own car, 4% come by buses, 15% come by campers, 2% by motorbikes and bike. 14% of all tourists come by air, out of which number 51% use low cost carriers. (Institute for tourism, 2018).

⁸ http://www.split-airport.hr/index.php?option=com_content&view=article&id=160&Itemid=115&lang=en
accessed November 23, 2018

2.4.2. Accommodation facilities

In 2017, Croatia's accommodation capacity totalled over 1,2 million bed places in 8,500+ lodging establishments. Of these, vacation rentals capture over 61% of beds places, followed by campgrounds (20%), hotels (11%), and other types of accommodation (Table 5). Among hotels, majority are 4-star (47%) and 3-star (33%) properties (Ministry of Tourism, 2018). Some 200+ hotels and B&Bs are small family-owned and managed properties, operating under the *Small & Friendly Hotels of Croatia* domestic marketing alliance (OMH, 2018).

Overall, over the past two decades, the number of bed places has increased by around 500,000. However, most of this growth has been in vacation rentals, while hotels only saw a marginal increase in the number of bed places. In fact, the observed period was marked by the existing hotels undergoing quality upgrades (e.g., from a 3-star to a 4-star property), with only a small number of newly constructed hotels.

Additionally, the Croatian hotel market is dominated by large domestic hotel groups, with the five largest companies owning more than 60% of capacity in the country, i.e. Valamar Riviera, Maistra, Plava Laguna, Istraturist Umag, and Adriatic Luxury Hotels (Doggrell, 2018; Thomas, 2017). Thus, only 24% of total hotel rooms are internationally branded, either through management or franchise agreements, or as part of international hotel marketing alliances. Out of 10 top global hotel operators, five of them are present in the Croatian market, mostly in Zagreb and in major cities along the Adriatic coast. By 2022, Croatia is set to add 6,000 new hotel rooms to its inventory, with an additional 3,700 being renovated.

Table 6 Croatia's accommodation capacities in the coastal region

Year	No. Of bed places	Hotels (in %)					Campgrounds (in %)	Vacation rentals (in %)	Other types of accommodation (in %)
		Total	5*	4*	3*	2*			
1989	861,216	15	3	19	74	5	35	32	19
2001	682,721	14	3	2	45	49	28	42	17
2005	784,600	13	5	9	54	32	26	48	13
2011	852,433	13	9	32	44	15	25	49	13
2017	1,207,427	11	10	47	33	10	20	61	8

* = star rating

Sources: Croatian Tourism Development Strategy Until 2020 and Ministry of tourism (2018).

Most of the accommodation facilities are located in the coastal counties (94%, out of which 89% of hotels), which is expected considering that most tourists visit this region.

Table 6 Croatia's accommodation capacities in the coastal region

County	Number of beds in all accommodation type	Number of beds in hotels
Istria County	306,040	29,815
Primorsko –Goranska County	202,586	24,285
Lika-Senj County	44,222	2,424
Zadar County	160,501	7,908
Šibenik-Knin County	97,237	8,260
Split –Dalmatia County	263,597	24,183
Dubrovnik-Neretva County	90,851	20,244
TOTAL coastal counties	1,138,034	117,119
TOTAL all Croatia	1,207,427	131,236

Source: Ministry of Tourism (2018)

2.4.3. Other facilities

Unlike natural attractions and cultural heritage, Croatia faces shortage of newly created tourist products and attractions (e.g., convention centres, theme and/or entertainment parks, golf courses, visitor centres, and similar tourist facilities) that would help expand the tourism demand beyond the sun and sea season (i.e., June-September) and to other (i.e., continental, as opposed to coastal) regions of the country. (Croatian Tourism Development Strategy Until 2020, 2013).

That said, Croatia currently has three full-size (i.e., at least 18 holes) golf courses (i.e., Zagreb, Adriatic in Savudrija, and Brijuni), six golf courses with nine holes or less (i.e., Sveti Martin, Krasica in Bakar, Split, Zmajevac in Kneževi Vinogradi, Ban Jelačić in Zaprešić, and Principovac in Ilok), and seven driving ranges (i.e., Umag, Tar, Poreč, Rovinj, Pula, Medulin, and Samobor). Additionally, there are 30 planned locations for new golf courses, however no golf course construction is currently underway (Horak et al., 2017).

Concerning cyclotourism, there are over 13,000 km of bicycle trails, however, only a tiny fraction of them are adequately designed, maintained, signposted, and with dedicated bike lanes (Klarić et al., 2015). Lately, however, bike-sharing systems, bicycle-friendly accommodation providers, and lodging facilities offering bike rentals have been gaining momentum.

In the yachting segment, Croatia has just over 17,000 wet berths and approximately 4,600 dry berths in the total of 140 ports of nautical tourism, of which 70 are marinas (Horak et al., 2015). Additional moorings are available in public harbours and numerous serviced and unserved anchoring locations. While the majority of berths are for vessels up to 12 meters in length, the past few years have seen a growth in the number of berths for vessels 15 meters in length or longer.

In terms of cruising, Croatia is one of the few countries worldwide that has two cruise segments – large international cruises and small domestic cruises. The coastal cities of Dubrovnik and Split meet most of the demand for large international cruises. In terms of the rapidly growing small domestic cruises, Croatia boasts a fleet of over 140 micro cruise ships (Vuković, 2016). These are majority

multi-day cruise ships, with some serving only as excursion (i.e., day-trip) vessels. Croatia’s multi-day micro-cruise ships are small, typically family-owned, mostly wooden engine-powered sailboats, which can sleep up to 36 passengers (Pranić et al., 2013).

In regards to conference tourism, the vast majority of conference halls and meeting rooms are located in hotels (Telišman-Košuta & Sever, 2016). Among the 140+ hotels offering conference facilities, majority are four-star hotels, most meeting rooms can seat 100-300 people, and just over 20 hotels can handle conventions with 500-1000 attendees. Additionally, there are four conference centers (all in Zagreb, Croatia's capital), two of which with a 1,000+ seat capacity, and a growing number of meeting rooms offered by universities, performing arts centers, movie theaters, indoor sports arenas, etc. Overall, the bulk of Croatia’s conference capacity is concentrated in three cities – Zagreb, Dubrovnik, and Opatija/Rijeka.

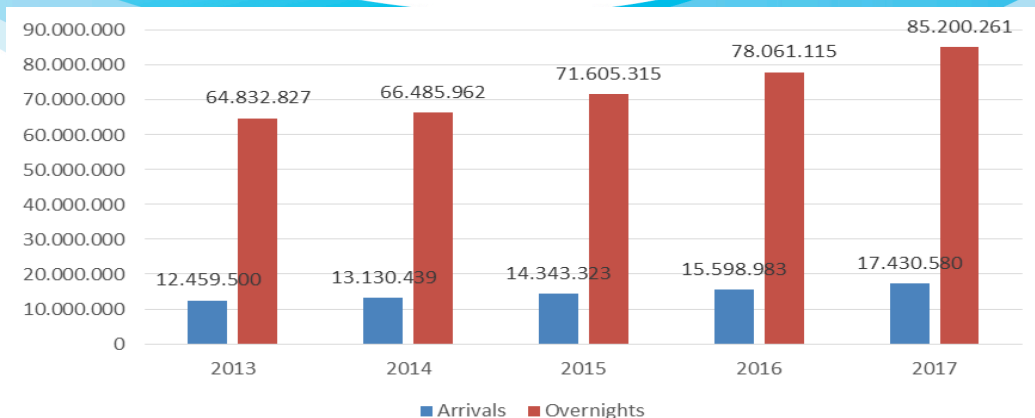
In the theme park sector, Croatia is home to six water parks (i.e., Aquacolors in Poreč, Istralandia in Brtonigla, Čikat on Lošinj island, Krapinske Toplice, Solaris in Šibenik, and Adamovec in Zagreb) and several amusement/theme parks (e.g., Fun Park Biograd, Glavani Adventure & Climbing Park, Underwater park Punat on Krk island, Medieval Theme Park Sanc. Michael near Svetvinčenat, Dinopark Funtana, etc.).

3. Basic tourism results in Croatia

3.1. Tourism demand

Tourism demand indicators (arrivals and overnights) in last 5 years show continuous tourism growth (Figure 8). Thus, in the observed 5-year period the number of arrivals grew by 40% and overnights by 31%.

Figure 8 Tourism demand



The most important markets for Croatian tourism in terms of overnights are Germany (24,3%), Slovenia (8,9%), Austria (8,7%), Poland (7,5%) and Italy (6,1%), accounting together for 55,5% of total county overnights (Ministry of tourism, 2018)

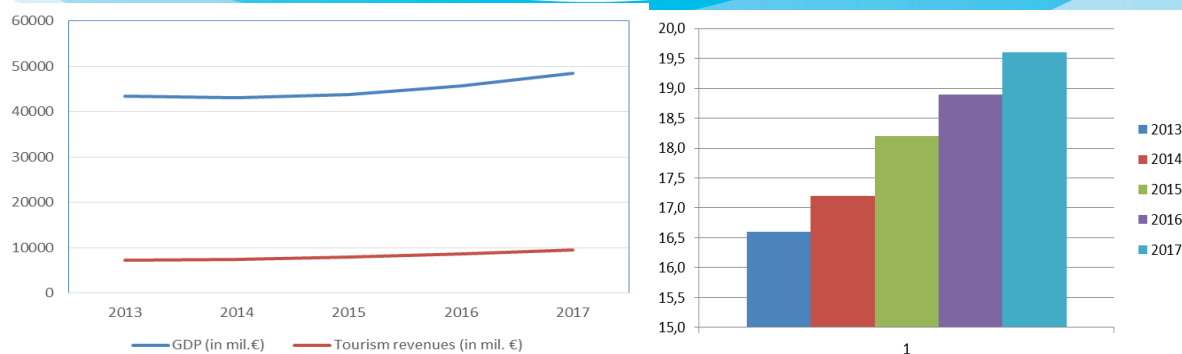
3.2. Tourism spending impact on GDP

The average daily spending of tourists in 2017. was 79 Euros, revealing a growth of 19% in comparison to 2014. when it was 66 Euros. Looking at the structure of spending, most i.e. 49% is attributed to accomodation services, 17 % on food and beverage outside the accomodation units and the remaining 34 % on other services. Thus, while the expenditures on accomodation have risen by 7%, the expenditures on other services have gone up for 33 % demonstrating the out-of-accomodation expenditures are on rise. The highest spenders are guests from the USA (158 Euros), Great Britain (139 Euros), Spain (126 Euros), Russia (121 Euros) and from Scandinavian countries (119 Euros) (Institute for tourism, 2017) .

On the other side, WTTC estimates that the visitor exports generated 39.0% of total exports in 2017. Also, Travel & Tourism accounted for total investment in 2017., and it should rise by 2.6% in 2018, and rise by 2.0% per annum over the next ten years to reach 11.2% of total investments in 2028 (WTTC, 2018).

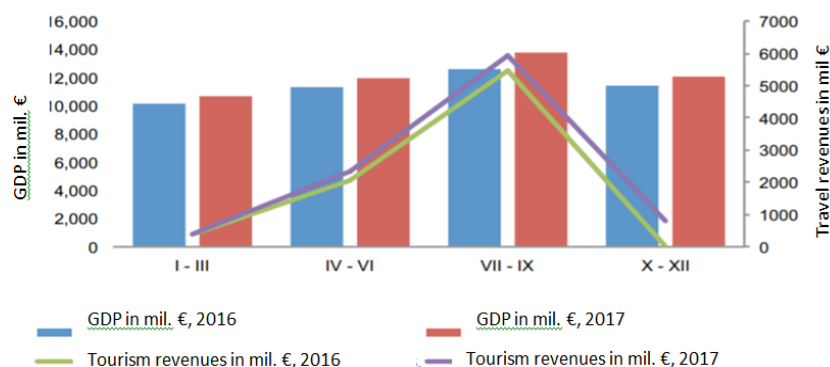
Tourism is for years now the most important economic activity in Croatia and data in Figures 9 i 10 demonstrate this. Namely, in 5-year period observed tourism revenues are rising faster than the GDP thus rising their share in the GDP from 16.6% in 2016 to 19,6% in 2017. The visualization of GDP and tourism revenues in 2017 quartiles (Figure 10) clearly shows the seasonality of tourism revenues and the direct impact they have in fuelling the GDP in respective periods. WTTC estimates that direct contribution of Travel & Tourism to GDP in 2017 was 10.9%, while its total (direct and indirect contribution) accounted 25.0% of GDP. It is forecasted to rise by 3.3% in 2018, and by 4% per annum to reach 31.7% of GDP in 2028 (WTTC, 2018).

Figure 9 – Tourism revenues and GDP (left) and tourism revenues share in GDP 2013-2017



Source: author's elaboration based on data from Ministry of tourism 2014e, 2015d, 2016a, 2017, 2018

Figure 10 – Tourism revenues and GDP through quarters, 2017



Source: Ministry of tourism, 2018

3.3. Tourism employment

The importance of tourism in Croatian national economy is reflected in employment figures. WTTC estimates that in 2017, Travel & Tourism directly supported 138,000 jobs (10.1% of total employment) in Croatia. This is expected to fall by 0.3% in 2018 and rise by 1.4% annually to 158,000 jobs (11.8% of total employment) in 2028. The total contribution of industry was, however, estimated to 23.5% of total employment (320,500 jobs). It is expected to fall by 0.2% in 2018 to 320,000 jobs and rise by 1.4% per annum to 366,000 jobs i.e. 27.2% of total employment in 2028 (WTTC, 2018).

Table 7 Number of employees and share of employment in hospitality in the overall employment

	Number (in 000)			Share in total employment (in %)		
	Total	Legal entities	Crafts and free professions	Total	Legal Entities	Crafts and free professions
2011	81	45	36	6,1	4,1	16,4
2012	82	47	35	6,1	4,1	16,4
2013	84	50	35	6,3	4,4	16,8
2014	85	52	33	6,4	4,6	16,6
2015	90	58	32	6,9	5,2	16,7
2016	93	61	32	7,0	5,2	16,6

Source: Ministry of Tourism, 2017

As tourism is not a sector *per se* registered in NACE, the national data are usually restricted to hospitality sector numbers, which of course, only give a partial view. These number for Croatia (table 7) show that the number of person working in this key tourism subsector has been growing steadily in recent 5-year period, achieving an increase of 14,81%. Structurally, this is a result of an 35,56% rise of employees in legal entities and 11,11% decrease of those in crafts and free professions. The share of hospitality employment in the overall employment has risen in the same period by 0,9% (from 6,1

to 7,0%) owing to the substantial growth of share in legal entities and only a modest one (0,2%) in in crafts and free professions.

According to Buneta et al. (2016) one of the greatest problems in Croatian tourism is insufficiently skilled staff. Only 6% of the total number of employees in tourism are highly educated employees who are employed mostly in management positions in hotels. The current formal tourism education system in Croatia is not fully adjusted to the current needs of the tourist economy nor tourist organizations, since it does not ensure a sufficient number of highly trained workers who could actively join work and management processes once they leave education.

According to Croatian Strategy of tourism development (Ministry of tourism, 2013), the main challenges formal tourism education system in Croatia faces are as follows:

- The secondary schooling system in tourism has too many schools that train future tourist workers, the plethora of mutually incompatible educational programmes across various secondary schools, and a general lack of practical experience results in inconsistencies and below-par quality of those leaving secondary education to pursue a career in tourism; ☐
- The higher tourism education system in Croatia is structured across several universities, polytechnics and academies where, in most cases, study programmes are primarily based on theoretical knowledge, with very little practical, or business-related, experience. Thus, skilled workers who come into the tourism labour market after these degrees are not adequately prepared for the challenges and the responsibilities that come with management positions both in the economy and the tourism sector in general;
- One of the main limitations of the existing system of formal education for the purposes of the tourism economy, is the non-existence of training centres i.e. hotel units where secondary and higher education students could gain practical experiences and skills necessary for actively joining the labour market, both in executive and management positions (middle and top management);
- With certain exceptions, current formal tourism education in Croatia does not have sufficient cooperation with international centres for excellence in tourism management education or tourism organisation systems, which would include exchange of knowledge, teaching methods and visiting professors, and preferably even setting up branches of such international centres for excellence in Croatia.
- As far as the current system for lifelong learning in tourism in Croatia is concerned it is mostly aimed at the specialization of the production and catering hotel staff through training in basic skills, and only occasionally and rarely do they include middle and top-level management which is key to the improvement of the competitiveness of the Croatian tourism economy. Existing lifelong learning programmes insufficiently include specialization in a wide range of personal, communication, sales and general leadership and management skills which are necessary for the efficient running of the tourism economy and organisations. There is no licensing system when it comes to lifelong learning providers in tourism.

- In collaboration with leading educational institutions, the country develops and implements the National Lifelong Learning Program for Family Accommodation Providers (households) with various program modules adapted to the specific needs and / or requirements (investment planning, literacy, use of modern sales tools, access to EU funds, relationship with guests, serving, quality standards and so on. Investments into the creation of strong regional tourism education centres, training centres and specialised higher education business schools are estimated at 20 million euros, while an additional 10 million Euros need to be allocated to the financing/co-financing of education programmes for those working in tourism, as well as retraining of the unemployed (Ministry of tourism, 2013, as cited in: Buneta et al., 2016).

4. Identification of the challenges related to the use of cultural, natural and other assets in Croatia

4.1. *Main challenges related to natural assets*

Despite tremendous efforts to preserve its bio, geo and landscape diversity, Croatia still faces significant threats and loss. This negative trend is recorded on international level too. Officially, Croatia records more than a 40.000 species and subspecies (according to some estimates this number increases up to 100.000) out of which 3% are endemic (NN 72/2017). According to IUCN, more than a 3.000 species in Croatia are endangered, out of which 42, 3% are estimated to face high risk of extinction. Furthermore, the lack of research for 22% of all species and subspecies stipulate the estimation of their endangerment. Consequently, to resolve these challenges, last few years Ministry of Environment and Energy did significant effort to conduct first analysis, i.e. estimate “state zero” in order to be able to track changes in future. The future revisions of the state of the species should be the top priority.

The loss of the geo and landscape diversity is mostly induced by:

1. Loss and fragmentation of habitats as a result of intensive farming and infrastructural development,
2. Invasive species,
3. Pollution,
4. Urbanization especially in the coastal part of Croatia, and
5. Climate change (NN 72/2017).

According to Strategy and action plan of protection of nature in Croatia (NN 72/2017), almost 62% of all negative impacts on natural resources are anthropogenic. Furthermore, geo and landscape diversity are also threatened by building new roads, water pollution with sewage and wastewater, pesticides, impacts on groundwater and large hydro-technical investments. The geo-diversity is mostly influenced by human actions, i.e. exploitation of mineral resources, water pollution, the illegal landfills for construction waste, illegal construction works and urbanization.

According to the Strategy, five key environmental priorities for Croatia until 2025 are following:

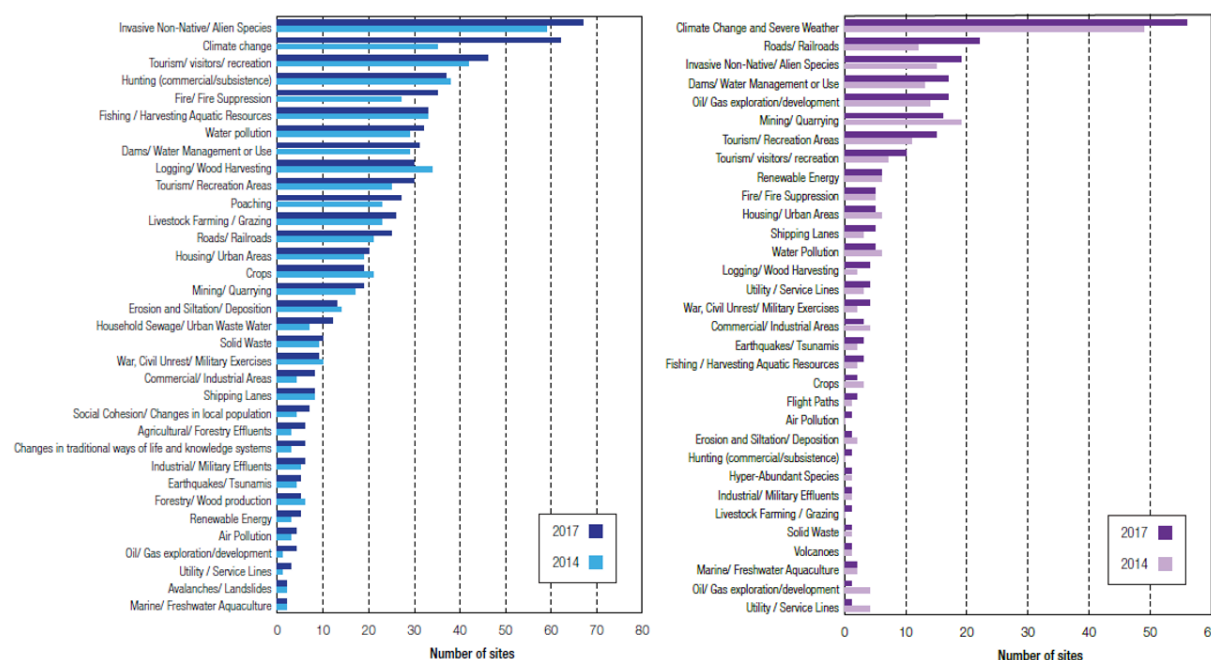
1. To increase efficiency of nature protection,
 - a. Develop legislation and institutional framework
 - b. Analyse the effectiveness of legislation and institutional framework for nature protection
 - c. To estimate the protected areas following IUCN guidelines
 - d. Define aims and actions to protect nature and conduct zoning following the Natura 2000
 - e. Indicate the actors involved in process and strategic documents that are required
2. To decrease direct pressures on nature and foster its sustainable use,
 - a. Ensure sustainable use throughout sectoral strategic documents
 - b. Increase effectiveness regarding nature protection
 - c. Increase inspections and control over the implementation of strategic actions
 - d. Foster acceptance and introduction of biodiversity protection measures
 - e. Ensure effective introduction of measure for nature protection in yearly plans for water protection
 - f. Identify species and habitats that are fragile and affected by climate change
3. To foster capacity for nature protection,
 - a. Foster the institutional development
 - b. Communicate with other relevant sectors to improve legislations and regulations
 - c. Decentralisation of governance and responsibility for nature protection
 - d. Estimate current and required institutional capacity for nature protection
 - e. Estimate public institutions potentials and capacities
 - f. Initiate monitoring of the human potentials and their effectiveness
 - g. Set up the obligation for employees in public institutions to educate continuously
 - h. Initiate the process of the professionalization of the nature protection regarding the competences of the employees
4. To increase knowledge and availability of data about nature,
 - a. Estimate the species and their territorial distribution
 - b. Standardize the collection of the data
 - c. Map the alien species
 - d. Establish the monitoring
 - e. Conduct the research and collect and share the data
 - f. Foster the communication, improve the legislation and scientific research on natural resources
5. To increase the level of knowledge, understanding and public support for protection of nature,
 - a. Foster the importance and understanding of nature protection and environmental services
 - b. Define terms regarding nature protection and include them in curriculums
 - c. Develop textbooks
 - d. Analyse current curriculums and identify gaps.

These all priorities are aligned with the EU Biodiversity strategy to 2020. The IUCN World Heritage Outlook identifies and evaluates current and potential threats affecting natural World Heritage sites.

Current threats reflect to activities or occurrences that have an immediately apparent impact affecting sites values, while potential threats refer to planned activities or evolving trends that could have a future impact if they materialise (Osipova, 2017). The Outlook results indicate invasive species, climate change and tourism to be three major current threats for natural World heritage (Figure 11). Furthermore, while its impacts are becoming increasingly visible in many natural areas, climate change is also the most widespread significant potential threat, followed by road construction, alien species, and water management and use.

According to World Wildlife Found (WWF) full diversity of Earth habitats and species in not properly protected, which can be seen from problems with current protected areas, i.e. (1) poor representation of habitats, (2) lack of connectivity between protected natural areas, (3) lack of funds, (4) poor management, (5) human activities.

Figure 11 Current and potential threats assessed as high or very high in 2014 and 2017



Source: IUCN World Heritage Outlook 2

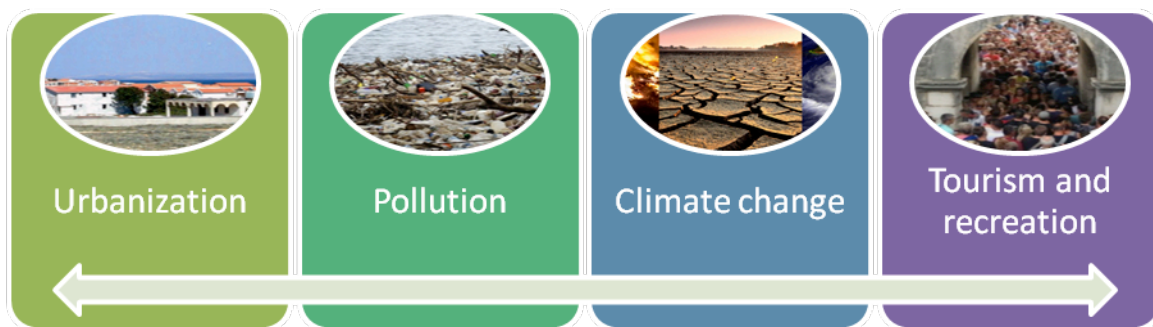
With regard to the Croatian national assets, especially those in coastal part, urbanization, tourism and recreation, pollution, and climate change appear to be four- potentially most important threats.

Growing urbanization in Croatian coastal areas is strongly related with both, economic (people are attracted to cities due to economic development) and demographic (economic development of the city is induced by increased number of residents) trends (Šimunović, 2007).

The internal migration of the population, as most obvious and widely accepted indicator of urbanization, indicate continuously urbanization of Croatian territory, characterized with migrations between towns within the same county and between counties (DZS, 2017). According to Croatian Bureau of Statistics (2017), most popular "destinations" for internal migrations were Zagreb as the capital of Croatia, and coastal counties, from Istria down to Dubrovnik-Neretva county. At the same

time rural and poorly economically developed areas face continuous depopulation. The economic development in coastal Croatia is mostly related to tourism development. Moreover, 96.5% of overall accommodation capacities are situated in coastal regions (Ministry of tourism, 2017).

The pronounced urbanization, along with highly seasonal and propulsive tourism development threatens fragile natural resources. At the same time, nature and nature based activities are primer and most important motive for arrival in Croatia for majority of tourists (TOMAS, 2017).



Source: Author's presentation

Various types of pollution have been recognized as the major threat influencing overall future development. Following the European Union development strategy, Europe 2020 (European Commission, 2010), has recognized sustainable growth, and resource based, green and competitive economy as top priority. The core of this strategy is sustainable transition from linear to circular economy, an economic model that will foster sustainable use of resources and reuse of materials and products. The aim is to minimise all kind of pollution and wais. This transition requires not only the transformation of overall value chain and development of new products and markets, but also the way people, i.e. residents and visitors act and think.

Finally, climate change has tremendous impact on both humans and ecosystem (IPCC, 2013). According to the World meteorological organization (WMO), 2016 was the warmest year since the establishment of temperature measuring system. Due to its climate and positions, Croatia is recognized as one of the counties that is and will be seriously affected by climate change in the future. Consequently, it is possible to expect significant sea level rise, change in animal migration patterns, negative impacts on hydrogeology, water resources, forests, agriculture, biodiversity and human health. Following, it is crucial not just to reduce the emissions but also to start developing mitigation plans for assessment and reduction of negative impacts.

4.2. Main challenges related to cultural assets

The status of material heritage is influenced by many factors such as climate, global pollution, unresolved proprietary status, changes in the economic systems and in the treatment of ownership, economic crises, liberalization of real estate market, disregard of the spatial planning documentation and legal framework. Despite continuous investments into the renovation and maintenance of cultural goods, due to all previously mentioned considerations, the present condition of certain types

of cultural goods is unsatisfactory (Ministry of Construction and Physical Planning of the Republic of Croatia, 2017).

The following **key issues** may be singled out in the areas of:

- *Urban management and planning* from the aspect of cultural tourism development position, in particular with respect to the following issues: *spatial planning* and further urban devastation of the coastal area, *spatial concentration of cultural resources* in the area of their relations to the general and tourist infrastructure; *illegal or inadequate construction* (spaces of exceptional importance and contact areas are compromised), *the influence of tourist development on the spatial, economic and social carrying capacities* of historical urban centres (where excessive commercialization and development of tourist monoculture and gentrification are evident), and *management of the development of various tourist products* from the aspect of their mutual compatibility;
- *Ownership and authority over particular parts of public resources*, especially in the case of localities under national or international (UNESCO) protection;
- *Unstructured approach to the revitalisation of monumental heritage* – continuing the dominant approach aimed at protection and restoration without an adequate interpretation;
- *Availability* of culture and cultural heritage affected by poor road accessibility of numerous heritage resources, physical accessibility for the physically disabled persons, information availability considering the non-existence of official information on numerous resources on web sites of relevant cultural and/or tourist organisations, and the market availability reflected in the missing online booking and purchase of tickets for the same;
- *Marketing presentation* of culture and cultural heritage: modern ways of interpretation and presentation are rarely and insufficiently deployed. As a consequence, the presentation of cultural assets and resources is predominantly static, exhibitional in character, offering no interaction with the visitor;
- *Insufficient (horizontal and vertical) connections and collaboration between key development stakeholders in the sphere of culture, economy and public sector*, resulting in the lack of mutual understanding of needs and ways of acting of various entities from different interest groups;
- *Insufficient knowledge on the possibilities of economic/tourist valorisation of cultural heritage*, consequently leading to the low level of development of entrepreneurship based on cultural resources.
- *Imbalance between the needs of the local population and the interest of visitors and tourists* in the creation of cultural offer

4.3. Main challenges related to other assets

As far as other assets of supply are concerned, Croatia's most serious challenges relate to public infrastructure, both traffic and communal, being as follows:

- Some local roads are poorly maintained or in poor condition;
- Urban public transportation is mostly of low quality;
- There is a major lack of parking spaces in urban destinations;
- There is a high number of traffic accidents;
- Railroad network is in bleak state and train traffic is slow;
- There is an insufficient quality of harbour port and stevedoring services;
- The number of connections between islands by boat is unsatisfactory;
- Cities face a shortage of dedicated and signposted bicycle trails;
- Both traffic signage and tourism signage are of a low quality;
- The system of fresh water supply along the coastal cities is in poor shape;
- Sewage network and treatment are substandard;
- Treatment of municipal solid waste is inadequate;
- Renewable energy sources are still not sufficiently used.

As far as accommodation supply is concerned, mayor challenges stem from the fact that:

- There is still a high seasonality of operations;
- There is a lack of internationally recognizable /branded lodging facilities;
- The ratio of vacation rentals in total accommodation capacity is too high in relation to hotel capacities that must be generators of a destination's quality;
- Generally speaking, tourist superstructure (e.g. conference centres, wellness/spa centres, etc.) is insufficiently developed;
- There is a limited supply of special interest tourism products (Klarić et al, 2012).

5. Elaboration of the most important national tourism strategic documents, and tourism products proposed by them

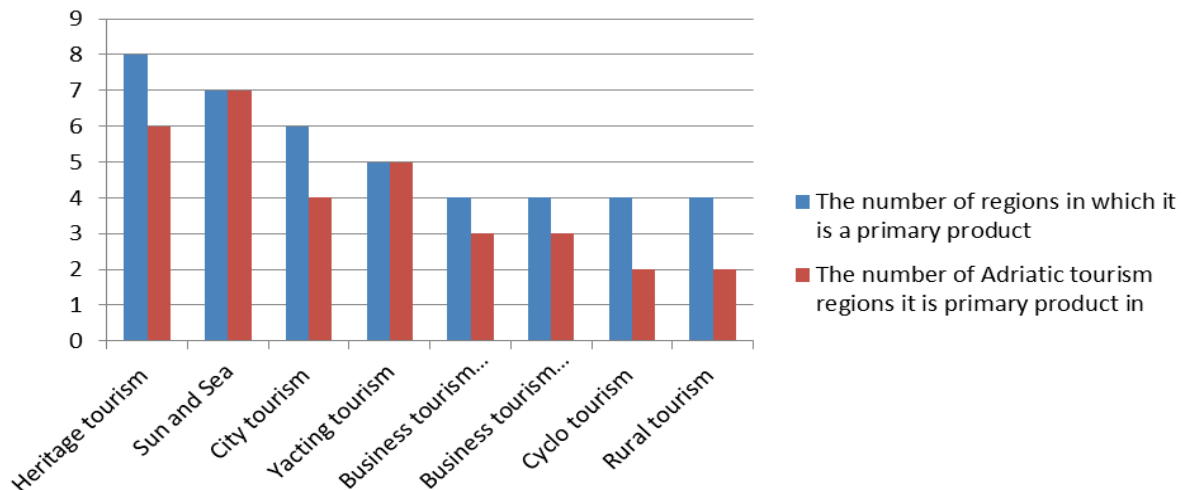
The most important tourism strategic document is the Strategy of tourism development of Republic of Croatia until 2020, which was adopted in 2013 (NN 55/13). It is a baseline strategic document as well as other documents and plans deducted from it. These other documents include documents targeting specific tourism products and development areas such as several action plans aimed at development of congress tourism (2013/16), green tourism (2016), culture tourism (2015), cyclotourism (2015), nautical tourism (2015), health tourism (2014), as well as several national programs, such as for management of the sea beaches (2014), small and medium-size entrepreneurship development (2014), development of small hotel business (2013), development of social tourism (2014), family accommodation improvement (2013) and the improvement of human potentials competitiveness in tourism (2015) as well as the Strategic marketing plan for Croatian tourism for 2014.-2020. and the regular two-year Strategic plans of Ministry of tourism.

The Strategy sets out clear directions and goals of tourism development, including tourism products that will be in focus in 10 touristic regions of country. These are presented in Figure 12. Some

differences may be noticed with regard to the main tourism products on the coast and in the whole of Croatia. Thus in the Adriatic region the primary tourism products are;

- Sun& Sea
- Heritage tourism
- Yachting tourism and
- City tourism.

Figure 12 The primary tourism products nationally and in Adriatic regions



Source: author's presentation based on Strategy of tourism development of Republic of Croatia until 2020

As the new strategy for the upcoming period is soon to be developed, it is interesting to see if these tourism product development goals were met and whether some new ones are going to be set.

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List of Figures

Figure 1: Shapetourism Decision Support System (PDSS).....	7
Figure 2: The Shapetourism observatory.....	8
Figure 3: Shapetourism survey we tool.....	10
Figure 4: Carrying Capacity scenario simulator.....	11
Figure 5: Med region cluster map.....	12
Figure 6: Nature and its constituents.....	17
Figure 7: Protected areas in Croatia.....	18
Figure 8: Tourism demand.....	25
Figure 9: Tourism revenues and GDP and tourism revenues share in GDP in 2013- 2017.....	26
Figure 10: Tourism revenues and GDP through quartals 2017.....	26
Figure 11. Current and potential threats assessed as high and very high in 2014 and 2017.....	29
Figure 12: The primary tourism products nationally and in Adriatic regions.....	33

List of tables

Table 1: Global Competitiveness Index GCI for Croatia 2015-2016 and 2018.....	13
Table 2: GCI and ranking for Croatia.....	13
Table 3: The global T&T Index for Croatia 2015 and 2017.....	15
Table 4: Number of visitors in Croatian national parks.....	18

Table 5: Croatia's accommodation capacities by accommodation type.....	23
Table 6: Croatia's accommodation capacities in the coastal region.....	23
Table 7: Number of employees and share of employment in hospitality in the overall employment.....	27