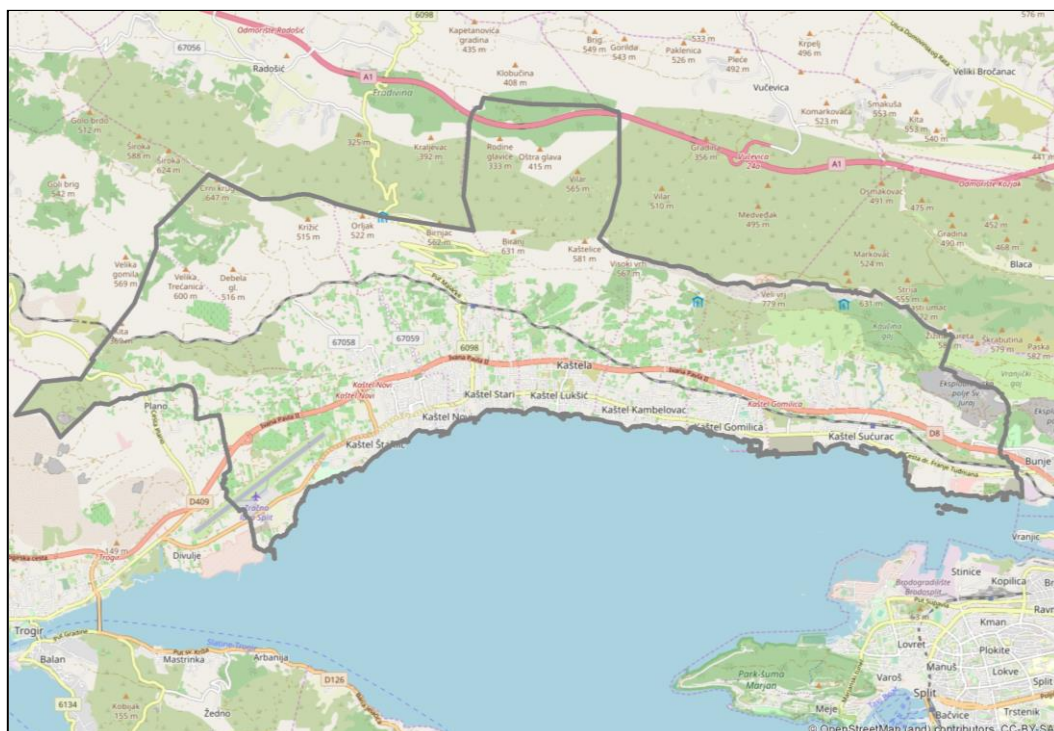


## CO-EVOLVE

Promoting the co-evolution of human activities and natural systems for the development of sustainable coastal and maritime tourism

# Deliverable 4.8.1

## Report on ICZM-MSP of Pilot Area 6 Kaštela bay



### Activity 4.8

### Pilot action 6– Kaštela bay

### JU RERA SD

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## 1. Scope of the document

This document is the report on advancement on pilot action implementation in Pilot 6 Kaštela bay and corresponds to Deliverable 4.8.1. It's based on concept described in the deliverable 3.18.1 "Guidelines for Tourism-driven strategic Planning" and contains the advancement of activities foreseen in the pilot area Kaštela bay for the final formulation of local Action Plans on sustainable tourism

## 2. CO-EVOLVE and the objectives of WP4

The WP4 (*M2-Testing*) translates in practice the findings of WP3 in order to implement Pilot Actions (plans, concrete actions and measures), setting the conditions for a sustainable tourism in coastal areas and related maritime space and promoting robust and transparent decision-making processes. CO-EVOLVE recognizes as a key challenge for sustainable coastal and maritime tourism development the strengthening of cooperation among Regions and the joint development and transferring of approaches, tools, guidelines and best practices. The actions envisaged are systemic, ecosystem-based and dynamic, taking into account future scenarios of natural (i.e. climate change) and anthropogenic changes. The Pilot Actions embrace a wide range of case in the Med area, from coastal urbanized or exploited areas (including port areas, structured waterfronts, different kind of beaches with tourism facilities, etc.) to natural protected areas (Natura 200, Ramsar, SIC&ZPS, etc). Fields of intervention are the **integrated planning of coast-maritime space, governance and management of conflicts between different uses, recovery and valorization of natural areas, developing of integrated tourist offers and deseasonalization of tourist fluxes.**

WP4 has two main specific objectives:

- **Define and test training tools for implementing sustainable tourism** and for sensitizing local administrators / tourism operators. (Output 4.1);
- **Formulate local Action Plans and implement actions for sustainable tourism** in the Pilot Areas, with the participation of main stakeholders and local coastal communities (Output 4.2);

WP4' results and practice experiences on the field, constitute the basis of good practices contribution to the "Transferability Plans" at pilot areas and regional scale (WP5).

WP4 starts on month 02-2018 and end on month 05-2019 **and represents the Module 2 "Testing" of CO-EVOLVE, according to the modular structure of Interreg MED projects.**

## 3. The strategic planning of Pilot area

The strategic planning process guides development in the direction of those strategic priorities identified by all stakeholders through a consultative process. In particular, on coastal area, a tourism-driven strategic plan for sustainable development of coastal areas have to integrate main principles and goals provided by the Integrated Coastal Zone Management recommendations (UNEP/MAP/PAPRAC Guidelines for ICMZ, 2012) and the Sustainable Coastal tourism approach guidelines (UNEP, 2009).

The methodology proposed by deliverable 3.18.1 for a definition a strategic planning tourism based on a pilot area 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 figure below.





## 4. Brief description of the Pilot area

The Kastela Bay (Croatia) is located in the central part of the Eastern Adriatic Coast, near the city of Split. The area of the bay covers 57 km<sup>2</sup>. Geographical position and broad openness to the sea determines belonging the area of the town of Kaštela on the Mediterranean climate of the Adriatic type, with the characteristics of hot and dry summers and mild and green winters and a large number of sunny hours and windy days. The city is developing longitudinally along the coast of Kaštela bay and an obstacle to the city's prosperity towards the slopes of Kozjak is a State road, which is always the crossroads the city on the coastal part and the area over the State road. Main comparative advantage of the City of Kaštela in relation to other competition destinations in Dalmatia and beyond, in terms of tourism development and increase of tourist traffic, is certainly a geographical position. Namely, the Kaštela area is situated between Split and Trogir, two cities with an exceptional and world-renowned cultural heritage protected under UNESCO, and this certainly has a significant impact on the growing incidence of guests in Kaštela. Another very important factor deriving from a traffic-geographical position is the Split airport, which is growing year-on-year and is currently the second airport in Croatia according to number of passengers.



## 5. Planning SET-UP in the pilot area

The main aim of this phase, 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.

*Please report here all the preparatory work you've done for your pilot area putting in evidence:*

- *the definition of the working team*

The project team consists of members, and one of the members is nominated as the Team Leader. Project team members cover disciplines defined by the project task, namely: coastal engineering, tourism, spatial planning, oceanography/climate change, cultural heritage, biology/ecology, geoinformatics and participative approach.

- *the definition of the territorial scope*

Territorial scope is City of Kaštela, although wider context was elaborated in case of impacts on the studied topics.

- *the process that lead you to the identification of stakeholders and the methodology foreseen for the participatory process (please refer to the 1<sup>st</sup> training course)*

The stakeholders are divided into "primary" and "secondary" depending on the nature of their involvement in the initiative. Primary stakeholders are the ones that the initiative directly affects either positive or negative. The primary stakeholders participating in the drafting of the Plan are divided into those who carry out economic activities in the area of Kastela (companies and crafts) and the population. Secondary stakeholders are those "intermediary roles" like other organizations in the same or related area, policy makers, local government and local experts or employees working in the public sector and have managerial competencies. Initially, 60 stakeholders were identified and additional 20 were identified during the drafting of the Plan. The four workshops were organized during drafting the Plan to gather additional information and set a future vision of development together with stakeholders. Workshops are documented with reports (Deliverable 2).

- *construction of the work plan and definition of milestones*

According to the guidelines outlined in the "Methodological Framework for Integral Planning"<sup>6</sup>, the elaboration of the Coastal Plan included the following phases / milestones and related documents:

Phase 1: Project Establishment (output documents: Working Plan, Stakeholder Analysis and Communication Strategy; meetings: Project kick off meeting)

Phase 2: Analysis (output documents: Diagnostic analysis; meetings: The first Project Team meeting on the Diagnostic Analysis)

Phase 3: Setting the vision (output documents: Draft of the Coastal Plan; meetings: The second Project Team meeting on draft of the Coastal Plan)

Phase 4: Presentation and adoption of the Coastal Plan (output documents: The Coastal Plan (Deliverable 1); meeting: Final Conference - presentation of the Coastal Plan).

## 6. Definition of project team

The project team consisted of the following members:

- Srećko Radnić (JU RERA)
- Mili Novak (JU RERA)
- Jure Margeta (Faculty of Civil Engineering, Architecture and Geodesy, Split), expert leader
- Martina Baučić (Faculty of Civil Engineering, Architecture and Geodesy, Split), coordination
- Ana Grgić (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Hrvoje Bartulović (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Nikola Popić (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Katja Marasović (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Nikša Jajac (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Katarina Rogulj (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Lidija Petrić (Faculty of economy, Split)
- Ante Mandić (Faculty of economy, Split)
- Ivica Vilibić (Institute of Oceanography and Fisheries Split)
- Zrinka Jakl (SUNCE Association)
- Majda Ivić (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Nataša Jovanović (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Samanta Bačić (Faculty of Civil Engineering, Architecture and Geodesy, Split)
- Boris Škara (City of Kaštela)
- Marija Pelivan (City of Kaštela)
- Ivana Ugrina (City of Kaštela)

## 7. Participatory process

ICZM is characterized by participatory approach. It should be launched at the establishment stage in order to involve public from the very beginning of the process. This usually has twofold benefits: it will secure capturing of the local knowledge on the one hand, and it will influence the level of ownership of the plan which will be reached during the preparatory process. Both achievements are of key importance for the successful implementation of the plan latter on. Therefore, it is necessary to analyze and define local stakeholders during the project establishment phase and to develop a communication strategy.

The stakeholders are divided into "primary" and "secondary" depending on the nature of their involvement in the initiative. Primary stakeholders are the ones that the initiative directly affects either positive or negative and are divided into those who carry out economic activities in the area of Kastela (companies and crafts) and the population. Secondary stakeholders are those "intermediary roles" like policy makers, local and regional government and local experts, all managing the area. All together, 80 stakeholders were identified and invited to participate in drafting the Plan.

The four workshops are organized to gather additional information and set a future vision of development together with stakeholders. Workshops are documented with reports (Deliverable 2).

Activities included the following:

No.	Activity	Date	Description
1	Meeting with the representatives of the City of Kaštela	24. Sep. 2018.	Short description of the project and definition of the city representatives to be involved in the drafting the Plan
2	Public presentation of the project	24. Sep. 2018.	<b>Presentation of the project and project team</b> to the public and media (presented by the Martina Baučić and Srećko Radnić)
3	First Workshop	12. Oct. 2018.	Topic: <b>Climate changes impacts and natural environment</b> (presented by the experts Ivica Vilibić and Zrinka Jakl) Discussion with the stakeholders
4	Second Workshop	26. Nov. 2018.	Topic: <b>Flooding of the coast and possible measures of protection with special reference to the architectural heritage of the City of Kaštela</b> (presented by the experts Jure Margeta and Katja Marasović) Discussion with the stakeholders
5	Conference: Adaptation on climate changes in coastal zone	22. Jan. 2019.	<b>Kaštela Coastal Zone Management Plan</b> (presented by the expert Jure Margeta) Discussion with the stakeholders
6	Third workshop	8. Feb. 2019	Topic: <b>The prospects for sustainable tourism development in the City of Kaštela</b> (presented by the expert Lidija Petrić) Discussion with the stakeholders
7	Fourth workshop	17. May 2019.	Topic: <b>Spatial planning and development of the City of Kaštela and a GIS analysis of vulnerability to coastal flooding</b> (presented by the experts Ana Grgić, Hrvoje Bartulović, Martina Baučić, Nataša Jovanović, Majda Ivić) Presentation of the student involvement in the Project (Samanta Bačić) Discussion with the stakeholders
8	Presentation of the draft Plan	29. May 2019.	<b>Draft plan</b> presented by the experts Martina Baučić, Jure Margeta, Lidija Petrić, Ana Grgić and Hrvoje Bartulović Discussion with the stakeholders
9	Presentation of the final Plan	to be defined	to be defined

All workshops are documented including the **Record of Discussion** and **Filled questionnaires**. The public was informed about the project activities via various media: from local to national level including newspapers, radio, TV and internet portals.





Panel discussion at the Presentation of the draft Plan



Front page of the national newspaper Slobodna Dalmacija

Author	Deliverable	Status	Date of Delivery
RER	4.1.1	final	26/02/2018

Key issues identified at workshops by the stakeholders are summarized as follows:

- insufficient infrastructure for population and for tourism: transport, water and sewage, rainfall drainage, waste collection;
- lack of public areas, parking lots;
- poor quality of life in historical centres:
- part of the most valuable heritage buildings is in ruinous condition;
- unplanned development of tourism, tourism as monoculture;
- undefined border of the maritime domain;
- intensive urbanization - degradation of the natural environment, reduction of green areas in the built parts;
- flooding from the sea and the torrent streams;
- beach and coast erosion;
- the more complex processes that citizens, entrepreneurs and managers need to carry out to manage the area.

## 8. ICZM-MSP Plan for Pilot Area Kaštela bay

The ICZM-MSP Plan of Pilot Area Kaštela bay consist of a textual and cartographic part with an accompanying GIS database. Textual part has four main chapters:

- Introduction;
- Summary of Diagnostic Analysis (focus on Identified key issues);
- Vision and scenarios of development;
- Policies and Management Measures/Actions.

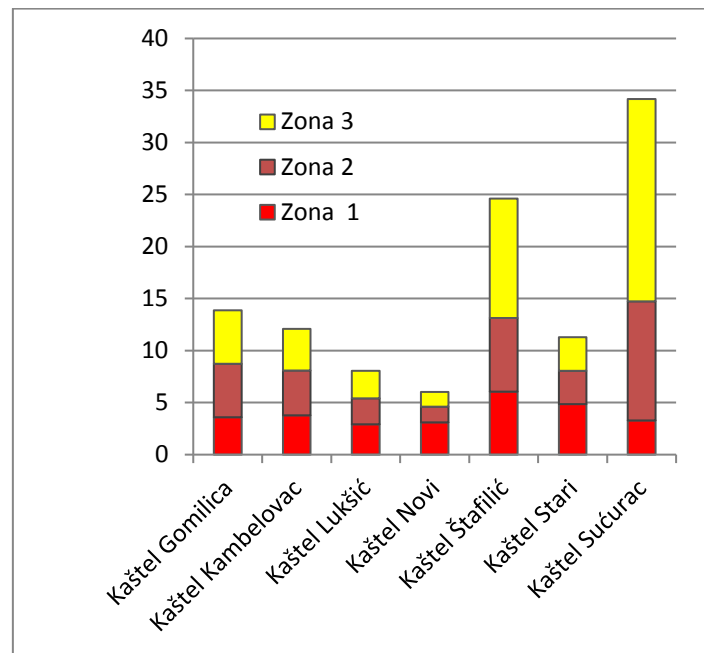
Experts have undertaken the comprehensive Diagnostic analysis taking into account the key findings by the stakeholders . Summarized findings by the topics follow. Brief description of the visions, goals, priorities and measures is given at the end of the chapter. Detailed elaboration on the level of particular actions is given in the Plan.

### Climate Changes

The main identified impacts on the pilot area are: flooding from the sea and the rainwater, erosion of the coast, droughts, fires, hot waves, changes in the natural environment and impact on agriculture. GIS analysis of vulnerability to coastal flooding has shown that 28 ha is up to 1 m above sea level and already exposed to sea flooding (shown in red color on the picture below), 35 ha is in zone from 1 to 2 m (orange color), and 4 ha in zone from 2 to 3 m above sea level (yellow color).



Coastal heights above sea level:  
Zone 1 (0-1m) in red color, Zone 2 (1-2) in orange, Zone 3 (2-3) in yellow



Zones 1, 2 and 3 in hectares of the seven settlements

Zone 1, already exposed to sea flooding, is the area of historic centers and densely populated, also an important tourism resource with sea sidewalks, beaches and parks. GIS analysis has found that in Zone 1 lays 7,5 km of roads with utility lines, 12 ha of protected cultural heritage areas, 5 ha is under buildings, and there are 613 housing units.



Buildings footprints (light blue) and housing units (dots) in Zone 1, Zone 2 and Zone 3 (yellow)



### Natural environment

The main issues regarding the natural environment include: pollution (air, water, soil), closed gulf highly vulnerable to sea pollution, degradation of habitats and landscapes and endangering biodiversity.



### Water infrastructure and waste disposal

Growth of population in recent past and today growth of tourists is putting high demands on all the infrastructure. Regarding water infrastructure, situation is the following:

- uneven water consumption (peak load in summer);
- incomplete and unfinished drainage systems;
- no wastewater treatment;
- undeveloped rainwater drainage system;
- flood threats;
- damage to coastal water infrastructure from sea flooding.



**Waste disposal** is facing the following problems:

- disposal at landfill Karepovac (having no proper waste management);
- low level of separation of waste;
- there is no complete waste management system in accordance with regulations (separation, recycling yard, etc ...);
- annual quantities of waste are constantly growing (peak in summer).

### Cultural heritage

Programme cofinanced by the  
European Regional Development Fund

Author	Deliverable	Status	Date of Delivery
RER	4.1.1	final	26/02/2018

The most valuable objects are endangered by flooding of the sea and rain waters (located along the coast). The lowest historical buildings are:

- Kaštel Cippico: 35 cm above sea level;
- Kastilac Gomilica: 60 cm above sea level;
- southern part of Kaštel Sućurca: 60 cm above sea level.

Area of 12 ha or 22% of A and B historical zones are located at altitude up to 1 m and are already under the threat. Additionally, the state of the buildings in the historical centers is in bad condition. Field survey and GIS analysis has shown that there are 67 houses or 9% in ruin condition in historical zones A.

Settlement	Number of abandoned houses	Number of temporarily inhabited houses	Number of permanently inhabited houses	Total
Kaštel Štafilić	14	15	84	113
Kaštel Gomilica	2	16	40	58
Kaštel Kambelovac	19	31	82	132
Kaštel Lukšić	14	24	102	140
Kaštel Novi	21	11	56	88
Kaštel Stari	23	25	83	131
Kaštel Sućurac	21	21	74	116
<b>Total</b>	<b>114</b>	<b>143</b>	<b>521</b>	<b>778</b>
<b>Percentage</b>	<b>14,65%</b>	<b>18,38%</b>	<b>66,97%</b>	<b>100,00%</b>

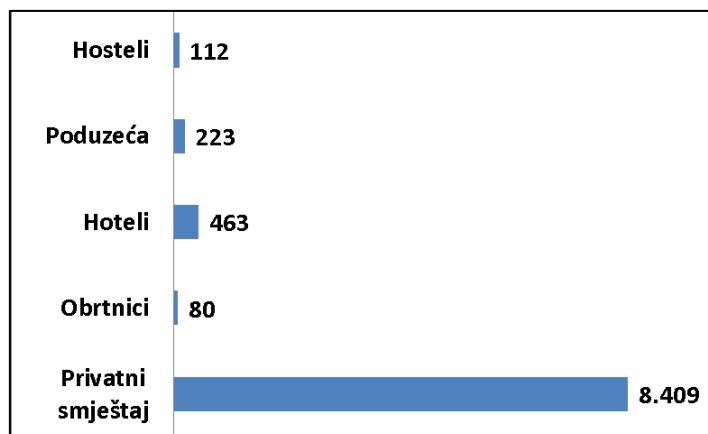
Number of houses in zones A by settlements and their usage

### Tourism

Today, there is an exponential growth of tourism in the area. The main identified problems are:

- the imbalance between capacity and volume of demand;
- excessive use and resource contamination;
- unauthorized and / or uncontrolled activities of various stakeholders in tourism;
- expressed seasonality;
- too much orientation to private accommodation in the structure of accommodation offer.





Number of accommodation units by type in the City of Kaštela (Hosteli eng. Hostels, Poduzeća eng. Companies, Hoteli eng. Hotels, Obrtnici eng. Crafts, Privatni smještaj eng. Private accommodation)

### Vision and goals

The built vision during drafting the Plan is the following.

City of Kaštela aims to:

- sustainable development;
- the quality of life of the inhabitants;
- social responsibility of all stakeholders;
- preserving the natural environment and cultural heritage;
- strengthening resistance to climate and other challenges from the wider environment.

Following that vision, the three main goals are:

- 1) **Implementation of an integral approach to managing the coastal area of Kaštela in the context of climate change;**
- 2) **Preservation and improvement of the state of the natural and the built environment;**
- 3) **Development of sustainable tourism tailored to the specifics of coastal historic cities.**

### Strategies/priorities and actions

**Goal 1: Implementation of an integral approach to managing the coastal area of Kaštela in the context of climate change**

**PRIORITY 1.1.** Development of a management structure for the implementation of the integral approach to managing the coastal area of SDŽ

Measure 1.1.1. Establish a Coordination Board for Integrated Coastal and Marine Management of the SDI

Measure 1.1.2. Determine the boundaries of the maritime domain

Measure 1.1.3. Implement the monitoring system in the coastal area

**PRIORITY 1.2.** Strengthening resistance to climate change

Measure 1.2.1. Strengthen coastal and infrastructure resilience to climate change

Measure 1.2.2. Introduce innovative tools for managing the coastal area of Kaštela Bay and SDŽ in conditions of climate variability and change

Measure 1.2.3. Establish an Early Warning System for Coastal Area

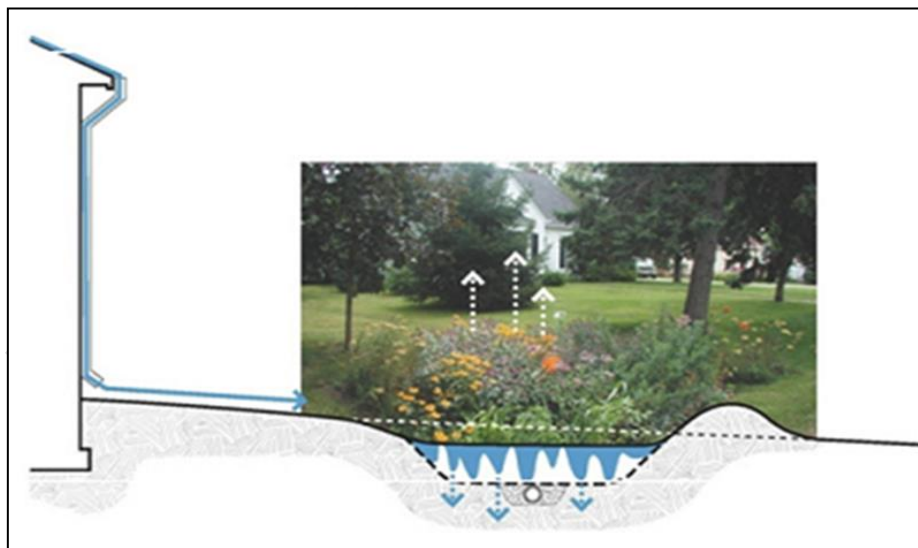
Measure 1.2.4. Strengthen resistance and manage the risks of flood, drought and fire

Measure 1.2.5. Strengthen awareness of sustainable coastal development and the need to adapt to climate change

Measure 1.2.6. Strengthen the resilience of the coastal economy



“Green” solutions for the cities



“Green” solutions for the cities

## Goal 2: Preservation and improvement of the state of the natural and the built environment

### PRIORITY 2.1. Preservation and improvement of the state of the natural environment and landscape values

Measure 2.1.1. Protect the sea, water, air and soil from pollution

Measure 2.1.2. Preserve the landscape value of the coastal area

Measure 2.1.3. Preserve indigenous and traditional agricultural cultures

### PRIORITY 2.2. Preservation and improvement of the state of the built environment

Measure 2.2.1. Improve transport infrastructure

Measure 2.2.2 Improve water infrastructure

Measure 2.2.3 Protect and restore architectural heritage

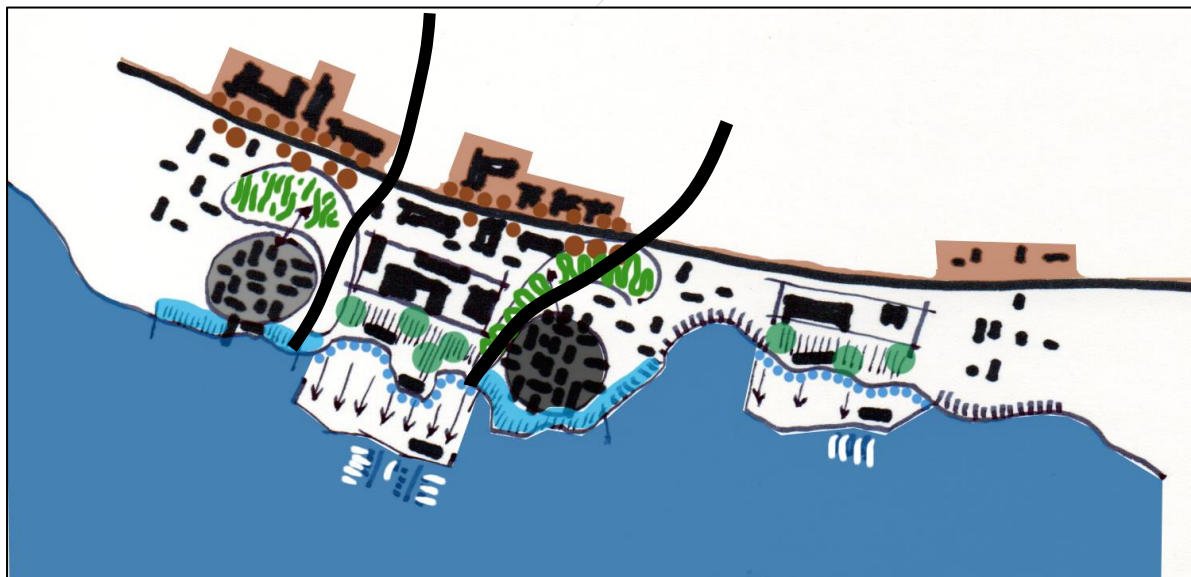
Measure 2.2.4 Improve the quality of the built environment

### PRIORITY 2.3. Improving the quality of using the land

Measure 2.3.1. Reduce land take

Measure 2.3.2. Promote Sustainable Construction

Measure 2.3.3. Improve the quality of life in historical centers



The concept of the coastal area land use (the most valued area)

The concept for the land use planning of the coastal area should satisfy the following:

- resistance to flooding;
- conservation of the cultural landscape - the coastline and the historical nucleus (protection measures without coastal land fill, protective greenery);

- preservation of nature (limited and controlled land filling of the sea, revitalization of the streams);
- new areas for development (areas created by coastal land filling);
- principles of green infrastructure (greenery, streams);
- principles of green construction (areas of new urbanity).

**Goal 3: Development of sustainable tourism tailored to the specifics of coastal historic cities**

**PRIORITY 3.1.** Preservation of balance between the supporting capacity of the destination and the volume of demand

Measure 3.1.1. Develop appropriate documentation for the development of sustainable tourism

Measure 3.1.2. Encourage responsible action of all stakeholders in tourism

**PRIORITY 3.2.** Development of sustainable / year-round tourism based on high-value natural and cultural resources

Measure 3.2.1. Implement marketing approach to the development of cultural tourism

Measure 3.2.2. Improve physical and market accessibility of localities and attractions