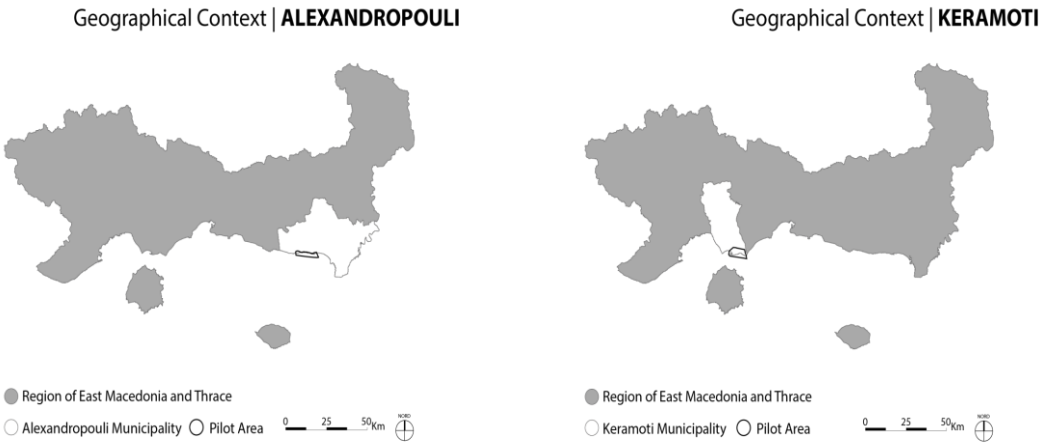
Project co-financed by the European Regional Development Fund

CO-EVOLVE

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

Deliverable 4.3.2

Report on advancement of Pilot actions implementation



Activity 4.3

Pilot action for the sustainable development of pilot area 1-A: Alexandroupoli-Makri and pilot area 1-B: Keramoti-Thassos (REMTH, Greece)

REGION OF EAST MACEDONIA AND THRACE

Table of contents

1. Scope of the document

This document is the report on advancement on pilot actions implementation and corresponds to Deliverable 4.3.2. It is based on the 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 No. 1-A Alexandroupolis - Makri and No. 1-B Keramoti – Thassos, for the final formulation of local Action Plans on sustainable tourism. The document is structured based on a common template/ protocol that will facilitate the joint presentation of the progress of WP 4 activities by the Work Package and activity leader and includes a joint presentation of the advancement of the WP4 activities from the beginning of WP4 (including the information included in the 1st advancement report). The document also addresses the development and presentation of the participatory process approach which is considered a cornerstone in the selection, development and implementation of the local action plan and the maturation of pilot actions.

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 2000, 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

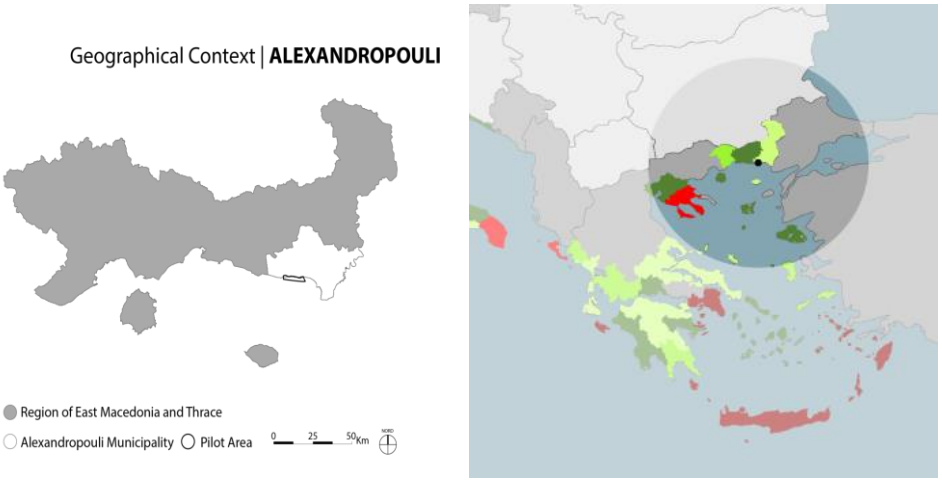
The strategic planning process guides development in the direction of those strategic priorities identified by all stakeholders through a consultative process. In particular, on coastal area, a tourism-driven strategic plan for sustainable development of coastal areas have to integrate main principles 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 incoastal areas is reported in figure below.

4. Brief description of the Pilot area

Pilot Area – 1.A – Alexandroupolis-Makri

Alexandroupolis/Makri is an urban and suburban coastal area with a port next to a Natura 2000 protected area.



Picture 1. Territorial coverage of Pilot Area 1.A.

Makri

Makri is a coastal settlement of the municipality of Alexandroupolis in the regional unit of Evros. It is the basis of the local community of Makri and is considered one of the largest settlements of Alexandroupolis with a population of approximately 800 inhabitants and it is situated 12 kilometers west of the center of Alexandroupolis while the access to Makri is achieved via a junction on Egnatia Odos. Makri is known for the ancient "Eleonas of Makri" and the main occupation of its inhabitants is traditionally agriculture though in the last decades tourism is considered an emerging economical sector.

The area of Makri has been inhabited since the Neolithic period and in the village there are remnants of walls and other buildings of the Byzantine period. The main attractions of Makri are the prehistoric tuba and the so-called Cyclopa cave, where remains of Neolithic settlements and Byzantine fortifications have been found. Other places of interest are the hill of Prophet Elias where there are ruins of other fortifications, the church of Agia Anastasia dating back to the beginning of the 19th century and allegedly built on the site of an older temple, the remnants of a three-aisled basilica at the site of which a mosque and another 12th-century church were built at Episkopio, the surviving Ottoman baths and the old commercial station.

Makri is an emerging coastal tourism destination in the summer months with a heavy secondary housing construction status.

Alexandroupolis

Alexandroupolis is the capital of the Evros regional unit in East Macedonia and Thrace. It is situated approximately 14.5 km west of the delta of the river Evros, 40 km from the border with Turkey, 350 km from Thessaloniki and 800 km from Athens (Greece's capital city). Small fishing villages like **Makri** and Dikella are situated to the west, and suburban villages such as Maistros, Apalos, Antheia, Aristino, Nipsa, Loutra are situated to the east. In the north part of the city are Palagia, Avantas, Aissymi and Kirkas. The current metropolitan population is estimated at around 70,000 inhabitants, and its area covers the southern portion of the regional unit, running from the Rhodope regional unit to the Evros Delta. The current status of the municipality of Alexandroupolis was created in 2011 by merging 3 former municipalities, that are now considered municipal units; namely Alexandroupolis, Feres and Traianoupolis. The territorial coverage of the municipality is 1,216.954 km^2, while the territorial coverage of the municipal unit is 642.245 km^2.

The municipal unit Alexandroupolis is further divided into the communities of Alexandroupoli, Aisymi, Avas, Kirki, **Makri** and Sykorrachi.

Alexandroupolis is considered one of the most important cities of Evros with a strategic position; it has a commercial port as well as upgraded and multi-modal logistics options being at the centre of land and sea routes between Greece, Bulgaria and Turkey.

Alexandroupolis is a rather new city, located at the site of ancient Sale a Greek city of the classical era founded by colonists from the island of Samothrace. Sights and landmarks of Alexandroupolis include the city's lighthouse in the port, the archaeological sites of the Mesimvria Zone and Maroneia stretching out to the small port of Agios Charalambos, the city's waterfront (the centre of commercial activity), and the nearby Evros Delta.

Representative climate data of the area are presented in table 1 below.

Table 1. Climate data for the municapility of Alexandroupolis

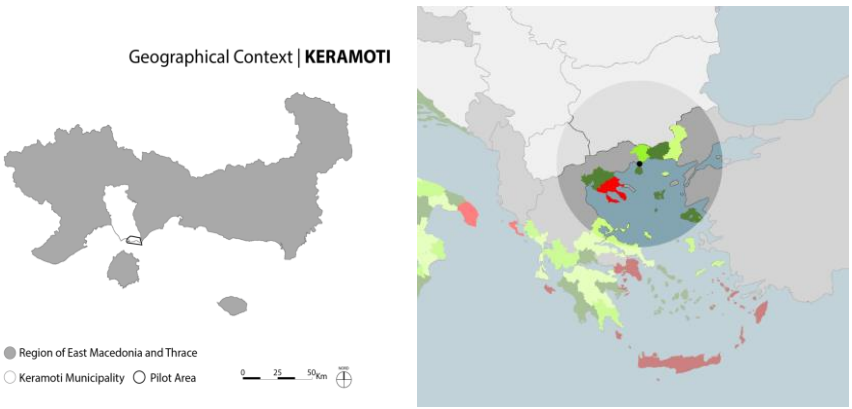
Climate data for Alexandroupolis													
Month	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Year**
Record high °C	17.8	21.4	23.4	27.0	32.0	36.8	39.0	37.4	36.8	32.6	23.8	23.2	39.0
Average high °C	8.4	9.6	12.3	17.3	22.4	27.1	30.1	30.2	26.4	20.2	15.1	10.7	19.1
Daily mean °C	4.8	5.8	8.5	13.2	18.3	23.0	25.6	25.2	21.0	15.5	11.0	7.0	14.9
Average low °C	1.1	1.9	3.7	7.1	11.1	14.8	17.4	17.2	14.0	10.1	6.7	3.3	9.0
Record low °C	−13.2	−14	−13.6	−2	1.0	7.0	9.0	8.4	0.0	−2	−6.2	−8.8	−14
Average precipitation mm	60.4	61.2	52.3	39.6	36.3	27.3	17.6	10.6	31.0	50.5	75.7	86.8	549.3
Average precipitation days (≥ 1.0 mm)	6.8	6.1	5.8	5.5	5.1	3.4	2.5	1.5	2.7	4.6	6.6	8.2	53.8
Average relative humidity (%)	74.9	73.6	73.0	71.3	68.6	60.6	54.4	53.3	59.7	67.6	75.2	76.7	67.4

Alexandroupolis is considered a commercial and logistics hub in north Greece as it is served by Dimokritos International Airport and the port of Alexandroupolis which has been used principally for touristic purposes, mainly to the island of Samothraki and, in some cases, for weekly Trans-Aegean services to most of the eastern islands of the Aegean.

Further, the city has the train station of Alexandroupoli and Alexandroupoli Port which serve destinations i.e. to Thessaloniki and Dikaia. A wide network of train and bus services throughout the region is developed while there were (or in the future will be) railway connections to Bulgaria and Turkey. The bus network is wide having routes all over Greece as well as Bulgaria and Turkey.

Pilot Area – 1.B – Keramoti-Thassos

Keramoti/Thassos is a suburban coastal area inside a Natura 2000 protected area and an island destination with significant tourism and coastal activities. The overview of the pilot area is presented in picture 2 below.



Picture 2. Territorial coverage of Pilot Area 1.A.

Keramoti

Keramoti is a town and a former municipality of the Kavala regional unit, East Macedonia and Thrace. In 2011 after the local governmental/ territorial reform it is practically part, and a municipal unit, of the **municipality of Nestos.** The municipal unit of Keramoti has a territorial coverage of 115.095 km^2 and as of the 2011 census it has a population of 5,115 inhabitants while the town of Keramoti has a population of 1,438. Keramoti is structured at an altitude of 10 meters, situated 42 kilometers from Kavala and across **Thassos** island. It is located on a small peninsula which forms a natural harbor near the estuary of Nestos,. It was initially a small fisherman's village, though currently it is an emerging touristic resort with heavy infrastructure developments including hotels and rented apartments.

Keramoti has a sea freight and passenger port with ferry connections to Thassos. The harbor is up to 7.5 meters deep and functions as a fishing shelter as well.

The village of Keramoti is “inside” the Natura 2000 protected area and the port of Thasos is “surrounded” by another Natura 2000 protected area. Keramoti is one the two ports connecting the island of Thasos to the mainland (the other is Kavala). The island of Thasos is a tourist destination known for its “wild character”: rich forest near the sea, combining “sea and sand” and “summer mountain” activities.

Thassos

The island of Thassos is located in northern Greece, across the coasts of Eastern Macedonia and it is administratively governed by the region of Eastern Macedonia and Thrace. The length of Thassos coasts is 115 km and its territorial coverage is 378.84 km^2. It is situated 18 nautical miles away from Kavala and 6 miles away from Keramoti and Kavala Airport. Thassos island is part of the homonymous municipality and regional unity. The capital of the island is Limenas. Regarding natural resources, wood is one of the main economic activities in Thassos, together with marble mining, oil, olives, honey production, etc. Its population is approximately 14,000 inhabitants.

It is a mountainous island with its highest peak at 1,203 m (Ypsarion). The overall local access is facilitated by a good network of forest and suburban roads which are characterized by rich olive groves. The island is practically surrounded by renowned coasts and beaches

The climate of Thassos is temperate, cool in the summer and mild in the winter. The average annual temperature is 17.2 degrees Celsius, and the average summer temperature (July) is 23.4 degrees Celsius. The island of Thassos has an important mineral wealth and a long tradition in the extraction of basic and precious metals, ocher, marble, etc.

Tourism is currently an emerging sector and is considered a heavy economic industry mainly during the summer period.

5. Planning SET-UP in the pilot area

The planning set-up section includes all the preparatory work designed for the pilot areas and presents the **working team, the territorial scope**, the process that has led to the **identification of stakeholders**, the methodology foreseen for the **participatory process** as well as the construction of **the work plan** and the **definition of milestones**.

In particular, the stakeholders which have a stake at the development of the Action Plans and which also have the potential to influence policies, facilitate the selection and implementation of measures and ensure the sustainability and acceptance of specific measures include:

- **All competent regional authorities**
  - Regional Development Fund, Technical Works, Development & Planning, Fisheries, Environment and Hydroeconomy, etc.
- **The pilot area municipalities**
  - Municipality of Alexandroupoli
  - Municipality of Nestos
- **Port Authorities**
  - Port Authority of Alexandroupoli
  - Port Authortiy of Kavala
  - Port of Keramoti
- **Universities**
  - AUTH, DU, UTH
- **National Real Estate Service**
- **Managing Bodies of Protected Areas**
- **Other relevant bodies and actors**

The **territorial scope** of the action plan includes the coastal front of the two selected pilot areas (namely Alexandroupolis-Makri and Keramoti-Thassos) and respectively the study of measures for:

Alexandroupolis-Makri

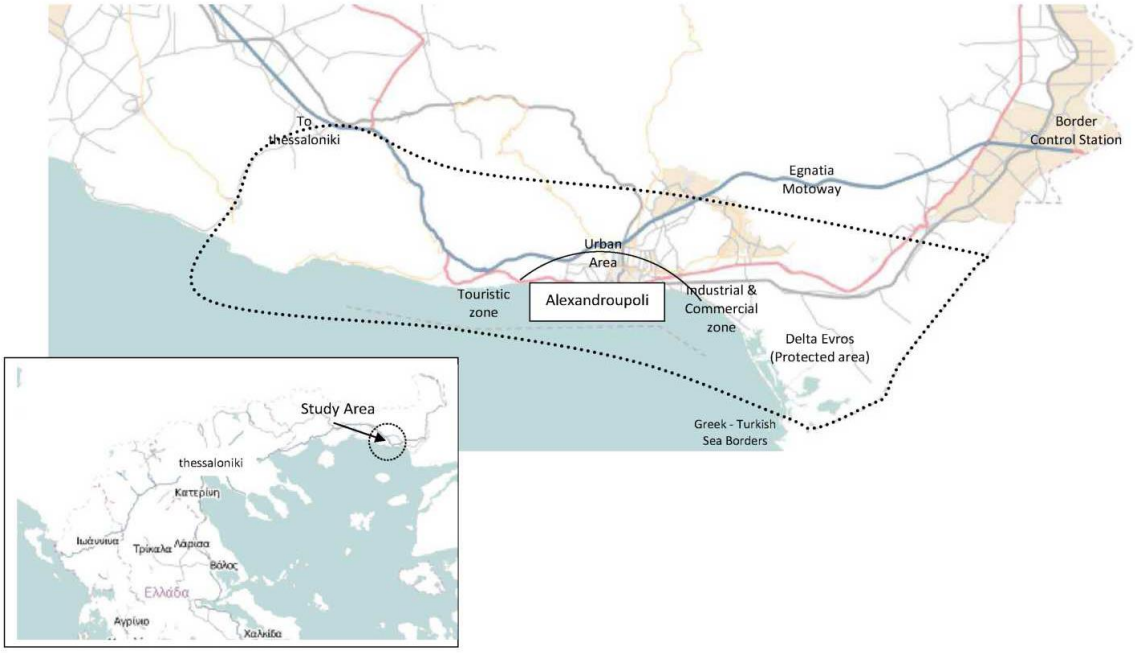
- Reduction of port channel dredging impacts and protection against erosion of the urban sea front

- Tourism development of urban sea front
- Study of the mechanisms of coastal erosion and port channel silting-up
- Legal framework gap concerning the dredging activities

Keramoti

- River delta retreat and sea water intrusion
- Tourism development of the Natura 2000 protected area (promotion of eco -tourism)
- Future planning of eco tourism activities and low impact economic activities (aquaculture, agriculture etc.)

Picture 3 presents a broad view of the Pilot Area 1.A.



Picture 3. Broad view of the territorial scope of Pilot Area 1.A

The process that led to the **identification of stakeholders** is based on the potential of the beneficiaries to influence the selection of measures, the political, technical, scientific and social link with coastal activities and coastal erosion and with the need to include stakeholders from the quadruple helix in order to have a broad acceptance of the proposed measures.

The stakeholders have been recorded in an easy-to-use database including information related to the following sections:

- Name
- Surname
- Country
- Region

- City
- Type of stakeholder
- Nature of participation in the project
- Area of intervention
- Domain of expertise
- Institution or body name
- Type of body
- Function of the person
- E-mail
- Telephone

Currently, **approximately 120 stakeholders** have been included in the stakeholder's list mainly from the local/ regional context. The list is being constantly updated.

The **methodology foreseen for the participatory process** was designed before the organization of the 1st infoday session and was based on the approach presented during the 1st training course in Bologna. The 1st step included the identification of main stakeholders. Stakeholders that participated during the kick off pilot area meetings were included in the list and were invited as keynote speakers during the 1st infoday.

The **1st Infoday that was organized on 05 October 2018** in Komotini. All stakeholders were officially invited by the REMTH Governor. Approximately 40 stakeholders and members from the pilot areas and members of all stakeholders from the working team participated in the infoday which was formulated in **two sessions.**

Keynote speakers were the Regional Councillor in charge of the European Projects Mr. Mpoutos Ioannis and the project co-ordinator Ms Paraskevi Chouridou from REMTH who presented the current status and advancements of the CO-EVOLVE project activities in order to homogenize and share the knowledge among the participants. Ms Maria Chamitidou, deputy co-ordinator and supervisor of REMTH's pilot activities was the moderator of the infoday.

The 1st session was about the project themes and goals and was mainly formulated in a way that would allow the stakeholders from the pilot areas to present the current status of the pilot areas, to present the current pressures and identify possible threats and solutions. For this reason representatives from the Municipality of Alexandroupoli and from Municipality of Nestos analytically presented both pilot areas and openly discussed with the participants.

The **1st session** also included a presentation about synergies and in specific about the role of other regions, namely the Region of Crete in the sustainable development of the Coastal-Marine environment. This presentation fed the discussion about possible synergies between European Projects for the engagement of the local society and the coastal zone users. This discussion was moderated by a representative from Region of Crete.

Following, the University of Thessaly, Co-evolve project partner, presented the sustainability indicators system for the Monitoring and Assessment of Tourism in Coastal Areas and distributed a questionnaire tailored to the selected indicators for the pilot areas.

The **2nd session** of the infoday was formulated as a workshop for the sustainable development of Coastal and Maritime Tourism in the Pilot Areas.

The discussion was moderated by Ms Chamitidou and keynote speakers were professors from the Aristotle University of Thessaloniki and from the Democritus University of Thrace. The discussion was about **REMTH's Coastal Zone** mainly focusing on the coastal erosion and offshore structures and on prospects of economic growth in the blue economy context.

Two questionnaires were developed and circulated. The 1st was developed and assessed by REMTH (the answers on the questionnaires are still being received) and aimed at facilitating the identification of the **vision, goals and objectives in the pilot area.**

In specific the questions addressed to the participants were the following:

- Do you take into account the general framework for the implementation of Maritime Spatial Planning?
- Do you take into account the general framework for the implementation of the Integrated Coastal Zone Management (ICZM) Protocol?
- Do you know the jurisdiction and responsibilities in the coastal zone activities among the divisions of your organization?
- Are you familiar with the procedures and legal framework governing licensing of intervention actions in the coastal zone?
- Can you mention possible problems for the authorisation of the above-mentioned interventions?
- What in your opinion is the main problem that needs to be tackled for a better management of the coastline?
- Do you know what are the main natural hazards faced in the coastline in your area?
- Can you identify any measures to address these risks?

- Can you propose areas where actions to improve their current situation could be implemented?
- What are your goals for future coastal management?
- Does your institution have data on coastal tourism?
- What do you think is the main tourist activity in your area?
- Do you think that permanent residents in your area know about the problems of the coastal zone?
- Do you think visitors / tourists in your area know about the problems of the coastal zone?
- In your opinion, will the planned pilot actions contribute to the tourist & coastal development of the areas?
- In your view, will the planned pilot actions contribute to the sustainable development of the areas, in line with the ICZM principles?

It is highlighted that questionnaires are still being received and the results cannot be yet assessed.

The second questionnaire was developed and circulated by the University of Thessaly and was particularly related to the sustainability indicators selected during the WP3 phase.

The **work plan** and the preliminary description of the **local action plans** for the two pilot areas is under discussion; however, a **preliminary** basis that foresees all key elements that should be included in an action plan have been foreseen.

A preliminary version of the chapters of the local action plans are briefly presented below:

A. Project Details

- Project title:
- Contracting Authority:
- Territorial Coverage:
- Implementation Date:

B. ICZM Principles related to the study area (in brief)

C. MSP Principles (in brief)

D. Current Situation (in brief)

E. Presentation of Weaknesses and Threats (in brief)

F. Results of public consultation

- Proposals
- Measures

G. Plan for sustainable coastal and maritime tourism development

H. Mitigation measures / best practices

I. Results

J. Sources of information (i.e. Local/Regional Spatial plan, tourism plans, etc.)

K. Annex

- Drawings, Maps, Charts, Photographic material

Key milestones for the development of the local action plan are the following:

- **Organisation of infodays**
  - The **first** has already been completed (October 2018)
  - The **second** is expected to be organized in March 2019 (after substantial progress on the development of the plan has been achieved)
- **WP4 completion date, namely May 2019**
- **Meetings with the working team/ stakeholders in the pilot areas**
  - Pilot area Alexandroupolis
    - 1st work meeting on 9 February 2017
    - 2nd consultation meeting on 05 October 2018
    - 3rd work meeting on 23 October 2018
  - Pilot area Keramoti
    - 1st work meeting on 9 February 2017
    - 2nd consultation meeting on 05 October 2018

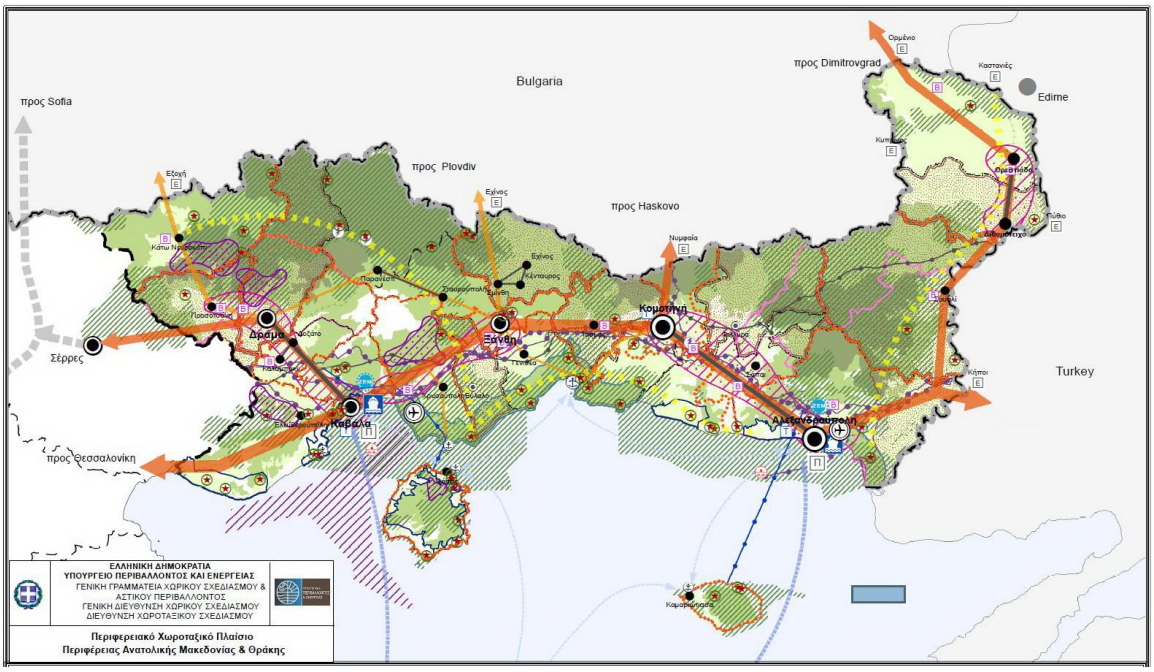
N.B. Several bilateral and multilateral work meetings between REMTH and the working team are envisaged to be organised during the following period.

6. Building knowledge framework in the pilot area

The urban and coastal development of both pilot areas is streamlined by a number of plans that have been put in place and adopted in the past. However, in October 2018 REMTH adopted the Regional Spatial Planning Framework. This is considered a reference document for future urban and coastal development as it focuses on the:

- integrated, balanced and sustainable development.
- social cohesion and sustainable economic prosperity.
- balanced and complementary distribution of productive activities.
- effective resource management, including the territorial resources.
- addressing the challenges of climate change (priority to the development of RES).
- protection, combined promotion and exploitation of the rich natural and cultural environment, and the landscape (identified as comparative advantage of the Region).
- sustainable site management and guidance to Local Spatial Planning to be followed by municipalities to organize the space and to ensure a balanced development of productive activities.

Picture 4 presents an overview of the regional spatial framework.



Picture 4. Map extracted from the Regional Spatial Framework

The Regional Spatial Framework also foresees specific priorities for the tourism sector, namely:

- Development of tourism.
- Increase of the general tourist product (shift towards qualitatively and thematically diversified tourism).
- Stimulation of the current tourist flow from eastern and south-eastern Europe and Turkey.
- Promotion of special forms of mild and alternative tourism and the revival of the domestic tourism and social tourism.
- Creation of a single tourist identity with reference to the endogenous potential and peculiarities of each spatial unit.
- Promotion of the qualitative characteristics and its integration into a polycentric and multidisciplinary network.
- Development of "green" tourism, with protection and sustainable management of the environment.

Finally, REMTH's Spatial Planning Framework identifies the natural environment as a priority sector and proposes a set of measures directly or indirectly linked with sustainable tourism development considering the safeguarding of natural resources:

- Creation of a wide network of combined and promoted natural and cultural resources for the protection and integrated management of the natural and cultural heritage and the landscape.
- The a) Natura 2000 sites, b) the National Parks, c) the most important cultural resources and d) the remarkable landscapes of REMTH are combined into spatial networks with a high priority of promotion and protection.
- Particular emphasis on Landscape Strategic Guidelines.
- Spatial Organizational Guidance in line with other national and sectoral policies concerning the spatial structure of both core transport infrastructure networks (road and rail networks, maritime and air transport, combined transport) and core networks technical infrastructure (energy, telecommunication networks and infrastructure, water supply networks and urban waste water management, water management, irrigation, flood protection **and coastal erosion**, solid waste).

Alexandroupolis-Makri

As indicated in the 1st advancement report, based on the outcomes of WP3, the pilot area of **Alexandoupoli-Makri** faces important threats that mainly relate to Climate Change and

morphological stability, Littoralization and Urbanization, Touristic fluxes and Carrying Capacity and land-sea interactions and conflicts.

More specifically, the vulnerability of the area to climate change has caused severe erosion to the shoreline and is expected to be aggravated in the future due to the construction of the port and its navigation channel.

In addition, increased littoralization pressures are identified from the city of Alexandroupoli towards Marki settlement in spite of the planning procedures to orientate urban development towards the hinterland. Efforts to upgrade and differentiate the area's tourism product are in place, in order to attract more quality tourism and increase the currently low touristic fluxes. A final key challenge for the area is the successful management of the waterfront which is currently concentrating many conflicting activities.

The enabling factors of the pilot area are mostly focusing on addressing the key threats already identified. Coastal protection measures such as sand nourishment and defense mechanisms have been adopted to manage erosion problem; water treatment plans to address overexploitation and salinisation problems of coastal groundwater; studies to estimate needs and cost of port dredging; transport plans to ensure the accessibility to the beach and connect the commercial port to the international highway; governance mechanisms to overcome existing gaps in national legal and administrative framework.

The customized Sustainability Toolkit developed under Task 3.17 gives a preliminary assessment on the sustainability level of the pilot area in addition to further information on trends and satisfaction levels and also constitutes a starting point for measuring and monitoring tourism development in the area.

Synopsis

The results show significant opportunities for tourism development, mostly in the field of beach and maritime tourism, constrained by important inconsistencies in the implementation and monitoring of tourism related policies and actions at destination level.

Customized Tourism Sustainability Toolkit

Core indicators

C.B1.1. Number of tourist nights per month

C.B2.1. Average length of stay of tourists (nights)

C.B3.1. Direct tourism employment as % of total employment in the destination

C.C1.1. Number of tourists/visitors per 100 residents

C.D5.2. % of tourism enterprises taking actions to reduce water consumption

C.D6.2. % of tourism enterprises that take actions to reduce energy consumption

C.D6.3. % of annual amount of energy consumed from renewable sources (Mwh) compared to overall energy consumption at destination level per year

Destination Indicators:

Di.Beach/Maritime tourism

Di.A4. Number of second homes per 100 homes in coastal zones*

Di.B1. % of tourist infrastructure (hotels, other) located in coastal zones*

Di.C2. % of beaches awarded the Blue Flag

Di.D1. Existence of up to date tourism plans and policies (YES/NO)

Di.D2. Existence of a land use or development plan (YES/NO)

Pilot area-specific indicators

P.A1.2. % shoreline subjected to erosion

P.A1.6. Coastal flooding events per year(number)

P.A5.1. Total use of water by tourism sector (Tourism as a % of all users)

P.B1.1. Existence of a coastal planning management system

P.B1.2. Length of protected and defended coastline (km)

Key messages from final measurement and data evaluation

The data available is very limited for accurate interpretation and include many qualitative estimations and spatial inconsistencies. Data coming from official statistical sources is rarely available and in most cases at a municipal level. Data availability at destination level is limited to estimations from municipal authorities, showing **important gaps in measuring and monitoring**.

Moreover, no information is currently available regarding the trends of highly prioritized indicators over the past years. Also, satisfaction levels on key issues are difficult to be defined at this stage. Even when estimated, they only represent the perspective of official municipal authorities instead of an overall perspective of official authorities, experts, public and private stakeholders involved in tourism sector.

In a preliminary assessment, tourism in Alexandroupoli/Makri needs to increase in both **tourism flows** and related **infrastructure**. Tourism plans and policies seem to focus only on the development of beach and maritime tourism which is mainly attributed to the rich natural resources of the pilot area (e.g. all beaches are awarded with Blue Flag and have excellent water quality - although lacking

infrastructure in some cases). Tourism and land use planning as well as coordinating mechanisms for MSP/ICZM exist but are not always implemented or functioning. The municipality is strongly focusing on increasing coastline protection measures, especially from erosion and coastal flooding, in order to support the co-evolution of tourism with the environment.

Suggestions for future evaluation and monitoring

Future efforts should focus on integrating indicators related to governance factors (currently not considered of high priority) and management and optimization of the pilot area's key assets, especially in the case of beach and maritime tourism.

Findings

Pilot Area 1.A is characterized by an increase of Population and specifically an **increase** of the ratio of population **in coastal parts** of the municipality, as presented in table 2 below:

Table 2. Demographics of Pilot Area 1.A

Population	**1991**	**2001**	**2011**
Coastal Area (CA)	44,014	54,730	62,559
Municipality (Total)	55,909	66,125	72,959
Percentage CA/ Total	78,72%	82,77%	85,75%

As regards the **land use,** picture 5 depicts basic information related to the land use and relevant pressures that needs to be envisaged while preparing the local action plans.

Picture 5. Land use in pilot area 1.A coastal front

Beaches	Beaches
Arable land	Camping (Municipal)
Archaelogical Sites	Urban area (~60.000 inhabitants)
Touristic housing	Port
Other urban uses	Hotels
Tourism Infrastructure	Touristic housing

The key environmental sensitive areas identified in the area are summarized as follows:

- **Natura 2000**
  - Evros River Delta (west part of the area) – GR1110007 – 98.58 km^2
  - Evros River Delta – GR1110006 – 125.58 km^2
  - South Forest Site– GR1110009 – 292.75 km^2
  - Thracian Sea area – GR1110013 – 75,78 km2 (2017)
- **Protected area of Wild Life**
  - Evros River Delta - 39.52 km^2
- **Ramsar Treaty**
  - Evros River Delta– 95 km^2

As regards tourism development, pilot area 1.A is under substantial tourism development (infrastructure, organized beaches, etc.). In particular the following figures for Alexandroupolis and Makri are presented below:

- **Alexandroupolis**
  - 23 Hotels, approx. 1.000 rooms, 2.000 beds

- 1 camping, 650 people

- **Makri**

1 Hotel, 121 beds

Keramoti

Based on the outcomes of WP3, the pilot area of Keramoti faces important threats that relate mainly to Climate Change and morphological stability, Touristic fluxes and Carrying Capacity and land-sea interactions and conflicts. More specifically, the increased erosion level of the shoreline has led to significant degradation of the coast, which is expected to deteriorate in the future due to medium estimated sea level rise. Increased coastal flooding events cause important accessibility problems (urban flooding, collapse of the road network) as well as salinisation of the lagoons and groundwater system. The port infrastructure also causes great problems such as traffic, noise, degradation of the road infrastructure and the urban environment, significantly limiting the space and opportunities for tourism activities. The carrying capacity of Keramoti is also limited by insufficient infrastructure for tourism development. Regarding land and sea interactions, the main conflicts identified between tourism and maritime transport as well as tourism and ecosystems protection.

The enabling factors of the pilot area are mostly focusing on Ecosystems Protection, Transport and accessibility and Water Cycle and Depuration. The area is targeting to more quality tourism and tries to shift from the typical “sun and sea” model to eco-tourism activities and diversify its tourism product to eco-friendly activities; water supply management plans and waste treatment plans have already been completed or will be in the near future; plans to move all commercial marine traffic to nearby ports and transform Keramoti port to a marina (or at least only serve as passenger port) are under discussion. In terms of governance factors, the municipality of Nestos and the Managing Authority of Nestos - Vistonis are working together to set common objectives and build common planning instruments. However, in spite of the important threats posed by climate change, no coastal protection measures are currently taken to address them.

The customized Sustainability Toolkit developed under Task 3.17 gives a preliminary assessment on the sustainability level of the pilot area in addition to further information on trends and satisfaction levels and also constitutes a starting point for measuring and monitoring tourism development in the area.

Synopsis

The results partly reveal significant opportunities for tourism development in the area, mainly in the field of nature/ecotourism, but the respective data is considerably limited in order to fully assess the dynamics of tourism development at the destination.

Core Indicators C.B1.1 Number of tourist nights per month

C.B2.1. Average length of stay of tourists (nights)

C.B .1. Direct tourism employment as % of total employment in the destination

C.C1.1. Number of tourists/visitors per 100 residents

C.D3.1. Waste production per tourist night compared to general population waste production per person (kg)

C.D5.2. % of tourism enterprises taking actions to reduce water consumption

C.D6.2. % of tourism enterprises that take actions to reduce energy consumption

C.D6.3. % of annual amount of energy consumed from renewable sources (Mwh) compared to overall energy consumption at destination level per year

C.D7.1. % of local enterprises in the tourism sector actively supporting protection, conservation and management of local biodiversity and landscapes

Destination Indicators:

Di.Beach/Maritime tourism

Di.A4. Number of second homes per 100 homes in coastal zones*

Di.B1. % of tourist infrastructure (hotels, other) located in coastal zones*

Di.C2. % of beaches awarded the Blue Flag

Di.D1. Existence of up to date tourism plans and policies (YES/NO)

Di.D2. Existence of a land use or development plan (YES/NO)

Destination Indicators:

Dv. Nature/Ecotourism

Dv.A3. Total number of visitors to parks and to key sites

Dv.B1. Number of sites/ecosystems/assets considered to be damaged or threatened (% of all defined systems/assets in protected area)

Dv.C1. % of site area occupied by rare or unique species

Dv.C2. % of endemic species at the site

Dv.D1. Existence of up to date tourism plans and policies(YES/NO)

Dv.D2. Existence of environmental plan and management(YES/NO)

Pilot area-specific indicators

P.A1.2. % shoreline subjected to erosion

P.A1.6. Coastal flooding events per year(number)

P.A5.1. Total use of water by tourism sector (Tourism as a % of all users)

P.B1.1. Existence of a coastal planning management system

P.B1.2. Length of protected and defended coastline (km)

Key message from final measurement and data evaluation

The data available is very limited for accurate interpretation and include important spatial inconsistencies. Data coming from official statistical sources is rarely available and in most cases at a municipal level. Data availability at destination level is limited to estimations from municipal authorities or existing academic studies, thus showing important gaps in measuring and monitoring. Moreover, no information is currently available regarding the trends of highly prioritized indicators over the past years while thresholds based on satisfaction levels could not be defined at this stage.

In a preliminary assessment, the pilot area of Thassos/Keramoti needs and aims to attract more quality tourism (in terms of spending per capita) as well as to limit seasonality and expand its tourism period.

Tourism plans and policies seem to focus mainly on the development of nature and ecotourism and far less on beach and maritime tourism. This is mainly attributed to the fact that Keramoti is a settlement within a protected area with important natural resources to support the development of ecotourism activities. However, considerable lack of data is observed in recording and monitoring both sites and species (e.g. state, number and conservation status) within the limits of the protected area in order to fully assess the dynamics of tourism development at the destination. Since most infrastructure activities are restricted by the protection framework of the area, Thassos/Keramoti is mostly focusing on increasing coastline protection measures to prevent erosion and coastal flooding.

Suggestions for future evaluation and monitoring

Special attention should be given in recording and monitoring the key assets for the development of ecotourism in the area (threatened sites, endangered and endemic species) as well as monitoring the actual implementation of tourism and environmental plans and policies.

Findings

As regards the general demographics of the area, there is a slight **decrease** of population as well as

high aging indices. Table 3 Briefly presents the demographic outlook.

Table 3. Demographic characteristics of pilot area 1.B.

Municipality (Nestos)	**1991**	**2001**	**2011**
Population	21.924	23.486	22.331
Population Density	32,3	32,3	32,7

The key environmental characteristics of the area that have been identified and that are expected to play a key role in the development of the local action plans are the following.

Natural Resources

Beaches – 32 km

NATURA sites

1. Nestos River Delta – Lagoons

(GR 1150001 - 15.650 km2)

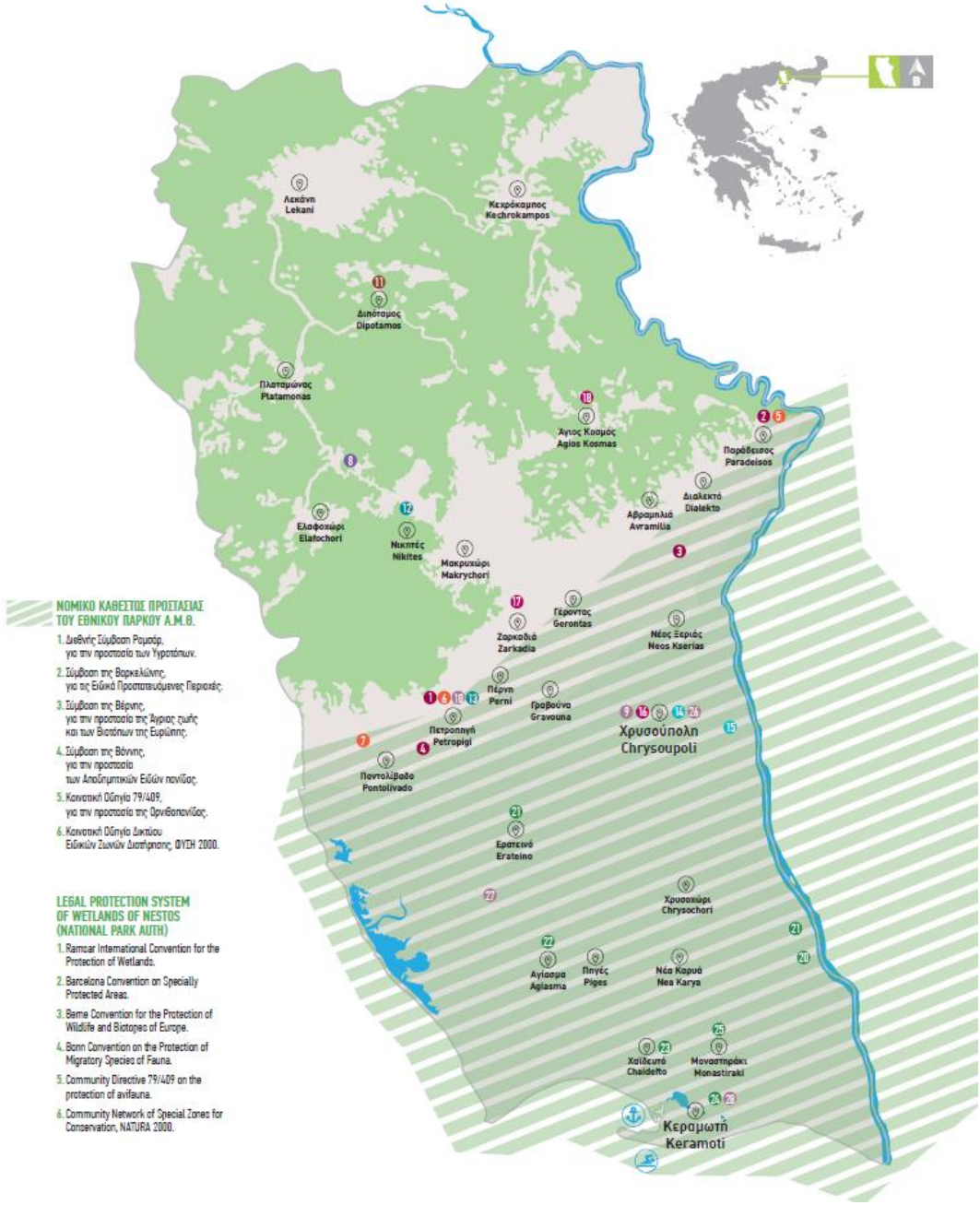
2. Keramoti Lagoons

(GR 1150002 - 25590 km2)

3. Nestos River Delta – Coastal Zone

(GR 1150010 – 30090 km2)

Picture 6 presents the protected areas identified inside pilot area 1.B.



Picture 6. Protected areas in pilot area 1.B.

As regards the local economy, the economically active population is 9.156 inhabitants while 3.033 are working in the tertiary sector, including tourism.

Briefly, figures related to the economic sectors of the area are presented below:

Primary Sector (37% of jobs)

- Fishing and fish farming

- Farming
- Livestock breeding
- Apiculture

- **Secondary Sector (21% of jobs)**
  - Manufacturing and marketing of agricultural products
  - Processing and marketing of livestock products
  - Processing trade in fishery and aquaculture products
- **Tertiary Sector (33% of jobs)**
  - Rapid increase in both tourism (family hotels) and catering facilities mainly in the municipal unit of Keramoti
  - Sea sports
  - Sailing

The tourism related infrastructure is considered substantial and includes an airport and a port.

Airport (Chrysoupoli/ Kavala)

- 2017 - 338,000 arrivals (22% increase over 2016).
- 2018 - more than 385,000 arrivals are expected

Keramoti Port

- 2014 – 701.582 passengers
- 2018 – 1.041.150 passengers (approximately 45% increase)

The tourism development of the area is supported by **several transport means** and **relevant infrastructure** (Egnatia Highway, National Road, International Airport, Ports (Keramoti, Kavala)

As regards accommodation and subsistence, the area is an emerging tourism destination and the following figures are reported:

- **Hotels -** 13 (approx. 400 beds)
- **Rented rooms** – 28 (approx. 600 beds)
- **Camping** – 450 people

It is highlighted that the touristic season is between **May-September and that m**any accommodations/ rooms are not registered; thus, the actual e**arnings cannot be calculated.**

The information presented in this chapter is necessary for the selection of measures that are in line with the current local, economic, touristic and environmental baseline situation in order not to create distortion of the daily routines of the population, but contrary to improve the quality of their lives by proposing tailored and joint coastal/tourism oriented beneficial measures.

7. Defining vision-goals-objectives in the pilot area

The pilot area of Alexandroupoli-Makri will work to increase and enhance the tourist offer in a sustainable and effective way. In the medium term, the area aims to address an improvement and diversification of the accessibility capacity connected with an enlargement of urban area and a conservation/protection of the peculiar natural features. The area will work to become a liveable and sustainable touristic area that will improve its economic growth through an enhancement of interconnections between the social and natural/agricultural systems. The increase of accessibility infrastructures, and the plan of city development will complementary act to guarantee a conservation of the eastern side protected area (Evros River Delta) and to generate a promotion of new form of tourism activities supported also by a diversification of users. Furthermore, the area will try to achieve a better liveability and protection of the coastal area from erosion and climate change emerging problems in order to increase the economic sector related to tourism activities. The area will undertake a transformation toward the development of competitive and sustainable touristic structures and the consequent generation of economic growth that will act to reduce the lack of attractiveness of the area. Furthermore, from a medium to a long term, the area is investing in attracting cruise and yachting tourism vision trough the expansion and the privatization of the port.

The specific objectives set for the development of Alexandroupoli are:

− Improvement of the wastewater infrastructure;

− Protection against erosion of the urban and peri-urban sea front;

− Improvement of the urban road and open air infrastructure;

− Development of cruise and yachting tourism;

− Completion of the urban extension towards the west with promotion of tourism infrastructure and second housing;

The objectives identified for the development of Alexandroupoli's tourism-driven strategy are coherent with the Med-scale strategy and related main goals. Also, the specific objectives show a good level of coherence and conformity with the ICZM High Level Objectives and Sustainable Coastal Tourism Goals with planning strategies that influence tourism development, especially concerning the economic sector development and environmental safeguard and conservation.

The pilot area of Keramoti aims at taking advantage of being located within an interesting protected area promoting new forms of eco and higher quality tourism. The area will be committed to become

a hub of a sustainable Greek coastal tourism. The promotion of a less impacting form of tourism will be able to diversify the supply and demand to and from users. Furthermore, the ports activities and the transport infrastructure and plans will be integrated in order to reduce the pressures on the protected coastal area. A plausible scenario developed for Keramoti, as sum of administrations and regional visions, support the area to increase the economic and social connections between the natural system and the future Mediterranean touristic development perspectives. Keramoti settlement will become a liveable and pleasant interconnected village for sustainable tourism development.

The specific objectives set for the development of Keramoti are:

− Completion of infrastructure works and services (waste water and waste management) to provide high quality services during the tourism peak;

− Development of higher quality tourism within the settlement of Keramoti;

− development of eco-tourism activities within the protected area;

− Protection of the protected area and promotion of the protected area through international programs;

− Protection against erosion of the Nestos River Delta;

The objectives identified for the development of Keramoti's tourism-driven strategy are coherent with the Med-scale strategy and related main goals. Also, the specific objectives show a good level of coherence and conformity with the ICZM High Level Objectives and Sustainable Coastal Tourism Goals with planning strategies that influence tourism development, especially concerning the economic sector development and social cohesion enhancement.

Pilot area 1.A – Alexandroupolis/ Makri

Further to the objectives set in the 1st advancement report, breaking down and analysing the needs in the pilot area, as presented by the local actors themselves, facilitates the development of the common vision and the identification of shared measures and goals.

It results that key characteristic of Pilot area 1.A is the diversified needs envisaged between the Eastern, Urban and Western Part of the Alexandroupolis which are depicted in the set of images below.

Eastern Part

- Tourism
- Tourism Houses

City Part

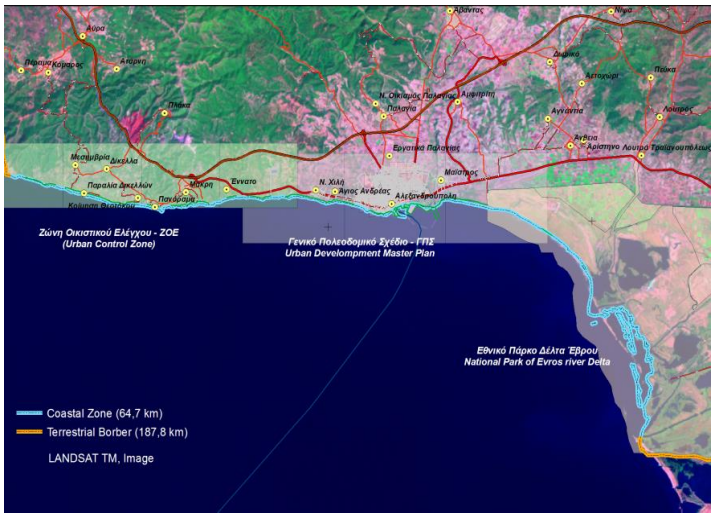
- Urban Development

Western Part

- Environmental Management

Picture 7. The diversified needs of Alexandroupolis/Makri pilot area

Picture8 presents the key reference documents for the spatial, urban and coastal planning of pilot area 1.A.



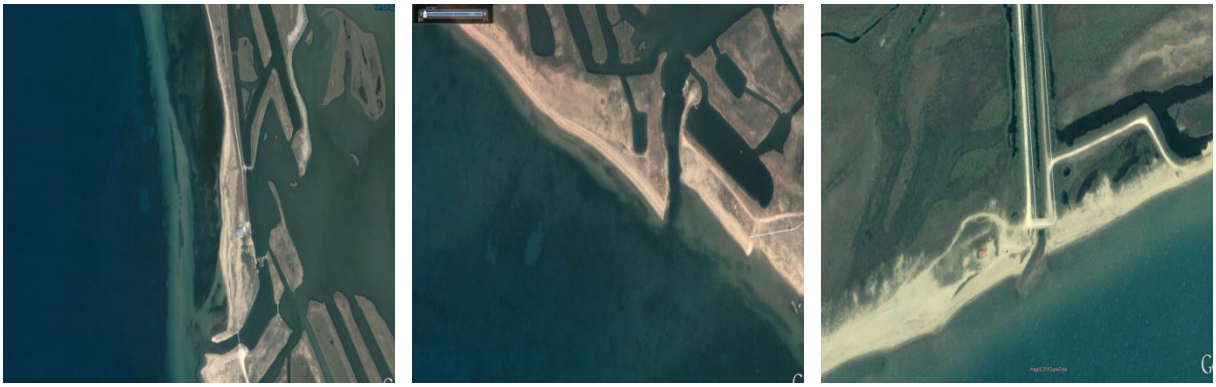
Picture 8. Reference documents for the spatial, urban and coastal planning of pilot area 1.A.

It results that the eastern part is developed/expanded based on urban control zone planning, the city part is developed based on the urban development master plan and the western part is severely affected by the National Park of Evros River Delta

Pilot area 1.B – Keramoti/ Thassos

Severe coastal erosion is identified in the Municipality of Nestos. The set of images below (Picture 9) depict the evolution of erosion (before/after) and sets the basis and the goals for the identification of measures for the safeguarding of the coastal front.

Before



After

Picture 9. The effects of coastal erosion in pilot area 1.B.

Further to 1st advancement report, other joint coastal/ tourism problems/needs have also been identified. In particular, a set of relevant problems are presented below:

- **Sources of pollution and systematic ecosystem degradation**
  - Uncontrolled disposal of marble waste from the marble industry
  - Uncontrolled disposal of waste
  - Uncontrolled disposal of waste from ferryboats in the port of Keramoti
- **Lack of infrastructure**
  - Lack of docking infrastructure during the high-demand summer session
  - Lack of protection of vessels from western winds

- **Lack of co-ordination between the competent authorities**
  - Municipality of Nestos and Developmental Agency of Nestos, Developmental Agency of Kavala, REMTH, The Nestos River Delta Managing Body, Kavala Forestry Office
- **Lack of promotion activities related to the local touristic product**
  - Visitors do not visit the protected areas and do not know the natural richness of the coastal and marine environment

The participatory process and the results of the 1st infoday held in Komotini facilitated the definition of **common problems and shared vision** for the pilot areas which is briefly combined below:

- Exploitation of results of **pilot-demonstration-research projects that will result in beneficial and tangible results** for end-users (e.g. integration of mature projects in invitations by the Regional Special Operational Programs Management Services).
- Exploitation of **data to identify local problems and to select mitigation measures** (e.g. drawing up simple and exploitable data and tools through the transformation of knowledge and primary data of projects and studies).
- Need to **reduce bureaucratic licensing requirements** for coastal zone erosion mitigation projects.
- Need to **strengthen the capacity of the competent authorities**.
- Need to clearly define the **regional priorities for erosion** and **selection / identification of high risk areas** (synergy between technical services and political leaders).
- Continue the **bottom-up information feed to resolve issues related to coastal erosion and sustainable tourism** development in the Region.
- Promote **co-operation between regional and academic bodies** to solve the erosion problems of the area (exploitation of existing knowledge and available).

The next steps and planning goals for the development of the local action plans are the:

- Development of the final version of the local action plans
- Organisation of working groups with the pilot area working teams:
  - Data collection
  - Elaboration of studies
  - Open discussion
- Elaboration of the action plans
- Consultations with the stakeholders (2nd infoday on March 2019/ participatory process)

- Update of the action plans