

Deliverable 5.2.1-5.2.2

**Transferability plan at pilot Areas and regional scale
(country and transboundary level)**

**- Dubrovnik Neretva Regional Development Agency
(DUNE) -**



Pilot area of Neretva Delta

Background

CO-EVOLVE is an Interreg MED modular project co-financed by the European Regional Development Fund, which lasted from January 2017 up to October 2019. It aimed at analyzing and promoting the co-evolution of human activities and natural systems in touristic coastal areas, allowing sustainable development of touristic activities based on the principles of Integrated Coastal Zone Management (ICZM) and Maritime Spatial Planning (MSP).

As all Interreg MED modular projects, Co-Evolve was divided in three phases: the studying phase, the testing phase and the transferability phase. During the first phase of the project - the studying phase -, an unavailable analysis at MED scale of threats and enabling factors for sustainable tourism with local studies on representative pilot areas has been performed in order to demonstrate through pilot actions the feasibility and effectiveness of a ICZM/MSP based planning process. The coherent and cross-fertilized analysis performed constituted the basis of indications for the testing phase, which translated in practice those findings in order to implement pilot actions (plans, concrete actions and measures) in selected coastal zones, setting the conditions for a sustainable tourism in coastal areas. Finally, the transferring phase, in the framework of which this document has been produced, targets two levels: the pilot/regional scale and the Mediterranean scale. At the local/regional level, the objective is to transfer the results of the analysis and demonstration actions beyond the immediate territorial and administrative limits of the pilot area. At the Mediterranean level, the objective is to transfer Co-Evolve major findings, conclusions and outputs to relevant authorities from each Mediterranean countries.

It should be noted that the purpose of this document is not to present in detail the results of Co-Evolve, be it research or pilot area experiments, but to give an overall overview of what has been achieved. The individual reports are available on the Co-Evolve website <https://co-evolve.interreg-med.eu/> and the direct references of the reports mentioned in this document are listed in the bibliography.

Contents

Chapter 1: Results from the studying phase	4
1.1 Threats and enabling factors for tourism sustainability	5
1.1.1. Tourist fluxes and carrying capacity	5
1.1.2. Littoralization and urbanization	6
1.1.3. Land-sea interactions	7
1.1.4. Coastal erosion and protection measures	7
1.1.5. Ecosystem threats and protection	8
1.1.6. Water management	9
1.1.7. Transport and accessibility	10
1.2. Co-evolve's planning methodology	12
1.3. Co-evolve's tourism typology and indicators	15
Chapter 2 – Results of pilot experiences	18
2.1. Presentation of the baseline situation	18
2.2. Methodology used at pilot area	21
2.3. Stakeholders involvement	24
2.4. Tools applied	26
2.5. Proposals of solutions	29
Chapter 3 – Replicable tools and methods	30
Chapter 4 – Actual replication/transfer	31
4.1. Replication at the local level	31
4.2. Replication at the regional level in a transboundary context	31
Bibliography	32

Chapter 1: Results from the studying phase

The coastal areas are very coveted spaces, which are also fragile and limited. The concentration and competition of human activities have led to degradation of coastal ecosystems. The challenge of sustainable development in these areas is to preserve outstanding natural spaces without hindering the development of human activities. Tourism is one of the major economic activities on the coastal zone of the Mediterranean region. In 2014, it accounted for 11.3 percent of Gross Domestic Product (GDP) and 11.5 percent of employment in 2014, with expected significant growth through 2025 including a 0.6 percent increase in total contribution to GDP¹. As such, this activity has a crucial role to play in the development of the region. Though, the continuous growth of tourism in Mediterranean coastal areas exerts pressures on environmental and cultural resources of the coastal zones, and affects negatively social and cultural patterns of tourist destinations.

The approach of Integrated Coastal Zone Management (ICZM) is perceived by European Union (EU) and numerous international organizations as the most appropriate approach for the development and the management of coastal zones. ICZM is defined as “a dynamic process for the sustainable management and use of coastal zones, taking into account at the same time the fragility of coastal ecosystems and landscapes, the diversity of activities and uses, their interactions, the maritime orientation of certain activities and uses and their impact on both the marine and land parts”². It is complemented on the sea side with maritime spatial planning (MSP) principles. MSP aims at “analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve objectives usually specified through a political process”³. In order to better understand which are the threats tourism poses to the coastal zones, but also which are the most relevant enabling factors for its sustainability, an analysis has been performed, and its results are summarized below.

¹ Plan Bleu, 2016. Tourism and Sustainability in the Mediterranean: Key Facts and Trends.

² UNEP/MAP/PAP/RAC, 2008, ICZM Protocol

³ Ehler, C. and Douvère, F. 2009. Marine Spatial Planning: a step-by-step approach toward ecosystem-based management, Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides no. 53, ICAM Dossier no. 6. Paris: UNESCO.

1.1 Threats and enabling factors for tourism sustainability

1.1.1. Tourist fluxes and carrying capacity⁴

Massive tourist fluxes can alter and compromise tourism destinations causing several potential direct and indirect impacts, strictly linked to the increasing need of local resources, space and to the over-production of waste/pollution. Diversification of the tourist offer, de-seasonalization and distribution of the flows on wider areas are all key actions to reduce the pressure from tourist fluxes.

The Tourism Carrying Capacity Assessment (TCCA) is a valuable decision-making tool for maritime and coastal tourism destinations planning. A system of metrics for a logical assessment of TCCA for maritime and coastal tourism in the Mediterranean was developed in the frame of CO-EVOLVE.

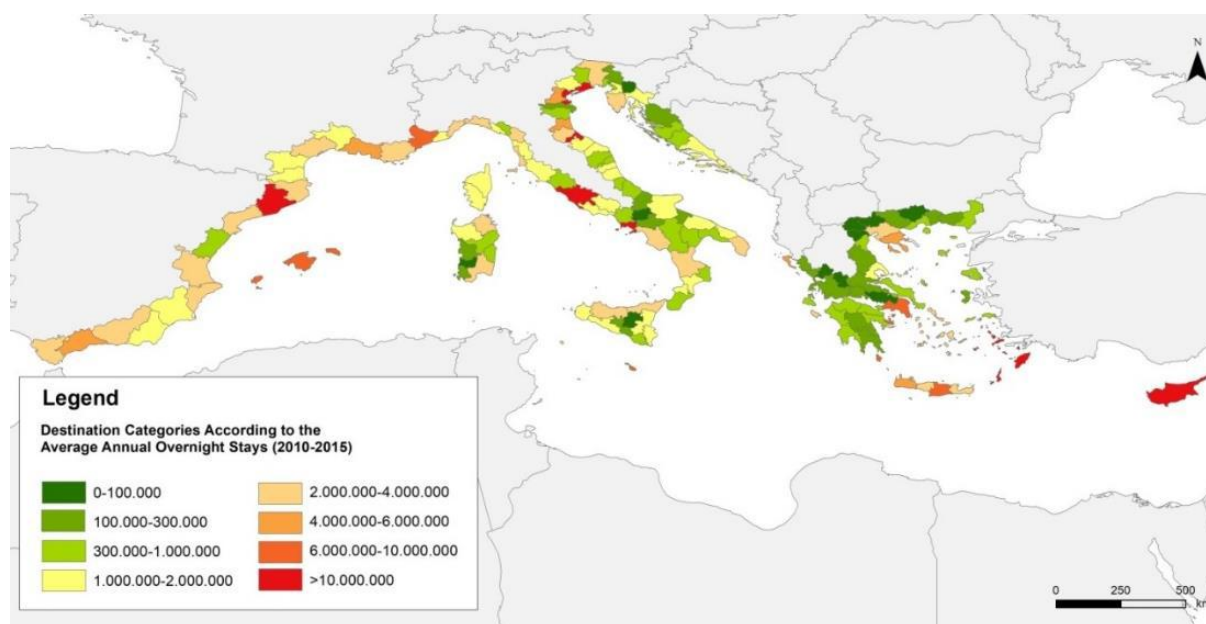


Figure 1: Destination categories according to the Average Annual Overnight Stays (2010-2015) (from Coccossis, H. and Koutsopoulou, A., 2017(b))

⁴ CO-EVOLVE project: Coccossis H. and Koutsopoulou A., 2017(a); Coccossis H. and Koutsopoulou A., 2017(b)

1.1.2. Littoralization and urbanization⁵

Urbanization and especially coastal urbanization or littoralization, namely land occupation by urban land uses and related infrastructure in coastal areas, is a long-standing and intense phenomenon in the Mediterranean region.

Between 1950 and 2010, the Mediterranean urbanisation rate increased from 42.86% to 65.63%, while estimations show that, by 2050, 73.96% of the Mediterranean population will live in urban areas. The population residing in urban areas is shown in Figure 1.

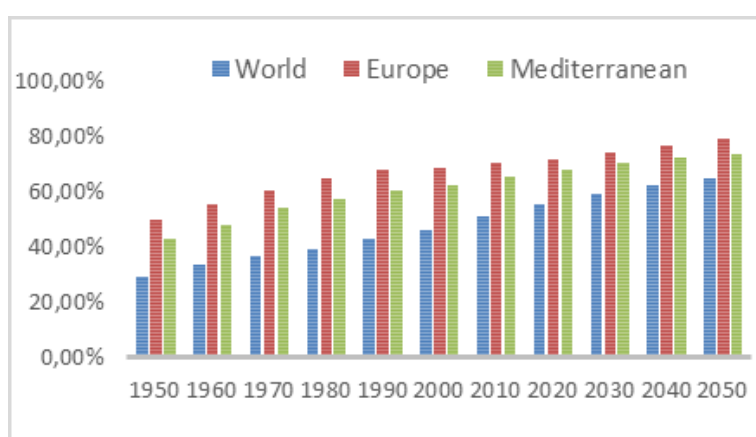


Figure 2: Increase of the population residing in urban areas (%) (Coccossis H., Stavridou K. and Koutsopoulou A., 2017, based on United Nations Environmental Programme Data Set, 2015)

The population within 100 kilometres of the Mediterranean coast has increased almost 1.5 times in the period from 1975 to 2005 (figure 1). Likewise, the population density at the European coast of the Mediterranean, from 1950 to 2013, is continuously increasing but with a lower growth rate over the years.

If the urbanization rate of European countries is expected to increase by a moderate degree by 2050, North African countries' rate will grow even more rapidly.

Coastal urbanization/littoralization can be considered both as a threat to and a main component of the tourist destinations development. Mature tourist destinations with high tourism dynamism show the highest degree of coastal urbanization/littoralization, while regions characterized by low to medium touristic pressure are still predominantly rural.

The ICZM Protocol is the main instrument at the basin scale to address littoralization/urbanization. In its article 8, it requires the contracting parties to establish a setback zone where construction is not allowed in the first 100 meters from the shore. At the national level, all Mediterranean countries have developed strategies and plans to manage land use in their coastal areas.

⁵ CO-EVOLVE project: Coccossis H., Stavridou K. and Koutsopoulou A., 2017.

*1.1.3. Land-sea interactions*⁶

The Mediterranean has long been the focal point of interactions between different coexisting and often conflicting socio-economic activities, such as fisheries and agriculture, energy extraction and exploration, and maritime transport. However, currently the maritime and coastal tourism is the largest sea-related economic activity in the Mediterranean region. Future scenarios indicate that in 2030 the Southern and Mediterranean Europe will receive 103 arrivals per 100 inhabitants. The forecast for energy extraction and exploration is for an increased exploitation of offshore oil and gas deposits; while for maritime transport a 4% annual growth rate in global trade over the next decade can be anticipated.

Similarly, fish aquaculture production in the Mediterranean countries of the EU is expected to increase by 112% between 2010 and 2030 (Piante & Ody, 2015⁷). Impacts from other activities on tourism include, for instance, negative interactions with marine aquaculture (conflicts over the use of space and local degradation of ecosystems), the density and negative influence of ports infrastructures, and negative interactions with off-shore oil and gas infrastructures.

*1.1.4. Coastal erosion and protection measures*⁸

Many important tourist destinations along the EU Mediterranean coast are exposed to erosion.

If over the past decades the broad erosion along the Mediterranean coasts has been basically related to the anthropogenic development, which altered the overall sediment budget and the natural balance of littoral sand nourishment, the future erosion trends will additionally largely depend on the climate change effects (sea-level rise and extreme events). Building coastal defense structures is a concrete way to prevent or reduce erosion at the local level. A significant presence of hard defense structures is observed in several Mediterranean areas characterized by sandy beaches and high urban development. Well-designed defense structures generally reduce the erosion rate of the protected beach, and are often combined with sand supply, dredging and nourishment in the framework of ICZM

⁶ CO-EVOLVE project: Coccossis H. and Koutsopoulou A., 2017(d)

⁷ CO-EVOLVE project: Piante C., Ody D., 2015. Blue Growth in the Mediterranean Sea: the Challenge of Good Environmental Status. MedTrends Project. WWF-France

⁸ CO-EVOLVE project: Carniel S., Gaeta M.G. and Bonaldo D., 2017(a); Carniel S., Gaeta M.G. and Bonaldo D., 2017(b); Rizzetto F. and Vacca C., 2017(a).

policy development. Although the technique of beach nourishment is nowadays becoming much more adopted in the Mediterranean region, it is often applied as a measure of a remedial rather than preventive strategy. Therefore, an overall long-term planning, coastal management, and regular monitoring of the coastline should be included in the planning of this type of measures as part of ICZM policy.

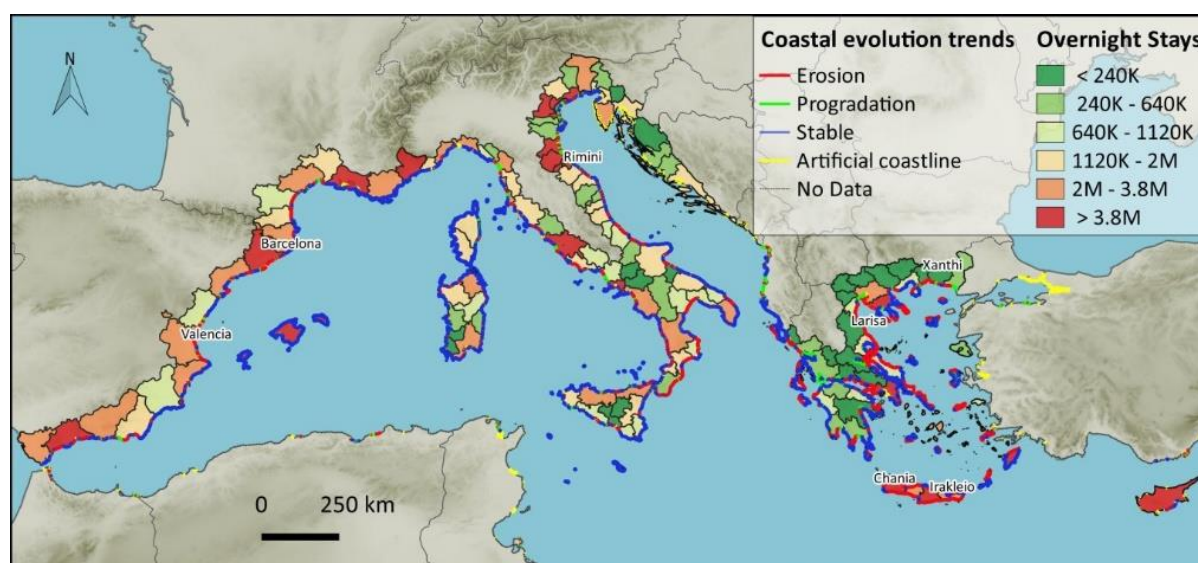


Figure 3: Coastal evolution trends and NUTS III overnight stays (average 2010-2015) in the Northern Mediterranean (from Drius et al. 2018)

1.1.5. Ecosystem threats and protection⁹

The main threats tourism poses to ecosystems are ecosystem fragmentation and degradation; wildlife disturbance and exploitation, solid waste production, water pollution, air pollution, introduction of alien species, noise pollution and light pollution.

On the other side, healthy coastal ecosystems provide multiple benefits for coastal tourism. They support recreation, wellbeing, aesthetic experience and intellectual stimulation. These so-called “cultural ecosystem services” rely on other services provided by coastal ecosystems crucial for tourism development, such as for instance micro-climate regulation and protection from coastal erosion. Considering the importance of ecosystem services for coastal tourism, current regulations, such as the MSP Directive, need to be supported and

⁹ CO-EVOLVE project: Drius M., Bongiorni L. and Pugnetti A., 2017 (a); Drius M., Bongiorni L. and Pugnetti A., 2017(b); Drius M., Campanaro A., Bongiorni L. and Pugnetti A., 2017

guided by an ecosystem approach, which takes into adequate consideration also the role of ecosystem services.

Conservation measures are concentrated more in the EU Northern Basin (Corso Ligurian Basin) and in the Central Basin (between Tunisia and Sicily), than in the southern Mediterranean Basin.

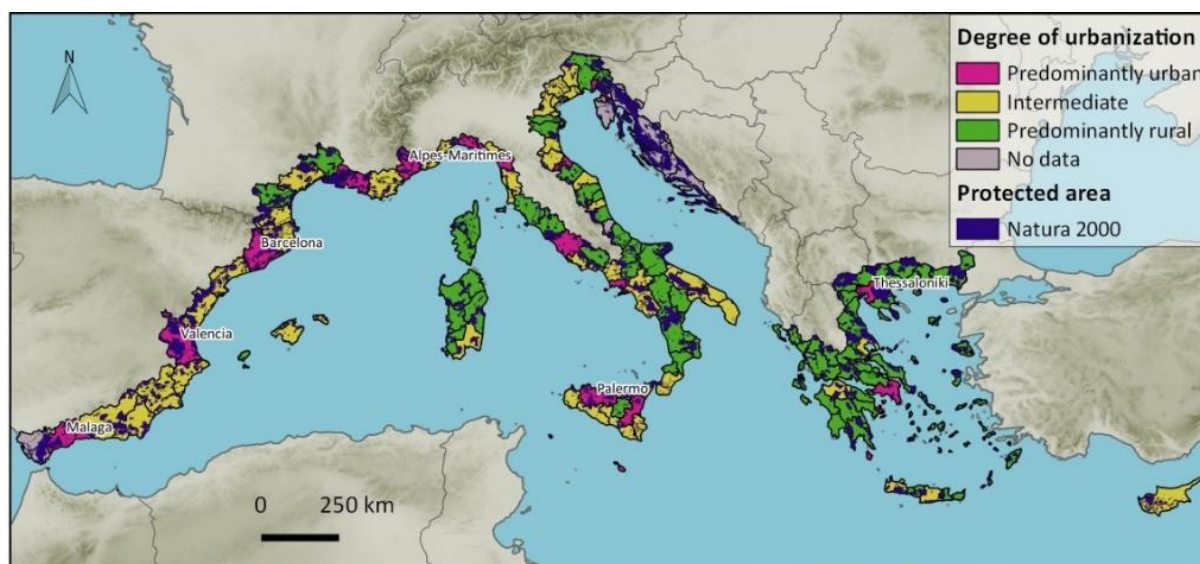


Figure 4: Degree of urbanization and distribution of Natura 2000 sites in the Northern Mediterranean (from Drius et al. 2018)

1.1.6. Water management¹⁰

Most of the impacts of tourism on water resources are linked to seasonality, with peak demand coinciding with the dry season (summer). Spatial concentration along the coast, at locations with scarce local water resources (islands) and often in fragile natural environments, is particularly problematic. There are numerous conflicts among uses (drinking water, agriculture, industry, ecosystems).

¹⁰ CO-EVOLVE project: Kennou H., Miquel S., Burak S., Margat J., and Dubreuil C., 2017

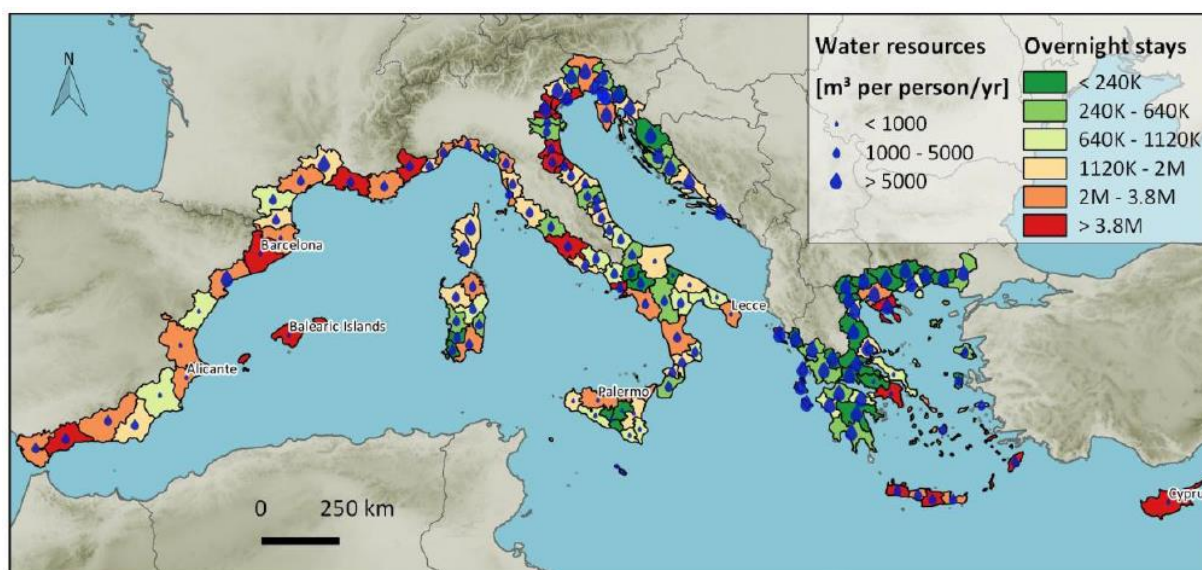


Figure 5: Availability of water resources and high tourist pressure (from Drius et al. 2018)

In the southern countries, as well as in Turkey, where water demand is still increasing and the resources are most threatened by climate change, the supply-side policy, mainly for development purposes, is still predominant. Overexploitation of groundwater is still unequally mastered. One of the main objectives of water policies is to prevent the consequences of drought and the risk of water shortage, as well as the current and future “water crisis” caused by climate change.

1.1.7. Transport and accessibility¹¹

Transport can be considered as a key factor in the success of sustainable tourism development. Accessibility of a tourist destination in order to attract tourists largely depends on the availability and efficiency of transport needed to travel to that destination. On the other hand, poor accessibility to destinations can discourage visitors from attempting to reach these places altogether.

¹¹ CO-EVOLVE project: Sakib N., Musco F., and Gissi E., 2017. State of the art and future development of Transport and Accessibility at Mediterranean Scale.

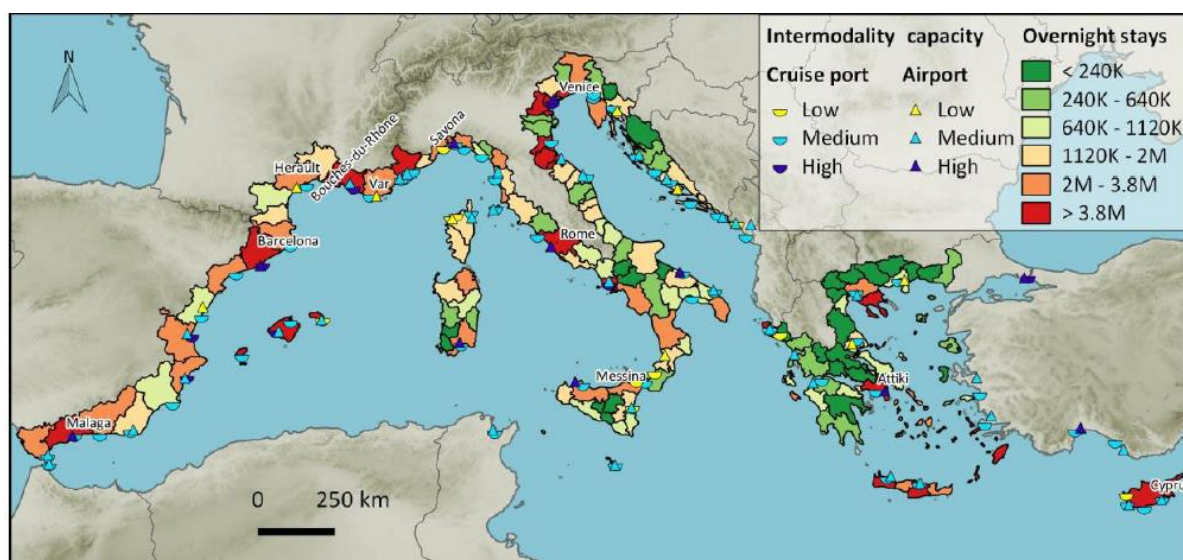


Figure 6: Intermodality capacity for cruise ports and airports is higher in Western Mediterranean than in Eastern Mediterranean, consistently with tourism fluxes (from Drius et al. 2018).

1.1.8. Interaction among threats and enabling factors¹²

All T&EF are expected to increase in the near future, although at different speed and intensity, with the exception of “pollution and other anthropogenic pressures affecting ecosystems” which should stay constant, owing to the good environmental policies and practices. In general, the intensity of the interactions between T&EF is increasing, with the three main drivers being: i) the morphological instability of coastal areas, also due to climate changes; ii) the increase of tourist fluxes; iii) the protection measures to put in place on the coasts and ecosystems in order to respond to threats and allow for sustainable tourism development. The expected increase of other uses of the coast and the sea within a general expansion of sea economy and their coexistence with tourism will be another major issue. This analysis, although simplified, clearly shows the importance of a multidisciplinary, integrated and long-term view and effort on policy and governance.

1.1.9. Governance for a better sustainability of tourism¹³

Even though they cannot be considered as “silver bullets”, the ICZM Protocol and MSP principles can be considered as major tools for the improvement of sustainability of tourism since they address all the crucial issues, which the Mediterranean basin is facing.

¹² CO-EVOLVE project: Drius M., V. Evers, S. Bellacicco, L. Petrić, M. Prem, A. Barbanti, 2018.

¹³ CO-EVOLVE project: Evers V., Petric L. and Prem M., 2017.

Considering tourism through their prism can also help adopt a holistic approach which is essential in order to balance the uses of the coastal zone, as well as to reduce the conflicts among them. Five main cross-cutting obstacles to sustainable tourism can be identified when adopting this holistic perspective.

- Obstacle 1: Countries' excessive orientation and over-dependence on tourism as an economic activity;
- Obstacle 2: Misbalance between destinations' carrying capacities and demand volume;
- Obstacle 3: Seasonal concentration of demand;
- Obstacle 4: Over-use and pollution of (natural and cultural) resources by tourism industry;
- Obstacle 5: Illegal activities by tourism industry.

The ICZM Protocol, as a legally binding instrument, complemented by the MSP principles on the marine part of the coastal zone, provides a legal basis for getting over these obstacles, and may act as a key enabling factor for co-evolution of the tourist areas of the Mediterranean region. Its implementation through the national laws, as well as through local practices, should enable the coastal destinations to keep or turn their coastal zones into healthy, attractive, economically balanced and diverse ones, which is the basis for developing sustainable tourism. Besides, it enables dealing with the emerging coastal environmental challenges, such as the climate change.

1.2. Co-evolve's planning methodology¹⁴

The guidelines produced in the framework of the project offer a step-by-step methodology to construct a tourism-driven strategic plan for sustainable development of coastal areas. They integrate the main principles and goals of ICZM and of sustainable tourism. The proposed planning methodology is organized in different consequential steps that constitutes an adaptive and cyclical process. It consists of 6 major phases, each of which includes key tasks and steps. The iterative process of tourism-driven strategic planning in coastal areas is reported in the figure bellow.

¹⁴ CO-EVOLVE project: Filippo Magni, Federica Appiotti, Denis Maragno, Alberto Innocenti, Vittore Negretto, Francesco Musco, 2017.



Figure 7- Conceptual framework of the methodology to the tourism-driven strategic plans construction (from Magni et al, 2017)

A short summary of each phase of the process is presented bellow.

STEP 0 - PLANNING SET-UP: The main aim of this step, that can be considered the most important pre-planning phase, is to create the needed bases for the subsequent implementation of the whole planning process. In this phase, one will answer to the **questions** why (why do we need this strategy for), who (identification of the stakeholders and of the team which will develop the plan), when (timing definition, identification of the milestones), where (territorial boundaries), and how (which are going to be the costs).

STEP 1 - BUILDING KNOWLEDGE FRAMEWORK: The overall aim is to analyze the area, in a coherent and integrate way, in order to build up the knowledge to support the decision-making process provided in steps 2 and 3, in which the vision and objectives are defined and the strategy is constructed. This step is organized in 3 main tasks. The first task aims to collect information about the existing area status in relation to sustainable tourism development. The information that should be collected and subsequently analyzed are: (i)

threats and enabling factors that affect the co-evolution of area's tourism development, (ii) area's sustainability status; (iii) existing policies and plans. The second task aims at analyzing data collected in order to obtain a knowledge framework useful to construct planning priorities and subsequent goals and objectives. The analysis must be strongly focused on the planning main goal. Finally, the third task's purpose is to organize the results obtained from the previous phases to facilitate the subsequent steps execution. At the end of this phase, a final summary of existing conditions of the area should be produced focusing on the agreed points

STEP 2 - DEFINING GOALS VISION AND OBJECTIVES: The starting point to create an effective strategy for sustainable tourism development in coastal areas is to set the main direction to which we want to move: the vision and its related objectives. The construction of the vision for the area and the identification of strategic specific objectives must be constructed, on one hand, addressing the strategic issues emerged from the analytical phase, and, on the other hand ensuring the coherence and compliance with ICZM and Sustainable tourism principles and main goals. Therefore, the step should be subdivided in 3 main tasks: the first one will consist in designing a common and integrated vision for the area; the second one will be to identify the main planning goals and objectives; and the last will be to link objectives with ICZM and sustainable tourism goals.

STEP 3 - TOURISM DRIVEN STRATEGIC PLANNING CONSTRUCTION: The aim of this step is to develop the longer-term elements for a sustainable tourism-driven development of the area starting from the vision and objectives identified. The tourism-driven strategy identifies a feasible "trajectory" of change based on the approved objectives and consisting of concrete actions reported in a comprehensive action plan for its implementation. Therefore, the tourism-driven strategic plan is an integrated set of desired and integrated outcomes in which the actions for the realization of them are explained through an action plan. The action plan will consist in a series of management actions aimed at achieving one or more identified objectives.

STEP 4 - IMPLEMENTING THE PLAN: The purpose of this phase is to apply the strategic approach to priority issues, i.e., on a smaller, more practical scale. Design and implement of strategic action plans depends upon the strategic priorities identified within the second step. As it identifies the key undertakings in consultation with stakeholders while focusing on resources and partnerships, the implementation of strategic actions plans remains fully congruent with the Co-evolve project approach.

STEP 5 - REVIEWING THE PLAN: The revision step is one of the most critical planning steps, and is an activity designed to provide constant feedbacks on the progress of the planning process and on the status and efficiency of its implementation. The revision step includes a phase of monitoring and a phase of evaluation. The aspect of tourism sustainability can be monitored using the “Sustainability toolkit” presented below, and the indicators selected for the specific area in the building framework step (step1). The use of indicators will show the trends of change after the actions’ implementation.

The importance of stakeholder involvement

It is important to stress the development of the plan should be done in a participatory way. The participatory process shall start from the very beginning of the process (STEP 0), starting from concept development through implementation, to monitoring and evaluation of results. Early stakeholder engagement in decision-making has been frequently cited as essential if participatory processes are to lead to high quality and long-lasting decisions.

In order to be efficient, stakeholders involved should include not only the actors likely to have an impact on the project, but also the people who will be affected by the project. Categories of stakeholders usually considered as relevant in tourism context include government, residents, local business, visitors, tourism employees, academics, and civil society. The participation process is complex and can be problematic, as there has to be collaboration among stakeholders holding different opinions on the same subject. For example, investors and hotel managers often don’t share the point of view of NGOs.

1.3. Co-evolve’s tourism typology and indicators¹⁵

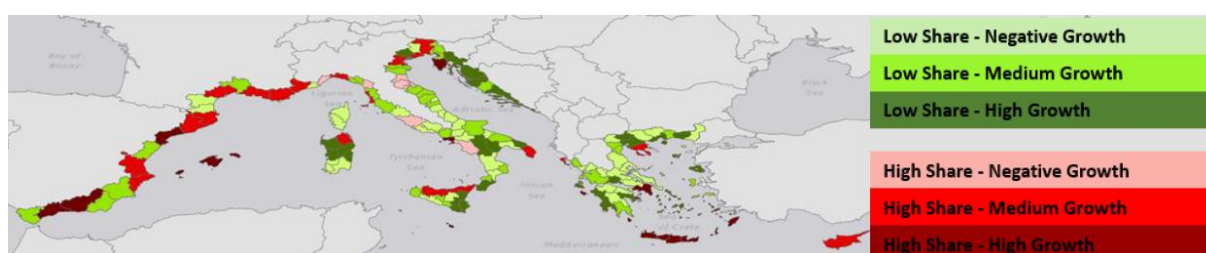
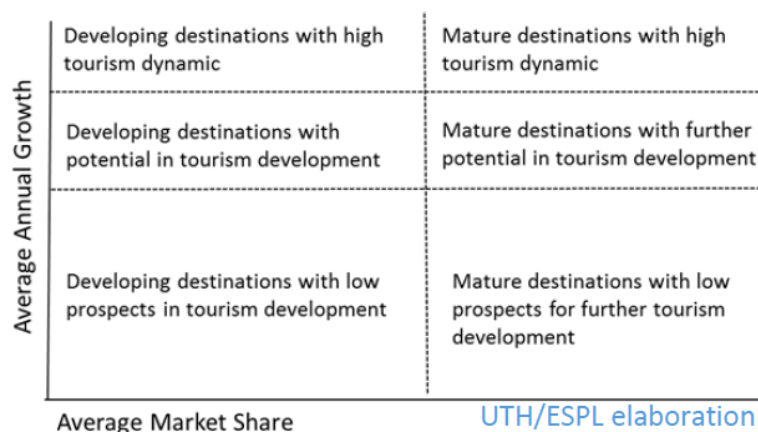
Tourism typology

The use of a common typology in tourism development substantially contributes to the identification of goals and objectives, the highlighting of trends, problems, conflicts and opportunities for development, the improvement of the decision-making process and the production of alternative scenarios for each type of destination. In CO-EVOLVE, the typology developed is based on two variables that form the basis for the classification. The first refers

¹⁵ CO-EVOLVE project: Coccossis H. and Koutsopoulou A., 2017(e); Coccossis H. and Koutsopoulou A., 2017(f).

to the average share of overnight stays at each destination against the total overnight stays in the Mediterranean destinations and the second refers to the average annual growth of overnight stays at each destination.

The use of the two variables led to 6 main destination types that provide useful insights about the state and potential of the tourism sector in the Mediterranean regions (figures 8 and 9).



Figures 8 and 9 - State and potential of the tourism sector in the Mediterranean regions (Coccossis H. and Koutsopoulou A., 2017(e))

Building upon the typology, the conceptual model of indicators developed in CO-EVOLVE represents an extended and flexible tourism sustainability toolkit that can be customized according to the specific needs and characteristics of the highly diversified Mediterranean coastal destinations.

The toolkit (figure 11) constitutes a three-tier system composed by the following sets of indicators:

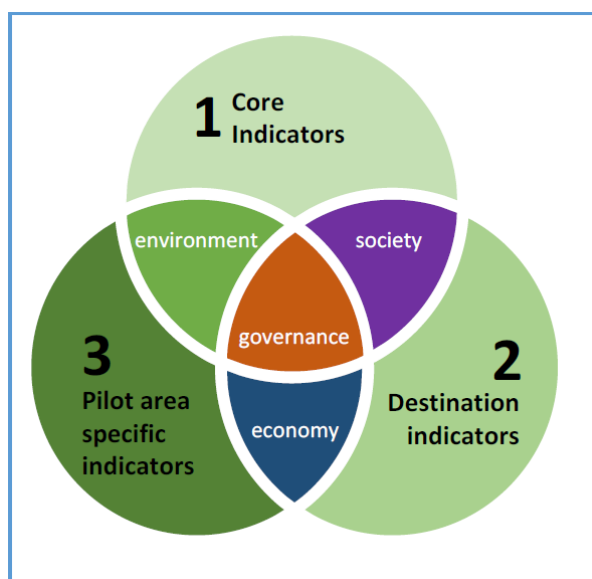


Figure 11: CO-EVOLVE toolkit (Coccossis H. and Koutsopoulou A., 2017(e))

Core indicators: 40 indicators have been selected from the European Tourism Indicator System (ETIS) to serve as the basis for comparison of the level and trends of sustainable development for all types of destinations

Destination indicators: an extensive set of indicators developed to address the specific issues of coastal areas according to the characteristics and particularities of the predominant type of tourism activity in each type of destination (Beach/Maritime tourism, Urban/Cultural tourism, Cruising, Recreational boating, Nature/Ecotourism).

Pilot area-specific indicators: a set of indicators developed on the basis of area-specific critical issues with linkages to the main threats, enabling factors and governance issues identified in Mediterranean coastal areas.

The starting point for adapting the Toolkit to each destination is a list of priority indicators selected from the Toolkit which refer to the most common critical issues and specificities encountered in Mediterranean coastal tourism destinations. The list is meant to act as a baseline for comparisons among coastal tourism destinations in the Mediterranean.

The use of the Toolkit provides hints for improving existing - or shifting towards alternative - tourism models, it highlights existing data gaps & provides guidelines towards relative measurements. It can also be used as a starting basis to measure and quantify stakeholders' perceptions, define thresholds through public consultation processes, develop probability scenarios to adjust future planning actions and policies and to monitor changes in sustainability in the future.

Chapter 2 – Results of pilot experiences

2.1. Presentation of the baseline situation

Tourism for Croatia is an extremely important economic activity and one of the indisputable development priorities. The situation is the same in Dubrovnik-Neretva County. In the area along the Neretva river, tourist activity has not yet been developed in accordance with the potential of the available tourist resource-attraction base. The key reasons for the underdeveloped tourism development in the Neretva cluster are relative traffic isolation but also underdeveloped tourism infrastructure. Apart from the lack of quality accommodation, the reasons for the relative lag should also be sought in the absence of a well-designed destination tourist product as a basic prerequisite for arrival and eventual multi-day tourist stay in this area.

The Neretva cluster consists of seven local municipalities in the southeastern part of the Republic of Croatia in the wider area along the Neretva river. These are the towns of Metkovic, Opuzen and Ploče and municipalities of Kula Norinska, Slivno, Zračanje and Pojezerje. The cluster is located in the Dubrovnik-Neretva County area near the border with Bosnia and Herzegovina. The whole area is predominantly defined by the meander of the lower part of the Neretva river flow and its confluence with the Adriatic Sea.

The area of the Neretva cluster covers an area of 412.56 km², which represents 23.15% of the area of the Dubrovnik-Neretva County. According to the latest 2011 census, 35,799 people (about 30% of the county's total population) lived in this area.

The Lower Neretva and its delta are unique in the landscape. Lowland wetlands protected by the Ramsar Convention and cultivated parts surrounded by hilly karst and connected to the coast and the sea are a landscape peculiarity in a national context that is still underutilized, especially in the context of (long-term sustainable) tourism.

The main character of this area is the abundance of water: the Neretva river and its backwaters, lakes, 'eyes', submerged karst depressions - Baćina lakes, a series of springs along the edge of the surrounding hills and a vast delta with lagoons and shallows. It is also characterised by the agricultural land created by the amelioration of the wetland.

Of valuable materialized cultural and historical heritage, the following should be especially emphasized: the archeological and cultural-historical site 'Narona-Vid', fortifications that

testify to the turbulent history of these areas, where the influences of Venice, the Ottoman Turks, Austria, the Dubrovnik Republic and the modern states of Yugoslavia and independent Croatia intertwined. Of the protected cultural and historical heritage, valuable urban areas and small rural units that are not formally protected but contribute to the local identity of the area should be noted.

In 2014, around 25.900 tourist arrivals and 185.000 tourist nights were realized in the Neretva cluster, of which about 66.7 thousand overnights were realized in their own 'cottages'. The Neretva cluster accounted for 1.9% of all arrivals and 2.9% of overnight stays in the total tourist turnover of the Dubrovnik-Neretva county. According to official data during 2013, during the peak tourist season (August), 1,900 beds in 12 collective accommodation units (hotels and similar facilities) and 166 family accommodation facilities (households) were available in the Neretva cluster area. The average annual gross utilization rate of all types of accommodation in the Neretva cluster is around 16.6%, with the best situation being in August (80% occupancy). It should also be noted that the existing utilization of accommodation capacities in the cluster area is significantly lower than the county average (22.8%).

The results of the conducted assessment of the competitiveness of the Neretva cluster clearly indicate that the reached level of its tourism development is quite far from optimum and there is plenty of room for further growth and development. This is especially true of the degree of development of the tourist offer in the narrow sense, availability / quality human resources, that is, the development of economy and social activities. Likewise, the state of communal infrastructure certainly also represents a significant impediment to tourism development.

One of the increasingly important challenges on which the competitiveness of any tourist destination depends increasingly is on the issue of responsible environmental behavior. Application of 'green' behavior concepts, recycling, responsible use of energy / water, compliance with 'green architecture' rules and maximum use of natural and locally produced materials are becoming increasingly recognized and appreciated by the market.

Finally, for the desirable tourist profiling / positioning of the entire project area in the future, the increasing trend towards the authenticity and uniqueness of the tourist experience is probably the greatest opportunity. This implies not only the originality / uniqueness of the

tourist resource-attraction base, but also the possibility of its creative, emotionally charged and nuanced presentations tailored to different audiences.

In addition to the 'sun and sea' products, which will continue to be a globally dominant and inevitable tourism product for the Neretva cluster, the features of the resource-attraction base of the project area are particularly favorable for the development of special interest tourism. Demand for special interest tourism has been steadily increasing over the last 20 years. Mostly it is generated by experienced tourists, with higher paying power, with pronounced hobbies and higher cultural capital, so this demand is relatively stable even in times of crisis.

One of the significant forms of this type of tourism is certainly the **rural tourism**.

According to the World Tourism Organization, the demand for rural tourism has increased by about 6% annually over the last 10 years. These are mostly young and / or middle-aged, average or above-average incomes who travel with family and / or friends, and in the destination, apart from accommodation in traditional accommodations (rural holiday homes, farms, family-run guesthouses / ' Bed & Breakfast 'facilities, etc.) and immersion in the daily life of the host, most often engage in various recreational activities such as hiking, horseback riding, fishing, touring wine roads, and visiting cultural and natural attractions in the area. Furthermore, tourists who choose to vacation in rural areas are largely self-sufficient and need a relatively wide range of intellectual stimulation needs, contact with the locals, to the search for a long lost peace of a simple and traditional way of life. Consequently, it is a consumer segment that seeks to establish itself feelings of freedom, relaxation and / or psychophysical recovery in direct contact with nature.

With the traditional orientation on agriculture, and the fact that a large number of inhabitants, especially those younger, are looking for alternative or additional sources of income, opportunities to develop rural tourism throughout the project area, especially through the establishment of a critical mass of family (farms) and / or other forms of family-themed rural accommodation are extremely large.

The development of tourism in rural areas will enable the reconstruction of abandoned settlements and the revaluation of the valuable cultural heritage of rural areas. Utilizing existing built structures will reduce the pressure to occupy new spaces for construction. Finally, the dispersion of tourist accommodation facilities across the larger Neretva cluster space will reduce the pressure for tourist construction in the coastal area.

In the County there are a large number of traditional rural settlements and hamlets of unexplored cultural and historical value, recorded but not protected as cultural heritage, which are included in the construction zoning areas in the same way as zones of new settlements. In this way, provisions for new construction of inappropriate volumes and spatial relationships for these settlements are applied in traditional settlements. For some settlements, the pressure for construction is more intense and cannot be met solely within the existing construction, that is, the plans also envisage the expansion of the existing construction areas.

Therefore, the aim is to create Guidelines for integral protection of rural landscapes and sustainable tourism development of the Neretva river that would include planning and architectural guidelines for construction in traditional rural settlements of the Neretva river valley.

2.2. Methodology used at pilot area

The planning set-up phase (Step 0) started from the main findings of the Neretva Cluster Tourism Development Plan. The concept of tourism development of the Neretva Cluster refers to the appropriate valorisation of total resource-attraction potential of the project area. When it comes to the integrity of the tourism value chain in the Neretva cluster, it should be noted that the current situation is not satisfactory. Namely, with the lack of abundance and the diversity of the accommodation offer, the whole project area is characterized by a distinct lack of catering and accommodation offers, lack of distinctive cultural entertainment and lack of a sufficient number of sports and recreational facilities.

Rural tourism is recognized as one of the important potential tourism products of particular importance in the project area. Given that the area of the Neretva cluster is also characterized by a distinct uneven tourism development, with the narrow coastal belt subjected to great pressure of tourism demand and construction of tourist facilities, while inland tourism is relatively underdeveloped, it is required to systematically develop experiences that would stimulate the tourism development of the cluster's hinterland.

The rural settlements of the Neretva valley represent the unexplored potential that this project seeks to reevaluate

During the Step 1 (Building knowledge framework) relevant information about the existing area status in relation to sustainable tourism development were analysed. The basics cartographic maps were collected and analysed: digital orthophoto map, basic map in scale 1:5000, topographic map of scale 1: 25,000, topographic map of scale 1: 100,000, historical map of Europe in the 19th century - third military survey (1869-1887) and the Cadastral Map of the Habsburg Monarchy (from source: www.mapire.eu).

Studies prepared for the needs of the development of the Spatial Plan of the Dubrovnik-Neretva County were also collected: Register of Natural Resources of the Dubrovnik-Neretva County (Croatian Agency for the Environment and Nature, Vesna Koščak Miočić Stošić and the Institute for Physical Planning DNŽ, 2017), Natural Heritage of Dubrovnik-Neretva County - Characteristics of areas from the point of view of nature protection and proposal of protection measures (State Institute for Nature Protection, 2014), Historical overview - Historical overview of the development of Dubrovnik-Neretva County (Maja Nodari, 2016), List of archeological sites in the area of Dubrovnik- of the Neretva County (Domagoj Perkić, 2016), Register of Cultural Property in the Dubrovnik-Neretva County (Institute for Physical Planning of the Dubrovnik-Neretva County, 2016), Cultural Landscapes of Dubrovnik-Neretva County - Recognizing and Valuing the Cultural Landscapes and Background protection (Biserka Bilusic Dumbovic, 2016.), Landscape Study of Dubrovnik-Neretva County - Typological Classification of Landscapes (Spatial Planning Aleš Mlakar in cooperation with the Faculty of Agriculture, University of Zagreb, 2016) and Tourism Development Plan for the Neretva Cluster (Institute for Tourism Zagreb, 2016).

Furthermore, during the preparation of the first phase, the Spatial Plan of the Dubrovnik-Neretva County and Spatial Plans of Towns and Municipalities were used in the area of coverage: Spatial plans of Metković, Opuzen, Ploče, Pojezerje, Kula Norinska, Zažablje and Slivno.

In Step 2 (Defining goals vision and objectives) the starting points were taken from the Neretva Cluster Tourism Development Plan. The Neretva Cluster Tourism Development Plan defined the determinants of economic sustainability, spatial-ecological sustainability and determinants of social sustainability of the tourism development. The goal is to make the area internationally recognized a tourist destination, recognizable primarily for its eco-system conservation of the Neretva delta. The vision for the tourism development of the Neretva

cluster is therefore based on three 'pillars'. These are: (i) ecotourism, based primarily on environmental conservation, biodiversity and nature characteristics of the wetlands of the Neretva Delta, (ii) special interest tourism, based especially on the culture of the life and work of the local residents, that is, on the beauty of the landscape and diversity reliefs, which provide tremendous opportunities for various, more or less demanding activities in the nature adapted to persons of different physical fitness as well as (iii) seaside tourism, with the possibility of actively participating in various physical activities in the hinterland.

Tourism driven strategic planning construction (Step 3) predicted the activation of practically the entire area of the Neretva cluster through five characteristic areas of tourism activity: (i) Coastal area (Area that should be characterized by a contemporary offering of active holidays in seaside resorts, especially family oriented with children, (ii) Natural values / Protected parts of nature (refers to valuable natural areas / eco-zones, where the Neretva estuary stands out as a particularly strong 'marker' and one of the leading reasons for coming to the Neretva area, (iii) Neretva Field / Lake Field - an impressive mosaic of the culture of life and work of the local people, (iv) Vid - Metković - Opuzen axis (the core of the cluster's urban and historical identity) and (v) rural hinterland - hilly area of karst, forests, olive groves and lakes with settled and abandoned villages and hamlets.

Plan's implementation (Step 4) purpose was to apply the strategic approach to priority issues, i.e., on a smaller, more practical scale. As part of the implementation of the CO-EVOLVE project, the Guidelines for Integral Protection of Rural Landscapes and Sustainable Tourism Development of the Neretva River Delta were created by external experts with professional support provided by the Institute for Physical Planning of Dubrovnik-Neretva County. The guidelines include a detailed catalogue of rural settlements as well as elaborated data on rural settlements such as a detailed analysis and catalog of landscapes, villages, hamlets and buildings; valorisation, architectural recordings, reviews and analyzes as well as planning guidelines for the revitalization of particular areas and structures.

2.3. Stakeholders involvement

In addition to the external experts, authors of the Guidelines for integral protection of rural landscapes and sustainable tourism development of the Neretva river, the Institute for Physical Planning of Dubrovnik-Neretva County is actively involved in the project.

At the beginning of the project, meetings were held in the towns and municipalities of the Neretva valley. The developers of the expert study participated together with the representatives of the DUNEIA Regional Agency and the Institute for Physical Planning of the Dubrovnik-Neretva County in meetings with the mayors from the project area from 6 to 8 May 2019. Meetings were held in the towns of Metkovic and Opuzen and in the municipalities of Slivno, Zazablje, Kula Norinska and Pojezerje. A meeting with representatives of the Town of Ploče was held during the field visit. At the meetings, representatives of towns and municipalities were briefed about the goals and plan of work on the project.

The project included workshops with local residents on raising awareness of the values of traditional architecture and the need for quality restoration in the spirit of tradition, and problems related to revitalization. In total, four workshops were held. The workshops were announced to all towns and municipalities, and the locals were informed via local media (radio, online portals) and social networks. For each workshop, a poster was prepared with an agenda. It was emphasized that all interested residents of the Neretva Valley were invited to the workshops.

Workshop 1: REVITALIZATION OF RURAL SETTLEMENTS OF THE NERETVA VALLEY was held on July 12, 2019 in Mlinište. Representatives of the DUNEIA Regional Development Agency presented the project. External experts presented the results of field analyzes. Representatives of ECOVAST (European Council for Villages and Small Towns) spoke about protecting the heritage of rural areas. Participants were also informed about the protection of rural landscapes in the Dubrovnik-Neretva County through the work of the Institute for Physical Planning of Dubrovnik-Neretva County. Good practice examples from the Neretva Valley (Bacina) were also presented. The discussion focused on the values of traditional architecture, the need for quality restoration and problems related to the revitalization of abandoned rural settlements in the Neretva valley.

Workshop 2: ARCHITECTURAL SURVEY WORKSHOP was held in Mlinište and the village of Vidonje on July 12, 2019. In cooperation with the Municipality of Zažablje and the Vidonje Local Board, the workshop was previously announced to the local population so that the owners and users of the buildings provided access and architectural survey of the interior of the buildings in the village of Vidonje. The aim of the workshop was to make an architectural survey of all the buildings in the village of Vidonje, to record the architectural details of the buildings and to produce photo documentation. With the participation of the locals, valuable additional data were collected on the history of the settlement and use of the area in the village.

Workshop 3: PREVIEWING SUSTAINABLE TOURISM DEVELOPMENT IN THE NERETVA VALLEY - WHAT WOULD IT BE USEFUL TO UNDERSTAND, KNOW, LEARN? was held in Ploče on September 4, 2019. The workshop was moderated by prof. Vladimir Lay, sociologist, and was held as a focus group for sociological research within the project. A one-hour focus group consisting of residents, representatives of development agencies, public administration and tourism workers discussed problems related to the revitalization of abandoned rural settlements.

Workshop 4: REVITALISATION OF RURAL SETTLEMENTS OF THE NERETVA VALLEY was held in Ploče on September 4, 2019. In the presentations, participants were able to find out basic information about the CO-EVOLVE project. The prerequisites for the development of sustainable tourism in the Neretva valley were also discussed from a sociological and planning-architectural point of view. The special presentation discussed the values and guidelines for the restoration of the traditional architecture of the Neretva valley, while the key presentation dealt with the topic of diffuse and integral hotels. The workshop also presented two examples of good practice from the Neretva valley.

2.4. Tools applied

Through the project, 203 villages and hamlets in the Neretva valley were identified and valorized, of which slightly less than half were abandoned or only temporarily settled. Village database creation included collection of relevant maps and sources for the project area of Neretva river delta. Based on the analysis of present and historical maps and available relevant sources, the first list of settlements was made in relation to the toponyms that appear on the maps.

Field surveys and photographic documentation: A detailed tour of the terrain and all the hamlets was carried out on two occasions. All hamlets accessible by road were visited. Extensive photo documentation was made on this occasion - a total of 2,753 photographs.

Creating charts and analytical views in GIS: After the visit to the terrain, analyzes were carried out on the valorisation of rural landscapes through the development of characterization and characterization of rural areas, analysis of spatial structures and landscape elements (constituents), spatial organization and composition of samples of the built and undeveloped landscape of the Neretva valley. The aforementioned analyzes were made in GIS and presented on the charts.

Creating a catalogue of rural settlements / hamlets / groupings: After the field visit, a database was created for all hamlets in MS Access. A total of 203 hamlets were analyzed. The database is linked to the graphical database in GIS. All hamlets were cataloged through the analysis of settlements, spatial structures, spatial organization, images of settlements, identification of connections between the landscape and its constituents, and identification of historical and existing networks of settlement systems within the landscape and its wider area. Spatial resources and conflicts in space have been identified.

An analytical (catalog) card was created for each analyzed hamlet with the following data:

- name and catalog number,
- data on administrative area, statistical settlement and cadastral municipality,
- analysis of the occurrence of settlements / toponyms on historical and contemporary maps,

- analysis of the spatial planning documentation, the spatial plan in force, a more detailed plan and the obligation to develop more detailed plans; the land use of areas in the spatial plan and the size of the settlement (if determined by the spatial plan),
- data on protected areas of nature, cultural heritage and protected environment (ecological networks)
- the location of the settlement in relation to the typological classification of the landscape,
- the location of the settlement in relation to the classification of the cultural landscapes,
- analysis of spatial structures and spatial organization of settlements: size, number of floors, indicative dating, originality of historical structures, prevailing forms and materials of roofs, structure of settlement pattern, general construction status, access road, basic infrastructure,
- typological definition in relation to accommodation in space (catalogue of rural landscapes) - spatial-functional links,
- a description was made for each settlement with relevant historical data and identification of resources and conflicts in the area,

The graphic part of the catalog for each analyzed hamlet shows an excerpt from:

- 19th century historical cadastral maps (source: www.arcanum.eu) in scale 1: 5,000
- Historical topographic maps (Second Military Survey of the Habsburg Monarchy 1851-1854, Source: www.arcanum.eu) at scale 1: 25,000
- Orthophoto maps (2017, source: State Geodetic Administration) at scale 1: 5,000
- Croatian Basic Maps (HOK) at a scale of 1: 5,000
- excerpt from the plan of use of the area of the spatial plan of the city / municipality at the scale of 1: 25.000
- Photo documentation (photographs taken during a field trip in May and June 2019)

Due to the fact that demographic data are available only at the level of the statistical settlement and not at the level of individual hamlets, demographic data are processed at the level of individual statistical settlements.

Based on the detailed analysis, guidelines are created that include elaborated data on rural settlements of the Neretva River Delta: a detailed analysis and catalog of landscapes,

villages, hamlets and buildings; valorisation, architectural recordings, reviews and analyzes, and planning guidelines for the revitalization of particular areas and structures.

The architectural survey of the village of Vidonje was made as part of the second phase of project work. After a field visit and valorisation of the settlement, one settlement was selected for the pilot area - the village of Vidonje in the Municipality of Zazablje.

The reasons for choosing the village of Vidonje were:

- relatively preserved structure of rural settlements,
- interesting relation to the landscape and small fertile karst soil,
- the settlement was largely abandoned during the 20th century, thus following the typical pattern of settlements in the hilly landscape of the Neretva Delta, in which the settlements of the hilly parts were losing residents who moved to settlements on the edge of the fertile valley and to larger centers in the Neretva valley,
- the settlement is relatively large, it was the seat of the parish, has two churches, one chapel in the settlement and an abandoned old building of the former school,
- the settlement is easily accessible, there is a paved road,
- although most of the houses are used only occasionally, it was possible to arrange the arrival of most owners / users to allow architectural surveying of the interior of the buildings.

Geodetic survey of the settlement of Vidonje was done by the local surveying office.

The architectural survey workshop was organized in Mlinište and Vidonje on July 12, 2019. The geodetic survey shows 70 buildings, but some of them are ruins that are only shown in the geodetic survey and are not detailed architecturally.

Architectural survey: In total, 41 buildings of Vidonje were architecturally recorded. After the architectural recording was done and the architectural recording workshop was held, technical designs of the architectural recording were made in the scale of 1: 100. In addition to the architectural footage, photographic documentation is shown for each building.

Interior shots were made for buildings that could be accessed (owners who were present at an architectural survey workshop). A total of 8 interiors of the buildings were taken.

Workshops: A total of 3 workshops (plus additional workshop for architectural surveying) were organized. The workshops' aim was to raise raising awareness about values of traditional architecture and the need for quality restoration in the spirit of tradition with local people. Problems associated with revitalization were also discussed, and local good practices were presented.

2.5. Proposals of solutions

The guidelines for the integral protection of rural landscapes and the sustainable development of tourism in the Neretva Delta contain planning and architectural guidelines for the revitalization of rural settlements of the Neretva valley area. The guidelines contain a description of the rural landscapes of the Neretva valley, historical and spatial contexts, description of spatial organization and basic demographic indicators. Space is broken down according to its functional and spatial characteristics. The basic characteristics of traditional settlements (relation to landscape, relation to fertile soil, typologies of construction, relations of buildings, system of open spaces) are stated. The basic features of a traditional house (freestanding / assemblies, floors, layout, construction materials etc.) and the basic elements of a traditional house (walls, roofs and roofs, chimneys, windows and doors, exterior spaces, porches, wells, gourds, decorations, interior organization etc. are analyzed in detail).

Guidelines for the restoration of traditional architecture are given. The most common mistakes to be avoided are given and the positive examples of successful renovation and new construction in historic rural settings are cited. The planning-legislative framework, the implementation of spatial plans, the permitting procedure is analyzed. The guidelines contain detailed planning directives for the spatial plans of the towns and municipalities of the Neretva valley.

Planning conditions are proposed that take into account not only the architectural design of the newly planned construction, but also the typology of the settlement and the relationship of the settlement to its natural or cultivated environment. The settlement and its environment constitute a morphological and functional entity that must be understood in order to intervene and preserve or enhance its values. Considering the specific cultural and historical heritage, settlements are grouped considering the construction of new residential and commercial

buildings or the reconstruction of existing residential and commercial buildings in terms of maintenance, rehabilitation, reconstruction and conversion. Traditionally constructed residential and commercial complexes are retained in the space with the possibility of reconstruction, which retains the historical rural settlement matrix, historical parceling and historical communications with the possibility of constructing contemporary ancillary facilities (smaller swimming pools, covered terraces, fireplaces, toilets, etc.).

In settlements that do not have the authentic identity of the traditional rural settlement, new constructions are allowed along with architectural guidelines for the design of new constructions. The architectural design should be adapted to the locality - contemporary explications of the regional or the use of contemporary architectural expression are possible. If the starting point of design is traditional architecture, contemporary realization must not be reduced to a literal copy of historical forms. Contemporary architectural expression must also take into account the context in which it arises, and particular attention must be paid to fitting in the landscape specificities of the subject area.

Chapter 3 – Replicable tools and methods

In the Dubrovnik-Neretva County there are a large number of traditional rural settlements and hamlets that are valuable as elements of local identity. Many of them are uninhabited or only partly inhabited. They have local cultural value, but are not protected as cultural heritage – therefore spatial planning documents are the only tool for their preservation and avoidance of spatial conflicts.

The development of tourism in rural areas can enable the reconstruction of abandoned settlements and the re-evaluation of the valuable cultural heritage of rural areas. Furthermore, it can contribute to disperse the pressure for new construction (related to tourism) that is evident in coastal settlements.

Guidelines for integral protection of rural landscapes and sustainable tourism development of the Neretva river can serve as a pilot project for creating the planning and architectural guidelines for construction in traditional rural settlements in other areas of the Dubrovnik-Neretva county as well as in other areas of Croatia.

The methodology that was used in this project – from detailed field studies to the use of state-of-the art technology (Access database, GIS systems) can be further used in similar projects. The GIS system can be implemented in online services that could be interesting to a range of users – from tourist associations to spatial planning offices.

Chapter 4 – Actual replication/transfer

4.1. Replication at the local level

During the last week of October, 2 Coordination boards in organization of Regional agency DUNE will be held. Coordination boards are aimed to representatives of 3 cities and 4 municipalities from Neretva valley in order to familiarize them with “Guidelines for integral protection of rural landscapes and sustainable development of the Neretva valley”.

The Guidelines contain detailed planning directives for the spatial plans of the towns and municipalities of the Neretva valley. During the coordination boards, Memorandum of Understanding will be sign with representatives of cities and municipalities of Neretva valley with the aim of making the guidelines part of the spatial plans of towns of Metkovic, Opuzen and Ploče and municipalities of Kula Norinska, Slivno, Zadržlje and Pojezerje.

4.2. Replication at the regional level in a transboundary context

On 21st of October Public Institution RERA will organize conference “Coastal zone management in Adriatic Croatia” within the “Coordination board” requested by application form.

Guidelines for integral protection of rural landscapes and sustainable tourism development of the Neretva river will be presented to representatives of 4 Adriatic Counties as follows: Primorje Gorski Kotar County, Šibenik Knin County, Zadar County and Split-Dalmatia County.

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