C - Project description

C.1 Project overall objective

Below, you can see the Programme priority specific objective your project will contribute to (chosen in section A.1.).

SO 2.3: Supporting environment preservation and protection in the Adriatic - Ionian region

Project overall objective

Below, you can choose to which programme priority specific objective your project will contribute to. Now think about your main objective – what do you aim to achieve by the end of your project? Remember your project needs to contribute to the programme's objective.
Your objective should:

- be realistic and achievable by the end of the project, or shortly after;
- specify who needs project results and in which territory;
- be measurable – indicate the change you are aiming for.

Project overall objective is the definition of a Joint Action Plan (JAP) aimed to reinforce and harmonize the implementation capacity of the Habitat/Birds Directive in Mediterranean coastal dune environments, characterized by EU priority habitat, which face several threats by increasing tourism. Based on multi-disciplinary experimentally-tested tools, this JAP will enable biodiversity preservation and ecosystems safeguard from anthropic pressure in dune environments in the whole Programme area.

C.2 Project relevance and context

C.2.1 What are the common territorial challenge(s) that will be tackled by the project?

Please describe why your project is needed in the programme area and the relevance of your project for the programme area, in terms of common challenges and opportunities addressed.

Widespread all over the Program area, coastal dunes are found in the transition zones between terrestrial and marine ecosystems, being one of the patchiest landscapes on earth. Coastal dunes – whether on the sea or along river/lakes - are among the most important ecosystems on account of their high ecological diversity in terms of environmental heterogeneity and variability of species composition. These peculiar ecological features are due to the abiotic and biotic factors that interact, constituting a complex sea-to-inland environmental gradient. Nevertheless, coastal dune systems are particularly fragile environments; in particular, the Mediterranean coastal dune systems seem to be those that have undergone greater erosion in the last decades. One of the main factors involved in the alteration and destruction of coastal dunes is the process of urbanization, intensive farming and the adaptation of coastal dunes for tourism and recreational purposes. Despite recreational activities represent an important advantage over the world, the quick and often unregulated development of touristic residential areas, resorts, marinas, and recreation parks, etc., results in severe pressure on the coastal dune systems of the Adriatic-Ionian area. In particular, activities associated with tourism, such as dune reshaping or flattening, beach cleaning, motor vehicle traffic, and trampling, are threats that cause serious environmental degradation, most notably the overuse of natural resources, loss of biodiversity, significant endangerment of ecosystems, and weakening of their resilience. These threats, along with numerous other modifications of coastal dune ecosystems, have provoked the alteration of the dune morphology, activating erosive processes or favoring changes in plant communities. This project will tackle - through the implementation of a JAP and relevant experimentally-tested planning tools - the task of evaluating and increasing the conservation status of coastal dune systems in the context of growing touristic pressure.

C.2.2 How does the project tackle identified common challenges and/or opportunities and what is new about the approach the project takes?

Please describe new solutions that will be developed during the project and/or existing solutions that will be adopted and implemented during the project lifetime. Describe also in what way the approach goes beyond existing practice in the sector/programme area/participating countries.

The project will contribute to the general protection of coastal dune environments of the whole Adriatic-Ionian area, focusing on the threats posed to several natural elements mostly by uncontrolled conventional tourism, whose consequences affect natural landscapes, habitat biodiversity and ecosystems. Indeed, it will implement specific solutions aimed to the safeguard of the coastal dune environment, like the design protocols for recovery and restoration of degraded dune habitats, the creation with innovative techniques of pedestrian accesses, light delimitations and rest areas to avoid habitat degradation caused by trampling in some experimental sites, as well as the creation of a floristic-vegetation and abiotic database for the long-term management of the dune complex. The drawing-up and approval of management plans for some Natura2000 sites will finally constitute the benchmark for setting-up the final Joint Action Plan.
In this framework, PREBIODUNES will adopt some already existing solutions, like the application of best practices and demonstration actions to protect the EU priority habitat, already existing in some of the countries of the Programme area in coastal dunes and the related habitats within Natura 2000 sites. It will also establish a common approach for the long-term protection of these habitats based on sound monitoring of biotic and abiotic characteristics, through experimental activities that will be implemented in identified site of some participating partners, to decrease/eliminate the threats affecting these habitats (e.g., tourist pressure, coastal erosion, spread of allochtonous species, lack of management/scarcity of information). The project will even contribute to the local implementation of the Integrated Coastal Zone Management (ICZM) European recommendations, as well as to the increase in the level of awareness of the local population (students, local inhabitants and tourists) and stakeholders of the importance of these habitats, not only for their landscape value, but also as a means to address climate change effects (e.g., rising sea level).
New solutions that will be developed during the project will be aimed at implementing innovative technologies, already tested in other sectors, like the use of remote-sensed data – mostly available from the last advanced satellite missions (e.g., Sentinel) – able to offer several pieces of information about the state of the environment in the analyzed locations, through the recognition of the spectral signature of observed objects. Based on this kind of information, suitable ICT tools will be developed (GIS, WebGIS), with the aim of analyzing the current situation in the whole Adriatic-Ionian area, while constituting tools for environmental and landscape planning in the coastal dune areas. Moreover, a remote monitoring system of extreme events and their impact, specifically designed, will contribute to the monitoring and early detection of potential natural and/or anthropogenic threats.

C.2.3 Why is transnational cooperation needed to achieve the project's objectives and result?

Please explain why the project objectives cannot be efficiently reached acting only on a national/regional /local level and/or describe what benefits the project partners/target groups/ project area/programme area gain in taking a transnational approach.

The whole Adriatic-Ionian area is facing a problem that is difficult to tackle, i.e., the management of coastal dune areas. Indeed, the participating regions are characterized by coastal areas that are attractive to an ever-increasing tourism demand while, at the same time, being extremely environmentally fragile. This aspect characterizes the whole Program area, where since 2020, at least 10% of their coastal and marine areas have deserved to be designated as marine protected areas, according to the policy commitments set by the Convention on Biological Diversity, signed by all IPA ADRION participating countries. IPA ADRION coastal participating countries have also signed the UN Barcelona Convention, whose goals are to assess, prevent, reduce marine pollution, and protect the environment through the harmonization of monitoring protocols, data, and information sharing. Defining and implementing policy frameworks and strategies to protect and enhance natural terrestrial and sea habitats, including protected areas and areas under Habitat and Birds Directives, is therefore a primary common need. The complementarity and experience of project partners assure achieving the project objectives and results, as they promote environmental protection, biodiversity safeguarding, and ecosystems restoration in the participating regions by strengthening innovation clusters of public and private actors through stronger transnational cooperation and better connections between n. 3 public authorities, n. 1 no-profit associations and civil society actors, and n. 1 private stakeholders, coordinated by three universities and 2 research institutions. This trans-national, multi-disciplinary, and inter-sectoral consortium will cooperate to formulate, through specific pilot tests, suitable solutions for the creation with innovative techniques of low-impact solutions for the fruition of coastal dune areas, so as to reduce the environmental footprint of tourism activities.

C.2.4 Who will benefit from your project outputs?

In the first column of each row, please select one of the pre-defined target groups from the drop-down list. In the second column explain in more detail exactly who will benefit from your project. For example, if you choose the category education, you need to explain which specific schools or groups of schools and in which territory.

Target Group	Specification
Regional public authority	This target group will be reached out to and actively involved through public events and dissemination activities, which will address in particular actors outside the project consortium. Within the project consortium, the Natural Regional Park Isola di S. Andrea - Litorale di Punta Pizzo (through PP2) will directly benefit from restoration and preservation works, as well as from an update of the park's management plan. This will represent an example of good practice for other Regional Public Authorities in the region. Furthermore, they will benefit from the use of GIS, Web-GIS and DSS tools for long-term planning purposes.
National public authority	This target group will be directly involved in the project activities, represented by the Agency for Nature and Environment Protection of Montenegro. Through dissemination and networking activities, other national public authorities will be reached out to as well, expanding the radius of the impact beyond the project consortium. The joint action plan produced will serve as a guiding document for future national legislative frameworks, on the basis of which demonstrated conservation and restoration methods for coastal dunes will be regulated and institutionalized. The national public authorities will finally have a stronger institutional capacity thanks to the cooperation established across borders and know-how transfer activities.
Interest groups including NGOs	In several of the regional and national parks involved in the project consortium, many NGOs are active - for instance the environmental NGO Legambiente in the Natural Regional Park Isola di S. Andrea - Litorale di Punta Pizzo. Their actions aim at preserving the local environment, making sure that anthropic activities (including tourism) impact the area's biodiversity to the lowest degree possible. These NGOs and their volunteers will benefit from the training packages and the enhanced learning opportunities created as part of the project's results.
General public	Coastal dunes areas are being impacted by anthropic pressure, particularly in the spring and summer seasons when tourism flows are high. Making sure that the tourists and general public entering protected areas are well informed is of primary importance, and this will be possible thanks to the training and information materials produced during the project's activities and implemented in the parks daily operation.
Local public authority	This target group will be directly involved in the project activities, represented by the Municipality of Gallipoli and the Municipality of Preveza. These two partners will benefit from the pilot construction for the preservation and restoration of costal dunes present in their territories. Similarly, some associated partners like the Municipality of Ulcinj will benefit as well. Furthermore, they will benefit from the use of GIS, Web-GIS and DSS tools for long-term planning purposes.

Work package 1

Work package title

Detailed analysis and mapping of project sites and ecosystems

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this work package, and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all activities in this work package are implemented and outputs delivered.

The specific objective (SO) of this WP is to build a scientifically sound basis for the implementation of the pilot actions and the joint action plan. To this end, the objective is to provide information on the status quo of the study area, while also delivering a planning tool: the GIS.

Think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief.

The communication objective is to transfer information and know-how surrounding the current status, fruition impacts on the study areas, and the proposed planning tool. This will be achieved, particularly through scientific conferences targeting academia and research institutions.

Activities

Activity 1.1	
Title	Geobotanical and faunistic analysis
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	The activity concerns the implementation of a basic cognitive analysis regarding the fauna and vegetation present on all countries included in PREBIODUNES based on data in the existing literature and from specific analyses initiated during the project. Existing vegetation and faunistic types and those related to the catenary succession under Directive 92/43/EEC most exposed to degradation or depletion will be identified. The edaphic, bioclimatic, floristic-sociological, ecological, and

Activity 1.1	
	chorological characteristics of each chosen habitat will be determined. The study will focus on the structural species of each habitat in order to assess their conservation status and analyze the endemic and/or phytogeographically interesting species that locally characterize these habitats. The analyses performed will yield useful information in order to identify with greater quantitative and qualitative detail the causes of habitat degradation and plan with greater precision the necessary in situ conservation actions. The cognitive assessments envisioned in this phase are expected to be completed during the first year of the project, ensuring that all pertinent data is available for the optimum management of the following phases and actions. The purpose of the action is to characterize the habitats in the intervention sites, verify their conservation status, and prepare a strategy to conserve them and make them usable at the same time. In order to be able to pinpoint the precise location of habitat restoration interventions (WP2), it is essential to know the conservation status of habitats, localize threats in a pointwise manner, and understand the dynamics of individual populations. In addition, with the collected data, it is intended to obtain a comprehensive database of psammophilous (plants living on sandy soils) and coastal habitats in areas where there is a lack of such information. All project partners are involved in their respective countries.

Deliverables 1.1

Running number	Deliverable title	Description	Delivery period
D.1.1.1	State of the art and framework conditions of existing habitats	Reports for each individual study area with edaphic, bioclimatic, floristic-sociological, ecological and chorological characterization and a careful analysis of the causes of degradation. All involved partners contribute. PP6 creates common document.	Period 2 , 7 - 12
D.1.1.2	Status of current habitats in the study areas	Report with demographic analysis, area occupied and structure of individual populations for selected faunistic and botanical species. Responsible for collecting contributions and creating unique report: PP7.	Period 2 , 7 - 12

Activity 1.2	
Title	Sedimentological and marine-coastal dynamics analysis
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	The main objective concerns achieving a sedimentology knowledge of the targeted sites. Some areas are lacking of data as for example input-output balances, sediment exchange volumes in relation to anemometer regime etc. According to the Commission's guidance on the evaluation of integrated coastal zone management, data collection activities and the effective exchange of information should be further strengthened and used more for policy and decision-making. Therefore, the action is aimed at mapping the detailed land and sea-scale sedimentary cover of the sand system (dune - emerged beach - submarine beach) by systematic sampling with appropriate mesh size and laboratory analysis (e.g., grain size, composition, facies associations), balances of sedimentation, evaluation of evolutionary trends (retreat, advancement stability) and modeling of significant events. Within the complex and articulated coastal sedimentary and morphological system, of the sites subject of the intervention, the dune occupies a position behind the emerged beach and is the site of sediment transport and accumulation produced by wind activity that finds nourishment precisely in the beach area in front (also intertidal) and underwater. This exchange of sediment impedes the identification of the coastal dune (FOREDUNE) the only deposit that plays an active role in the complex and delicate processes that regulate the littoral environment and its balance. In fact, they act as a protection for secondary, stabilized, and semi-stabilized dune complexes. The goal is to undertake quantitative research using advanced measurement techniques on the mechanisms behind dune generation and evolution. This will be done through observation, modeling of relevant littoral dynamics processes, and analysis of interactions between these processes. The results of these analyses will serve to design the impact mitigation interventions

Activity 1.2	
	proposed in the following WP3 and monitor their effectiveness. Each location offers unique characteristics in terms of morphology, evolution, orientation, geological substrate, sedimentological deposits (slope, fluvial, and marine), and evidence of degradation brought on by careless use of the resource, and effects of winds on the geometry and morphology of sandy deposits. All project partners are involved in their respective countries.

Deliverables 1.2

Running number	Deliverable title	Description	Delivery period
D.1.2.1	Monitoring protocols and study on sedimentological regime of the intervention areas	Report summarizing the protocols - i.e., detailing methodology and tools - for monitoring and recording the sedimentological and coastal dynamics of the intervention areas and conclusions thereof. Responsible for collecting all contributions from PPs: LP.	Period 2 , 7 - 12

Activity 1.3	
Title	Habitats Mapping
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18
Description	The action involves the detailed survey and mapping of habitats present in the study areas and their integration within a GIS system. The cartographic processing envisaged by this action is intended as a spatial interpretation of the current and potential distribution of habitats, resulting from the joint analysis of basic data acquired from field surveys. These concern the survey of floristic-vegetation dynamics and arrangement and sedimentological-geomorphological characters and processes. In fact, the integrated analysis of the geomorphological, sedimentological, faunistic, and vegetation components within the dune systems makes it possible to identify the different morpho-vegetational components. Sedimentary accumulation processes within foredunes, those of progressive stabilization of sand formations, or even

Activity 1.3	
	erosion phenomena by wind or human activities, are related to floristic species and their associations. The analysis of these dynamic relationships between the physical and floristic-vegetational systems enables the identification of the conditions of balance of the system, the possible evolutionary trend (accumulation and erosion) and any criticalities in progress. For the study area the input database will include the Digital Terrain Model (DTM); map of land-use including critical facilities geo-referenced maps of habitat types and species including rare species, rare habitats, habitats relevant for coastal protection, as well as the position of most environmentally-impacting anthropic interventions. The maps will include: - Map of landscape units; - Map of overall anthropic pressure; - Map of Overall Ecological Value (environmental quality); - Map of overall ecological sensitivity; - Map of territorial vulnerability. The main results obtained by the Project will be then extended through the web to the general public, that would so explore - and, in case, download - the main cartographic information about the analyzed sites and relevant technical/environmental characteristics. To this aim, the GIS will be calibrated in selected geographical areas through in-situ surveys and satellite data (Landsat/Sentinel). The open-access GIS will be interactive, making all services openly accessible online through free applications. The mapping of habitats constitutes a fundamental aspect for achieving a planning detail, lacking or completely missing in the already existing Management Plans, and which is necessary to implement with greater accuracy the concrete conservation actions (WP2). In areas for which the Management Plan has not yet been drafted, mapping is the time for knowledge of the distribution of habitats and species and the definition of their qualitative-quantitative status necessary to plan the conservation actions (WP3) and to give a useful long-term cognitive tool. All PPs are included in this task.

Deliverables 1.3

Running number	Deliverable title	Description	Delivery period
D.1.3.1	GIS	GIS tool structured on different levels, encompassing, aong others, pieces of information about sedimentological-geomorphological characters, habitats and species living in the target study area, and those endangered. POLIBA is responsible for delivering the GIS with all PP contributing with data.	Period 3 , 13 - 18

Activity 1.4

Title	Analysis of fruition impacts on habitats
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	To identify the key environmental characteristics and load-bearing processes that control the evolution of sandy systems (beach and dunes), as well as in relation to the resource's use, detailed environmental analyses of the coastal territory and the recognition of the sandy shorelines' fruition system are undertaken. Sector analyses help define the various levels of sensitivity of morpho-vegetational and sandy systems, highlighting the propensity of the environmental system to reveal situations of disequilibrium and criticality in response to any perturbing actions or events. This character also seems to be useful in determining the beaches' carrying capacity, allowing one to specify the number of individuals in relation of the sizing of sensitive and non-sensitive components. A methodological approach based on the recognition of pressure factors, analysis of current and potential critical issues that threaten the conservation of habitats, and identification of specific actions (responses) suitable for habitat conservation is used to assess the potential interference between tourist-bathing fruition and the dynamics environment, habitats, and wildlife environments of sandy and wet compendiums (dunes, beaches, and ponds). Analysis of the impacts of fruition of the habitats allows an estimation of the potential interference between the activities and services associated with fruition and the environmental balances. This knowledge framework provides the

Activity 1.4	
	essential prerequisites for the planning of fruition (including the assessment of the carrying capacity of the sandy compendium), the planning of interventions, and the definition of regulatory measures. All PPs are included in this task.

Deliverables 1.4

Running number	Deliverable title	Description	Delivery period
D.1.4.1	Impacts of fruition	Report summarizing the results from the analysis on the impacts of fruition made on each study area at country level. UNIRI-OBRI is responsible for collecting contributions from all partners and delivering one joint report.	Period 2 , 7 - 12

Activity 1.5	
Title	Management and communication of WP1
Start period	Period 1, 1 - 6
End period	Period 3, 13 - 18
Description	As a leader of WP1, UNIRI-OBRI will coordinate the efforts made by the involved PP for the data gathering, visualization and identification of the fruition impacts. UNIRI-OBRI will be supported by PP8 and PP10, which will have the role of co-leaders, facilitating internal communication and timely achievement of the WP specific objective. In their role as co-leaders, they will also be responsible for the actions foreseen by the program, regarding publicity and transparency of public funds, and will be responsible for creating by-weekly update emails for all PPs. Steering committees will be organized every 6 months: one kick-off meeting in M1 (in Bari) of the project and a meeting every period (Albania M7; Bosnia and Herzegovina M13; Croatia M18). Scientific conferences throughout Europe (such as but not limited to GEODAYSIT - Italy, ISAE – Serbia, ATAE – Croatia, ECOMONDO – Italy, AGROSYM – Bosnia and Herzegovina) targeting academia and research institutions, will be attended by the project partners.

Deliverables 1.5			
Running number	**Deliverable title**	**Description**	**Delivery period**
D.1.5.1	Technical and financial reports	Each PP is responsible for producing their own financial report and submitting it to the LP, who will produce the joint financial report every 6 months. Each PP contributing to WP1 will submit the technical report to the WP leader.	Period 3, 13 - 18
D.1.5.2	Reports on communication and dissemination events	Reports on all external communication and dissemination events delivered by all the involved partners.	Period 3, 13 - 18

Outputs

Output 1.1	
Output Title	Delivering a GIS to contextualize the preservation and restoration interventions
Programme Output Indicator	RCO116_2.3: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 3, 13 - 18
Output Description	Using joint data gathering on habitats, sedimentological and marine-coastal dynamics in the whole study area will allow to create a basis for future planning of the interventions and works for the conservation and the restoration of coastal dunes across the countries involved in the project.

Work package 2

Work package title

Pilots design and implementation

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this work package, and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all activities in this work package are implemented and outputs delivered.

The SO of this WP is to implement pilot actions that allow for the preservation of endangered coastal dune habitats, through co-design and co-creation approaches (with stakeholders' involvement).

Think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief.

One of the communication objectives is to stimulate demand for further preservation and restoration measures in the area. In this sense, several public authorities in the areas of the pilot actions will be targeted with dissemination events and a particular attention will be given to targeting locally active NGOs on the fruition of these interventions and their importance for local habitat preservation and restoration.

Activities

Activity 2.1	
Title	Design of pilots on recovery and restoration of degraded dune habitats
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18
Description	Diffuse processes of degradation, erosion and dismantling of dune formations cause a sedimentary disequilibrium in the coastal system and are mainly attributable to the widespread and uncontrolled use of the dune area, former sand-removal activities and the indiscriminate cutting of vegetation in the backdune. In order to restore such areas, certain actions are required. Therefore, the

Activity 2.1	
	activity consists of the planning of interventions for the restoration and rehabilitation of degraded dune habitats, present at the following pilot sites: Isola di S. Andrea e litorale di Punta Pizzo Regional Park in Italy (responsible: PP2); Preveza coastal area in Greece (responsible: PP3); Velika plaža in Ulcinj in Montenegro (responsible: PP8, authorizations from PP9); Klek peninsula in Bosnia and Herzegovina (responsible: PP10). Given the environmental sensitivity of these habitats, naturalistic engineering techniques and materials such as wood, fiber nets made of coconut, reeds, and ropes will be used to minimize the impact on the ecological balances of the dunes and on the floristic-vegetational component, in view of a natural "extinction" of the intervention. In addition, it is planned to implement the seeding and planting of native species whose seeds, collected and cultivated as part of activity 2.3, so as to pursue the goals of reestablishing geomorphological-vegetation balances. Plantings and seeding will be carried out exclusively from native germplasm collected at the intervention sites or in neighboring areas if it is genetically compatible. The interventions, aimed at recovering the spontaneous processes of formation and consolidation of the dunes, are represented by: (a) Stabilized dune protection systems with the aim of protecting those dunes where the phenomena of erosion and trampling scaling. (b) Sand trapping systems with the purpose of trapping sand that, accumulating within the structures like e.g., reeds promote the process of formation and evolution of embryonic dunes, as well as the process of spontaneous growth of pioneer vegetation. (c) Renaturation systems of degraded dune sectors: for the reconstruction of the dune vegetation where phenomena of its degradation and depletion are evident. The task foresees the organization of ideas competition to design interventions on coastal dune and marine protection areas. Students from each research entity (Polytechnic of Bari (IT), Faculty of Science (MNE), CTI (GR) and HEIS (B&H) will present research ideas for sustainable interventions. The call, with free participation, will be open to all researchers and students (PhD), as well as of design

Activity 2.1	
	and civil and environmental engineering. A prize will be foreseen for the winners and the best intervention will be tested in at least one pilot-areas. POLIBA will design the pilot actions and propose the partners different possibile design scenarios depending on the local specificities of the target area.

Deliverables 2.1

Running number	Deliverable title	Description	Delivery period
D.2.1.1	Pilots designs and protocols for interven tions	Reports containing graphic drawings of preservation and restoration interventions (one for each pilot site) and protocols detailing interventions in each site. The outcomes of the ideas competition will be the basis for the design of pilots. POLIBA is responsible for this deliverable.	Period 3 , 13 - 18

Activity 2.2	
Title	System of remote monitoring of planned interventions and their impact
Start period	Period 2, 7 - 12
End period	Period 4, 19 - 24
Description	Remote monitoring systems are largely used (i) for monitoring of extreme events as early warning systems and for a correct risk management, and (ii) for smartly keeping the track of living organisms and helping in biodiversity conservation and restoration. Remote monitoring systems collect and transmit data collected from several sensors that have been installed on offshore assets or on coastline. Among different strategies for remote systems, video monitoring is considered a useful tool especially for coastal risk management. It allows monitoring of the coastline evolution and risk analyses connected to storm surges, with the advantage to be synoptic and non-invasive. Video systems can provide long-term data, which are collected continuously in time and required for coastal vulnerability assessment. The advantages of remote sensing through video systems favored a wide spread of this technique in

Activity 2.2	
	coastal monitoring over the world for proper management of the coastal areas, for the setup of early warning systems and for the biodiversity conservation. In PREBIODUNES project we will use a low-cost video-monitoring system for monitoring of vulnerability of dune systems and for assessing impacts of the intervention foreseen in the testing phase. Unconventional prototypes will be installed as coastal protection tools as well as for monitoring of impacts for each of the pilot interventions areas. The monitoring system, that it is capitalized by the previous STIMARE Project, will provide a concrete support in designing dune protection strategies and other practical natural engineering interventions. The system will be able to quantify the dune system modification through image processing of the shoreline evolution and run-up, and to calibrate an evolution numerical model including the simulation of morphodynamics processes. In addition, aiming at designing shared strategies with local stakeholders, during this phase, a “peer to peer” discussion with the local stakeholders will be implemented, this will lead to a comprehensive strategy for coastal protection, following the European Marine Strategy framework. POLIBA will provide the methodology to PP2 for the pilot in Italy, PP3 for the pilot in Greece, PP8 for the pilot in Montenegro, PP10 for the pilot in Bosnia and Herzegovina.

Deliverables 2.2

Running number	Deliverable title	Description	Delivery period
D.2.2.1	Risk assessment for coastal dune restoration	Report on factors influencing the adaptability of the coastal dune system and amplifying coastal risk (such as urbanization; land use, man-made infrastructures, the reduction of sediment supply from drainage basins, the destruction of the dune belt etc.). POLIBA is responsible for this deliverable.	Period 4, 19 - 24
D.2.2.2	Guidelines for dunes protection design	Guidelines on the design of dune protection structures and site-interventions on marine protected area. POLIBA is responsible for this deliverable.	Period 4, 19 - 24

Activity 2.3	
Title	In-situ collection and ex-situ conservation in germplasm bank
Start period	Period 3, 13 - 18
End period	Period 4, 19 - 24
Description	Ensuring the availability of native germplasm of the species that make up the priority habitats and community interest habitats is a key step in the process of conserving the flora and vegetation in environments compromised by anthropogenic pressure, such as coastal ones, characterized by high dynamism and inherent structural fragility. Effective protection of these environments must be achieved through the conservation of the structural species of the vegetation groups that form the coastal chain series. Gathering campaigns will be concentrated mainly between late spring and early fall. Guidelines will be drafted by PP6 based on internationally acknowledged standards for the gathering, handling, and preservation of the material to be collected. The genetic diversity of the source populations will be respected during the gathering process. LP, PP3, PP6, PP8 and PP10 will collect samples and will send them to PP6 for analysis and to LP for storage in the germplasm bank.

Deliverables 2.3

Running number	Deliverable title	Description	Delivery period
D.2.3.1	Germination and multiplication protocol of selected species	Germination and multiplication protocols of selected species. PP6 has responsibility for this deliverable.	Period 3, 13 - 18

Activity 2.4	
Title	Pilot construction of pedestrian accesses, light boundaries & parking areas to avoid habitat degradation
Start period	Period 3, 13 - 18

Activity 2.4	
End period	Period 5, 25 - 30
Description	Implementation of pilot interventions with the aim of removing or reducing the impact generated by transit and frequentation in general on the dune system. In relation to the current state of the areas, interventions suitable for the specific situation will be identified and subsequently constructed. Works might involve actions such as: (a) Seasonal removable walkways (placed in April and removed in October) and precarious hanging walkways made of environmentally sustainable material; (b) Light delineation of dune areas in order to discourage access: (c) Identification of vehicular parking areas to prevent cars from reaching the dune areas and discourage excessive approach to the naturalistically interesting areas The planning, design, and construction of pedestrian access and facilities to support the fruition of coastal environmental resources is based on the analysis of the sensitivities of the coastal environment and the assessment of carrying capacity, so as not to produce on the territory permanent alterations or involutions of significant environmental processes. Reduction of an important pressure factor that threatens the stability and geomorphological balances, sedimentary, and vegetation of dune systems. The results expected by these interventions are: - Reduction of an important pressure factor that threatens the stability and geomorphological sedimentary and vegetation balances of dune systems -Activation of the spontaneous evolutionary and growth processes of dunes, Restoration of the natural morphodynamic relationships between foredune and backdune -Improvement of the overall arrangement of sandy bodies and the habitats present within them. The partners involved in task 2.1 will also be involved in this task.

Deliverables 2.4

Running number	Deliverable title	Description	Delivery period
D.2.4.1	Reports of the interventions	Reports detailing the intervations made on each of the involved pilot sites. PP2, PP3, PP8 and PP10 will be responsible each for their location's interventions.	Period 5, 25 - 30

Activity 2.5

Title	Management and communication of WP2
Start period	Period 2, 7 - 12
End period	Period 5, 25 - 30
Description	As a leader of WP2, Poliba will coordinate the efforts made by the involved PP for designing and implementing the pilot actions in the study areas - one site in Italy, in Greece, in Bosnia and Herzegovina and in Montenegro. POLIBA will be supported by PP2 and PP7, which will have the role of co-leaders, facilitating internal communication and timely achievement of the WP specific objective. In their role as co-leaders, they will also be responsible for the actions foreseen by the program, regarding publicity and transparency of public funds, and will be responsible for creating by-weekly update emails for all PPs. Steering committees will be organized every 6 months: Albania M7; Bosnia and Herzegovina M13; Croatia M18; Italy - Gallipoli M24; Preveza - Greece M30. Dedicated dissemination will be done towards public authorities in the areas where the pilot actions have been implemented, through the organization of local events to disseminate the interventions carried out. Local NGOs will be targeted through events targeting the networks currently existing and active in the protected areas.

Deliverables 2.5

Running number	Deliverable title	Description	Delivery period
D.2.5.1	Technical and	Each PP is responsible for producing their own financial report	Period 5

Deliverables 2.5			
Running number	**Deliverable title**	**Description**	**Delivery period**
	financial reports	and submitting it to the LP, who will produce the joint financial report every 6 months. Each PP contributing to WP2 will submit the technical report to the WP leader.	, 25 - 30
D.2.5.2	Reports on communication and dissemination events	Reports on all external communication and dissemination events delivered by all the involved partners.	Period 5, 25 - 30

Outputs

Output 2.1	
Output Title	Pilot actions for the preservation and restoration of coastal dune areas
Programme Output Indicator	RCO84_2.3: Pilot actions developed jointly and implemented in projects
Measurement Unit	pilot actions
Target Value	4,00
Delivery period	Period 5, 25 - 30
Output Description	Four pilot constructions of conservation intervations, including but not limited to pedestrian accesses, light boundaries and parking areas to preserve habitat degradation from anthropic pressure and located in four different countries of the program area.

Output 2.2	
Output Title	Low cost systems for monitoring interventions impact
Programme Output Indicator	RCO116_2.3: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 5, 25 - 30
Output Description	Low cost video-monitoring system for monitoring the vulnerability of dune systems and for assessing impacts of the intervention foreseen in the testing

Output 2.2	
	phase.

Work package 3

Work package title

Implementation of action plan, common methodologies and tools

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this work package, and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all activities in this work package are implemented and outputs delivered.

The SO of this WP is to equip stakeholders, including public authorities, policy-makers and NGOs, with management plans, decision support systems and a Joint Action Plan for a sustainable approach to the conservation and restoration of coastal dunes ecosystems.

Think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief.

Different stakeholders, local, regional, and national public authorities and policy-makers more than others, will be targeted by this WP’s communication objective, which is to disseminate the operational tools developed throughout the project's activities and have a positive, sustainable impact on the dunes habitats of the whole program area. Several NGOs might be active in protected areas, playing an important role for monitoring and protection purposes. That's why a communication objective is to reach this target group through dissemination and networking activities, starting from those associated to the partnership.

Activities

Activity 3.1	
Title	Uptake of solutions through elaboration/adaptation of Management Plans
Start period	Period 5, 25 - 30
End period	Period 6, 31 - 36
Description	A Management Plan is a tool used to establish concrete measures for habitat conservation and environmental system preservation. To foster the most extensive interrelationship between various levels of planning and interventions that are

Activity 3.1	
	measured by environmental policies of protection, preservation, redevelopment, and sustainable development, these measures should be oriented toward maximum integration between spatial areas, policies, areas of disciplines, actors, and decision-making networks. The relationship between various plans is essential to ensure that, despite the diversity of their goals and objectives, the elements they contain are measured, compatible with land preservation, sustainable activities, and have minimal impact. The contents of the Management Plans of the intervention sites will be based on the Guidelines for the Management of Natura 2000 Sites, which are the guiding document for drafting this tool. In fact, the “Habitats” Directive (92/43 /EEC) requires “that Member States adopt, in Natura 2000 Sites, “Conservation Measures” and where necessary “Management Plans” to avoid habitat degradation and species disturbance”. The measures to be taken must be oriented towards the identification of the main threats and criticalities to which Natura 2000 SCI/SPA sites are subject, the development of habitat conservation activities and measures, and the identification of the different types of permissible interventions, in order to safeguard the naturalistic and environmental values of community interest, with a view to the sustainable development of the territory. In addition, the Commission’s guidance on Integrated Coastal Zone Management in Europe (ICZM Recommendation), which proposes a strategic approach to coastal zone planning and management aimed at achieving sustainable development, will also be considered. Management Plans will be drafted for the sites where the pilots have been implemented as well as for other sites relevant at the country level. Where existing, management plans will be updated and adapted. The partners involved in task 2.4 are also involved in this task.

Deliverables 3.1

Running number	Deliverable title	Description	Delivery period
D.3.1.1	Management Plans	Management Plans will be drafted and published for those sites where pilots have been established as well as for sites that are of national interest for the countries involved in the project. PP2,	Period 6, 31 - 36

Deliverables 3.1			
Running number	**Deliverable title**	**Description**	**Delivery period**
		PP3, PP8 and PP10 will be responsible each for their location's management plan.	

Activity 3.2	
Title	Implementation of WEBGIS and SDSS
Start period	Period 5, 25 - 30
End period	Period 6, 31 - 36
Description	Following the realization of GIS in WP1, a powerful Web-GIS platform will be established for accessing, creating and editing maps from an open-access and freely accessible GIS. Data will be shared using Open Geospatial Consortium compliant web services, as well as displayed via Web Map Service (WMS – an interface to request portions of a map over the internet) or downloaded via a Web Feature Service (WFS – an internet-based access to spatial data within the GIS). With a WFS with Transactions, data would be edited by authorized actors (e.g., project partners; future public/private stakeholders potentially involved in the management of coastal areas; etc.) directly over the web service. Moreover, always basing on the Project GIS realized in WP1, a Spatial Decision Support System (SDSS) will be implemented as well, to provide functions for storing, managing, analyzing and displaying spatial data, useful to help decision-makers in the process of problem-solving. A SDSS is a computer-based software exploratory tool, which allows to assess the conditions of a system under a variety of scenarios and the consequences/impacts of different planning choices. Indeed, while planning coastal risk management strategies, coastal dunes managers need to assess risk across a range of spatial and temporal scales. The SDSS will reveal as a suitable way to support them in the decision-making process, through a scenarios analysis, starting from technical, economic, environmental and social information, integrated into a common platform. This integration process will be based on Project results, which will allow to: -) identify the

Activity 3.2	
	appropriate scales and data resolution for analyzing social, environmental and economic issues; -) selecting and linking an appropriate set of tools to implement appropriate planning strategies; -) representing key emerging (and hence challenging) issues, e.g.: risk perception and social resilience; -) developing multi-criteria analysis to integrate social, environmental and economic impacts; -) accounting for the expectations of the stakeholders and therefore optimizing the opportunity for them to interact with the tool development and with the final tool itself. The SDSS that will be developed will therefore help decision makers to scope optimal strategies to minimize coastal risks. The exploratory tool will allow the users to perform an integrated coastal risk assessment, to analyse the effects of different combinations of engineering, social, economic and ecologically based mitigation options, across short, medium and long-term scenarios, taking into account physical and non-physical drivers, such as climate change, subsidence, population and economic growth, etc. LP (as a supervisor) and PP4 (for the actual implementation) will participate to this task.

Deliverables 3.2

Running number	Deliverable title	Description	Delivery period
D.3.2.1	PREBIODUNES Spatial Decision Support System	SDSS will provide functions for storing, managing, analyzing and displaying spatial data, useful to help decision-makers in the process of problem-solving. POLIBA and PP4 will be responsible for this deliverable.	Period 6, 31 - 36

Activity 3.3	
Title	Creation of a flora-vegetation and abiotic database for the long-term management
Start period	Period 3, 13 - 18
End period	Period 5, 25 - 30
Description	This action involves the creation of a database for the management of information and data on the

Activity 3.3	
	floristic-vegetation type (autoecology and synecology of the species), the faunistic spieces, and the abiotic (coast geomorphology, currents, winds, climatic data). Such a database will be implemented based on the information found in WP1 and will be an indispensable tool during the development of the activities of WP2. The design and implementation of the database structure is scheduled for the first half of the project, while data entry must be completed within the second year and in any case after the closure of WP1 activities. Public dissemination can only be carried out once the database is completed and available online at the web page of the project, with a section specifically created for consultation by external users. PP6 will be responsible for gathering the data from all the partners and producing the database. Following partners are involved: LP, PP4 (for the actual implementation of the database), PP6, PP7.

Deliverables 3.3

Running number	Deliverable title	Description	Delivery period
D.3.3.1	Database of habitats in the region	The database summarizes different types of information on flora, fauna, geomorphology, and climatic data, among others. This will cover all the countries involved in the project partnership and will have a particular focus on protected areas or areas of national interest. PP4 delivers the database.	Period 3 , 13 - 18

Activity 3.4	
Title	PREBIODUNES Joint Action Plan for the whole ADRION Programme area
Start period	Period 5, 25 - 30
End period	Period 6, 31 - 36
Description	The PREBIODUNES Joint Action Plan (PJAP) encourages a collaborative approach to address common problems and set goals for environmental sustainability and resilience among grassroots, local, and regional stakeholders. The PJAP aims to join all relevant stakeholders under a common strategy to ambitiously implement

Activity 3.4	
	recommendations to improve the well-being of coastal ecosystems and allow them to thrive for the sake of future generations. The recommendations will outline actions needed to mitigate and eliminate threats and stressors that adversely affect the ecological integrity of coastal ecosystems. The coastal area requires a balance between ecological integrity, recreation, and economy. This balance is achieved by creating realistic recommendations that bridge coastal communities with the ecosystems that surround them. The PJAP will attempt to determine the actions needed to ensure that the coastal ecosystem is resilient to change and increasing threats and is managed in a sustainable manner. Therefore, it will establish: who will implement these changes; when these changes need to take place (long and short term); which threats and stressors are prioritized based on location and natural sensitivities affected; and what resources are needed to complete projects or eradicate threats. All partners are responsible for the drafting of the PJAP.

Deliverables 3.4

Running number	Deliverable title	Description	Delivery period
D.3.4.1	PREBIODUNES Joint Action Plan	JAP with the aim of creating a common vision for the conservation of the dune environment of the eligible areas involved in the proposal. All partners contribute to a joint document, coordinated by the WP Leader.	Period 6, 31 - 36

Activity 3.5	
Title	Management and communication of WP3
Start period	Period 3, 13 - 18
End period	Period 6, 31 - 36
Description	As a leader of WP3, EPA will coordinate the efforts made by the involved PP for the uptake of solutions through the adaptation of Management Plans, and the definition of a PREBIODUNES Joint Management Plan. EPA will be supported by PP3 and PP8, which will have the role of co-leaders, facilitating internal

Activity 3.5	
	communication and timely achievement of the WP specific objective. In their role as co-leaders, they will also be responsible for the actions foreseen by the program, regarding publicity and transparency of public funds, and will be responsible for creating by-weekly update emails for all PPs. Steering committees will be organized every 6 months: Bosnia and Herzegovina M13; Croatia M18; Italy - Gallipoli M24; Preveza - Greece M30; Montenegro M36. Furthermore, dedicated dissemination will be done towards public authorities through the organization of one public event together with the workshops that will be organized by each country at the end of the project, with the aim to increasing awareness on the needs and available tools for intervention.

Deliverables 3.5

Running number	Deliverable title	Description	Delivery period
D.3.5.1	Technical and financial reports	Each PP is responsible for producing their own financial report and submitting it to the LP, who will produce the joint financial report every 6 months. Each PP contributing to WP3 will submit the technical report to the WP leader.	Period 6, 31 - 36
D.3.5.2	Reports on communication and dissemination events	Reports on all external communication and dissemination events delivered by all the involved partners.	Period 6, 31 - 36

Outputs

Output 3.1	
Output Title	PREBIODUNES Joint Action Plan
Programme Output Indicator	RCO83_2.3: Strategies and action plans jointly developed
Measurement Unit	strategy/action plan
Target Value	1,00
Delivery period	Period 6, 31 - 36
Output Description	Action plans at regional levels will be drafted for all countries involved in the project, including tools,

Output 3.1	
	methodologies and timeplans to draw a roadmap for the preservation, restoration and future thriving of the complex ecosystems forming the coastal dunes of the Interreg IPA ADRION Program area.

Work package 4

Work package title

Advancing the knowledge base and stakeholders' involvement

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this work package, and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all activities in this work package are implemented and outputs delivered.

The SO of this WP is tocreate a solid basis for the results to be transferred to the targeted stakeholders, while making sure that the developed transferred solutions are sustainable and can be effectively capitalized upon.

Think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief.

Quadruple-Helix representatives with active interests in coastal dunes areas will be targeted by this WP’s communication objective, which is to build awareness and capacity for sustainable dunes preservation and restoration. The training activities as well as the technical and Thematic Cluster events foreseen in this WP will be the means to transfer the knowledge and disseminate the project’s outputs and results to a wide spectrum of stakeholders at local, regional and national level.

Activities

Activity 4.1	
Title	Development of training packages and In-Situ Learning Labs
Start period	Period 3, 13 - 18
End period	Period 6, 31 - 36
Description	Training actions are essential for maximizing effectiveness in the PREBIODUNES involved areas. The training packages will consist of dedicated training modules for different target groups. On the other hand, the in-situ Learning Lab aims at increasing the knowledge of the areas' native flora and fauna, conservation and restoration techniques,

Activity 4.1	
	and monitoring methods, to positively influence community members' attitudes towards local biodiversity conservation and their ability to contribute meaningfully to local conservation efforts. The activity will involve the following target groups: - students, teachers, and the general public, and aims to illustrate the impact of human activities on the health and composition of natural species, appropriate interventions for their recovery in order to inspire environmental stewardship. - volunteers and staff of the NGOs, active locally in the protected sites, to increase capacity for monitoring and reporting potentially harmful events and patterns caused by anthropic activities. - managers and technicians in order to reinforce and increase actual capacity at the partner sites to define strategies and draft integrated management plans for sustainable conservation and management of coastal dunes sites. In the Learning Labs, training activities on the use of GIS/DSS /WEBGIS tools and in the management plans development will be carried out. The events will be organized in each of the four sites where the pilots have been established. All partners are involved in this task, and training labs will be organised by: PP2 in Italy, PP4 in Greece, PP5 in Albania, PP6 in Croatia, PP8 in Montenegro, PP10 in BiH.

Deliverables 4.1

Running number	Deliverable title	Description	Delivery period
D.4.1.1	Training package	Training materials collecting information regarding the areas' native flora and fauna, conservation and restoration techniques, and monitoring methods. PP2 will lead the task and all partners will contribute by adding local habitat's specificities.	Period 5 , 25 - 30

Activity 4.2	
Title	Technical event for Decision Makers and project final conference
Start period	Period 6, 31 - 36
End period	Period 6, 31 - 36

Activity 4.2	
Description	Technical events targeted at the regional and national authority levels will aim at strengthening the technical capacity of the key practitioners. This will encourage synergies with other regional and national bodies responsible for sensible area management, and promote capitalization of the project's results, promoting an integrated approach to the management of dunes habitat sites. The target groups of these technical events are representatives of local communities and public authorities at local and regional level, to understand best practices, increase knowledge about the environmental impact of habitat fruition and further capitalize on the project's results (e.g., citizen and community environmental initiatives, municipal organizations, NGOs, sectoral business organizations, ethnic minorities). Every participant country will organize at least one technical event (PP2 for Italy, PP4 for Greece, PP5 for Albania, and PP9 for Montenegro). A final conference to present the project's result will be held in Bari and organized by the LP.

Deliverables 4.2

Running number	Deliverable title	Description	Delivery period
D.4.2.1	Technical events	Reports including minutes, presentations, participants and outcomes from the technical events held in each of the participating countries. Responsible partners are PP2, PP4, PP5, PP6, PP9, PP10.	Period 6 , 31 - 36

Activity 4.3	
Title	Capitalization action: organization/Participation to ADRION Thematic Clusters
Start period	Period 6, 31 - 36
End period	Period 6, 31 - 36
Description	In line with the requirements of the Program, this task aims at setting up strategies for facilitating the exploitation, sharing and reuse of knowledge, experiences, and results of the PREBIODUNES project and ensuring effective actions for their

Activity 4.3	
	capitalization. The capitalization events in the project have been categorized as: I) Dissemination events: Participation of project partners in different international exhibitions (at least 1); Pilot dissemination events (1 for each pilot site); Capitalisation event within Thematic Cluster (1) ii) Training and Capacity Building: Workshop (1 for each country), Training events/earning Labs (1 for each country); Idea Competitions (1), Technical Events (1 for each country) iii) Policy advocacy: Events for Network establishment (1), participation in joint events with other members of the Thematic Cluster and of the thematic community projects to consolidate and create networks for collective dissemination, transfer, and integration of the project's results. Within this category, it is foreseen the organization of a macroregional event within the Thematic Cluster in month 35 of the project, organized by LP.

Deliverables 4.3			
Running number	**Deliverable title**	**Description**	**Delivery period**
D.4.3.1	Macroregional Thematic Cluster event	Event-related documentation, reporting on the participants, agenda, presentations, discussion and brainstorming results, among other elements. LP will organize the event, and PPs will participate to local capitalization events if any in their countries.	Period 6, 31 - 36

Activity 4.4	
Title	Establishment of a network for macroregional dunes conservation
Start period	Period 4, 19 - 24
End period	Period 5, 25 - 30
Description	Establishment of a network between public authorities, sector companies, regional and national park managers, higher education and research institutions, NGOs, tourism professionals to carry out actions of capitalization and dissemination of project results, their transferability, and the

Activity 4.4	
	development of interconnections, synergies, and links between members, in order to promote and disseminate the project results to interested stakeholders in the program area and beyond. The Network members will have to sign a memorandum of cooperation to ensure their commitment and thus contributing to the strengthening of continuous transnational cooperation, after the end of the project, in a sector of high environmental importance, through an integrated strategic approach that will contribute to the sites' sustainable management. To sign the Memorandum of Understanding, an online coordination meeting will be organized by the LP in M30.

Deliverables 4.4

Running number	Deliverable title	Description	Delivery period
D.4.4.1	PREBIODUNES Network	Network established through the signature of a Memorandum of Understanding and signed by different stakeholders for a strengthened dissemination of the project results and their capitalization after the project's end.	Period 6, 31 - 36

Activity 4.5	
Title	Management and communication of WP4
Start period	Period 3, 13 - 18
End period	Period 6, 31 - 36
Description	As a leader of WP4, GAL will coordinate the efforts made by the involved PP for the development of training materials and the execution of local learning labs in the pilot areas. GAL will be supported by PP4 and PP5, which will have the role of co-leaders, facilitating internal and external communication and timely achievement of the WP specific objective. In their role as co-leaders, they will also be responsible for the actions foreseen by the program, regarding publicity and transparency of public funds, and will be responsible for creating bi-weekly update emails for all PPs. Quadruple-Helix representatives and NGOs staff

Activity 4.5	
	(managers, volunteers) will be targeted through the Learning Labs organized as part of the WP. Additionally, the communication objective towards the wider network will be achieved with the organization of the Thematic Cluster meeting and the participation to similar events by the LP and some other key partners.

Deliverables 4.5

Running number	Deliverable title	Description	Delivery period
D.4.5.1	Technical and financial reports	Each PP is responsible for producing their own financial report and submitting it to the LP, who will produce the joint financial report every 6 months. Each PP contributing to WP4 will submit the technical report to the WP leader.	Period 6, 31 - 36
D.4.5.2	Reports on communication and dissemination events	Reports on all external communication and dissemination events delivered by all the involved partners.	Period 6, 31 - 36

Outputs

Output 4.1	
Output Title	PREBIODUNES Network
Programme Output Indicator	RCO87_2.3: Organisations cooperating across borders
Measurement Unit	organisations
Target Value	16,00
Delivery period	Period 6, 31 - 36
Output Description	A cluster of several Quadruple-Helix representatives, involved in the conservation and restoration efforts for coastal dunes habitats (both within and outside the consortium) will be cooperating and strategizing together with the aim of providing a common response to current challenges surrounding biodiversity loss and endangerment of coastal dunes habitats.