

Alternative Scenarios

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Abstract

The alternative scenarios combine the Knowledge Framework and the Strategic Document into a single, actionable list of items, to be further defined in terms of funding and planning within the Action Plan.

What follows is a repository and a “tagcloud” of the most frequent and central issues emerged in this phase of the project. Please consult each partner documentation to find out the actions / initiatives envisaged for each scenario, and for a detailed account of the issues behind each scenario.

As a visualization tool, here’s a list of the most frequent words used in the alternative scenario phase, generated in a “tagcloud”.



IUAV

ECOLOGICAL QUALITY OF WATER BODIES	BIODIVERSITY OF HABITATS AND SPECIES	CULTURE	AGRICULTURE	ACCESSIBILITY BY LAND
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LANDSCAPE	WAVE MOTION AND EROSION	TOURISM	FISHING	ACCESSIBILITY BY WATER
INTERMODALITY	HOUSING - FACILITIES	OTHER		

NATURA HISTRICA

NEW MANAGEMENT PLAN	SOLVING ILLEGAL PROPERTY ISSUES	BETTER REGULATION VISIBILITY	NEW PERSONNEL	NEW PROTOCOL OF SURVEILLANCE
IMPROVEMENT OF TRAFFIC INFRASTRUCTURE	RESEARCH AND MONITORING OF ECOLOGICAL CONDITIONS OF WATER AND SEDIMENT	MANAGEMENT OF HABITATS TO IMPROVE STATUS OF SOME SPECIES	BIRD MONITORING	MAINTENANCE OF THE AREA – CLEANING, REMOVING VEGETATION
REVALORISATION AND DEVELOPMENT OF CULTURAL TOURISM	INCENTIVES FOR REVITALIZATION OF TRADITIONAL ECONOMY AND ECOLOGICAL PRODUCTION	PRODUCTION OF MARKETING STRATEGY AND NEW TOURISTIC ITINERARIES	DEVELOPMENT STRATEGY FOR BRANDING OF PALUD THROUGH EU PROJECTS	

NATURA JADERA

LOCAL COMMUNITY GOVERNANCE	STAFFING AND NEW QUALIFIED PERSONNEL	DEVELOPMENT PLANS	PROTECTION OF ENDANGERED SPECIES	PROTECTION FROM ENVIRONMENTAL HARM
MONITORING SYSTEM	COMMON PLAN AND TOURISTIC SUSTAINABILITY			

PIDNC

RECOGNITION IN THE LOCAL COMMUNITY	PRESERVATION AND PROTECTION OF HABITATS	RASINING AWARENESS IN THE GENERAL PUBLIC	CROSS-INSTITUTIONAL DECISIONS AND PROCESSES	
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PTNBO

WETLAND CONTRACT AS A DECISION HUB	RE-ACTIONING OF THE 2014'S VAL D'OFANTO PACT	INTEGRATED TERRITORIAL INVESTMENTS	SYSTEMIC POTENTIAL OF HABITATS	RIVER RESTORATION
MULTI-FUNCTIONAL APPROACH	RENEWABLE ENRGY SOURCES			

SAN BENEDETTO DEL TRONTO

STAKEHOLDERS INVOLVEMENTS	NEW GOVERNANCE TOOLS	KNOWLEDGE AND DATA SHARING	IMPROVING WATER QUALITY	RECYCLE AND REUSE OF WATER RESOURCES
SAFETY OF HYDRALICS	CONTRASTING COASTAL EROSION	PROTECTING NATURE AND BIODIVERSITY	MITIGATE DEGRADATION	CONTRASTING AND MITIGATING CLIMATE CHANGE
SUSTAINABLE AGRICULTURE	HISTORICAL AND CULTURAL LANDSCAPE	TOURISTIC USE	ENVIRONMENTAL EDUCATION AND AWARENESS	

UTI

COMMON STRATEGIES AND PROJECTS	CONTRACTS COORDINATION	IMPROVE LAGOON WATER BALANCE	IMPROVE WATER QUALITY	SUSTAINABLE MOBILITY
PROTECT BIODIVERSITY	RESTORE LAGOON MAIN CANAL DEPT	TOURISM		

REPORT OF ALTERNATIVE SCENARIOS

Iuav University of Venice
Northern Lagoon of Venice

Deliverable 4.3.1 – English summary

Final version date: 15/04/2021

Notes:

1) A.4.3 Drafting the Wetland Contract

The activity aims at implementing and subscribing the one Wetland Contract in each target area through the following progressive steps:

- identifying the institutional management bodies for the Wetlands Contracts (Coordinating Committee / Management Board and Technical Secretariat);
- developing of Territorial Labs for the participated governance;
- defining mid-long term strategic scenarios;
- sharing and assessing the strategic scenarios;
- drafting and subscription of the formal agreement of the Wetland Contract during the Local Final Conference (press conference).

The actors subscribing the Contract will be committed of: (i) acting in the frame of valorising of the subsidiarity principle, in respect of every actor's competences; (ii) activating all the partnership tools; (iii) keep working and monitoring the process even after the project end.

2) D.4.3.1 Report of Alternative scenarios

Each target area will report about the different scenarios proposed for the assessment to the Territorial Labs. The report contains the criteria used for their development and the explanation of the differences.

3) This template has been developed by UNICAM (University of Camerino). It is inspired by and coordinated with the documentation elaborated in the Project WETNET financed under Interreg MED Cooperation Programme to increase information share, data and opportunities of confrontation.



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REPORT OF ALTERNATIVE SCENARIOS

(deliverable 4.3.1 – English summary)

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A. TREND SCENARIO

This scenario seeks to reproduce the continuity of current trends in three strategic areas: governance, environment and economic and social development. In this scenario the involvement of citizens is limited, management and the conservation policies do not encourage the involvement of all territorial stakeholders. Therefore, it represents the continuation of the present development pattern, and it is not considered as the optimal framework for the achievement of the objectives, against the degradation of natural spaces.

[Please provide a sort description]

The scenario combines the **Knowledge Framework** (*Documento Conoscitivo - doc1*) and the **Strategic Document** (*Documento Strategico - doc2*).

The **Knowledge Framework** (doc1) refers to the section “Trends and critical issues”.

It describes the phenomena underway with the aim of describing how the lagoon is changing, provides data on the transformations of the individual items indicated in the index and highlights the criticalities and pressures for each of these. It includes the information collected in the Knowledge Document and recognises the main values by associating them with the transformations. It includes information gathered from the territorial lab (“Local observation”) and the information included in the official documents (“Official Documents”).

The **Strategic Document** (doc2) refers to the section “Aims and current measures”.

It describes the trend scenario for the Venice Lagoon based on the adopted plans and other official documents (technical reports, strategic assessments, etc.); it provides the data for the individual items listed in the index and highlights for each of these the plans that deal with them. It includes information gathered from the territorial lab (“Local observation”) and the information included in the official documents (“Official Documents”).

Both Knowledge Framework and Strategic document are organized according to the three Thematic Tables titled #1 Ecological and Hydromorphological protection; Wave management; #2 Productive and recreational activities – Agriculture, hunting and fishing; Promotion and tourist reception; table #3 Housing – Policies, facilities and services; Accessibility and usability.

For each table, a document presenting the alternative scenarios has been developed.

The documents explore a series of topics that have been selected from the listening activities and territorial labs (Table #1: Ecological quality of water bodies; 1.2 Environmental health; 1.3 Landscape;

1.4 Biodiversity of habitats and species; 1.5 Hydraulic and storm surge risk; 1.6 Wave motion and erosion / Table #2: 2.1 Culture and Tourism; 2.2 Agriculture, hunting and fishing/ Table #3: 3.1 Housing; 3.2 Mobility).

All information reported in the table are a selection of a more articulated document (see Annexes 4.3.1_1,4.3.1_2,4.3.1_3)

TREND SCENARIO			
Strategic area	Topic	Trends and critical issues (Knowledge Framework - doc1)	Aims and current measures (Strategic Document - doc2)
(THEMATIC TABLE#1) Ecological and Hydromorphological protection; Wave management	1.1 Ecological quality of water bodies	<p><u>Local Observations highlight:</u> plastic from mass tourism waste all over the lagoon; presence of heavy metals in the water; presence of material residues from hunting and fishing; inefficient separate waste collection, especially during the peak tourist season; phyto-purification plants historically in need of maintenance</p> <p><u>Official Documents highlight:</u> the ecological status of the Venice lagoon is significantly lower than the expected quality objectives and the ecological status/potential for heavily modified water bodies (historic centre and northern lagoon valleys) are currently not defined. Industry, transport and urban development are the main determinants causing point and diffuse pressures on the water bodies in question. In the absence of firm action on integrated environmental management of the lagoon ecosystem (natural and anthropogenic), the ecological quality of the northern lagoon of Venice will not achieve the quality objectives set.</p>	<p><u>Aims:</u> "Sufficient ecological status" is to be achieved for the water bodies of the Northern Lagoon of Venice facing the lagoon eaves, and "good ecological status" is to be achieved for all the others. No ecological quality objectives have been defined for the water bodies in the historic centre of Venice and the northern valleys.</p> <p><u>Measures:</u> preventive actions, supported by all possible regulatory and incentive tools, in order to intervene as far as possible on the generation of pollutant loads; measures to ensure favourable hydro-morphological conditions to achieve the prescribed ecological status or potential; actions for further abatement of residual loads after reduction actions, exploiting the self-purification capacities inherent in the territory, able to intervene effectively on diffuse sources; extraordinary diversion measures.</p>
	1.2 Environmental health	<p><u>Local Observations highlight:</u> the worrying presence of heavy metals from industry in the water; the input of pollutants from fertilised agricultural land in the drainage basin. We note how the plastic produced linked to mass tourism spreads throughout the lagoon; the use of polluting fuels; chemical-acoustic pollution from Marco Polo Airport. There are some positive cases: experimentation with phyto-purification in the lagoon, recovering</p>	<p><u>Aims:</u> protection and improvement of the status of aquatic ecosystems, as well as terrestrial ecosystems and the wetlands that depend on them; increased protection of the aquatic environment; an effective contribution to mitigating the effects of floods and droughts; extending the protection of water, both surface and groundwater; managing water resources on the basis of river</p>

		<p>one of the fundamental functions of transitional environments (e.g. the Lazzaretto Vecchio plant) + tidal ecotones to retain fresh water (eaves) + re-humidification (central lagoon) + reinforcement and bio-restoration (navigable canals); every spring an Ecological Day is held, aimed at cleaning the banks.</p> <p><u>Official Documents highlight:</u> water areas suffer countless daily pressures due to the exploitation of the resource and its progressive pollution; high production of special wastes coming from the production of goods and services and commercial activities; heavy pollution and degradation due to industrial and agricultural activities on exploitation of fishery resources in the Venice lagoon, with increased loss of sedimentary materials due to illegal fishing of the Philippine clam only partially limited by morphological restoration measures, with damage to lagoon organisms and traditional fishing which is difficult to quantify, with episodes of pollution in canals and waterways; emissions from fixed sources (of industrial origin, among which the industrial pole of Porto Marghera stands out); emissions from mobile sources deriving from urban and suburban vehicular traffic.</p>	<p>basins independently of administrative structures; involving citizens in the choices made; reducing concentrations of micropollutants in water and sediments; safeguarding ecosystem continuity; reducing the exploitation of natural resources, protecting health and preventing pollution.</p> <p><u>Measures:</u> Implementation of interventions aimed at improving the purification plants on the whole territory of the Drainage Basin; interventions for the realisation of estuarine phyto-purification wetlands, the realisation of the monitoring system and population awareness works; adoption of measures for the qualitative and quantitative protection of the regional water heritage; identifying suitable areas for the construction of artificial barriers, "freshwater barriers", in order to counteract the rising of the salt wedge in watercourses and the intrusion of saline water; development of the environmental monitoring platform; activation, strengthening and development of river contracts; supporting "sustainable mobility"; supporting the cycle of natural resources.</p>
	<p>1.3 Landscape</p>	<p><u>Local Observations highlight:</u> poor respect for the rules and constraints imposed to protect the landscape; lack of legislative clarity in the face of large-scale economic and political interests; protection of fragile environments and consequent compliance with constraints are affected by political trends, when they should be above them. This has often betrayed the expectations of citizens, exposing the lagoon to aggressive consumption that pays little attention to the uniqueness of the natural but also man-made landscape.</p> <p><u>Official Documents highlight:</u> the environmental components of the aquatic lagoon system are the most critical from an ecological (presence of pollutants, changes in biocoenosis, withdrawal of fish resources, etc.) and physical-geomorphological (wave motion, movement of solid sediments, erosion of margins, etc.) point of view. The causes of these criticalities also lie outside the lagoon</p>	<p><u>Aims:</u> to encourage the coexistence of the anthropic and natural systems in order to promote protection and maintenance works; to connect the "pieces" of the ecological network; to support the environmental integrity and functionality of coastal habitats and areas of high naturalness and ecosystem value; to slow down the processes of environmental and landscape degradation; to preserve the identity of the provincial territory, its structural features and functionality; to protect, recover and enhance human settlements (urban fabric, rural architecture), the environment and the lagoon landscape.</p> <p><u>Measures:</u> reactivate the formative processes of the littoral, increasing reforestation with typical essences; activate territorial crossing routes along the lagoon edge; indicate active</p>

		<p>environment, in the drainage basin (use of fertilisers, eutrophication, etc.) or derive from uses and activities (maritime navigation, tourism) whose nature and importance is such that they cannot be replaced or mitigated except over long periods of time. If no action is taken, a deterioration of the natural living conditions of flora and fauna in watercourses is expected. Salt marsh areas and coastal erosion tend to expand due to urban sprawl, with stress loads on all components (water, air, microclimates, soil, biodiversity and landscape) and a general worsening of the ecological footprint.</p>	<p>measures to safeguard the peculiarities of fauna and biotopes as a whole; identify the areas to be subjected to a ban on hunting; provide for monitoring activities and measures to regulate human presence and tourist and recreational practices; adopt the criterion of least loss of naturalness and least ecological fragmentation when regulating urbanisation processes; identify and provide adequate compensation for the loss of ecological depth; identify and specify the protection areas for the formation of parks and nature reserves; support measures to restore the landscape of wetlands along the lagoon boundary as buffer zones; contain the causes of degradation by reactivating natural defence.</p>
	<p>1.4 Biodiversity of habitats and species</p>	<p><u>Local Observations highlight:</u> a strong presence of floristic and faunal biodiversity, especially in some areas (Campalto, Dune, Alberoni, Oasi Trepalade); deterioration of habitats due to environmental conditions (exceptional high waters, excessive currents); the presence of aggressive tourism which damages some environments in particular (e.g. Dunes); erosion of lagoon biotopes (salt marshes, mud flats, etc.) caused by wave motion; the uplifting of shallow waters caused by the use of scrapers or the farming of monocultures (conflict with the world of hunting and professional fishing). <u>Official Documents highlight:</u> the presence of biotypes capable of fulfilling precise ecological functions and the simultaneous endangering of bio-stabilizing vegetation due to anthropogenic activities; a worsening of the environmental quality of the most fragile and vulnerable valuable areas with direct and indirect effects on biodiversity, on the natural and anthropogenic features of the lagoon landscape, on the quality of life of resident populations and on the development of traditional activities and economic sectors</p>	<p><u>Aims:</u> to protect the lagoon system with policies for the environmental enhancement and qualification of border areas, the drainage basin and relations with the urban system involved; to limit the impoverishment of ecosystems in productive and urbanised areas; to protect and enhance the areas included in the Natura 2000 Network; to ensure a balance between environmental ecosystems and human activities; to maintain and restore typical lagoon habitats; to conserve and increase biodiversity; to reduce impacts. <u>Measures:</u> promote the reconstitution of seabed vegetation; protect the system of environmental values present in the territory and the conditions that lead to environmental fragility; develop traditional and/or innovative land management techniques for the conservation of biodiversity; promote biosecurity; preventing and reducing or eliminating the impact on ecosystems, habitats and native species resulting from the introduction of alien species; supplementing ecosystem and scientific knowledge, particularly of pressures on the biosphere (flora and fauna) and on the integrity of the territory; encouraging the recovery, protection and</p>

			enhancement of particular biotopes with particular regard to the smaller islands in the lagoon and the forts.
	1.5 Hydraulic and storm surge risk	<p><u>Local Observations highlight:</u> floods along the mainland drainage network, high water phenomena in the Venice Lagoon, exposure of the coastline to storm surges.</p> <p><u>Official Documents highlight:</u> the increasing waterproofing of the territory together with the impoverishment of the drainage network, which is no longer adequate to cope with current runoff, leads to widespread critical hydraulic situations throughout the entire hydrographic system (more than 200 areas subject to flooding, 70% of which are in agricultural use, characterised by floods that in 60% of cases occur between 5 and 20 years). The Venice Lagoon is also affected by high water phenomena (linked to astronomical and meteorological aetiological factors, exacerbated by the effects of climate change) and the coastline is exposed to the risk of storm surges.</p>	<p><u>Aims:</u> the Piano di Gestione del Rischio di alluvioni (PGRA) [Flood Risk Management Plan] aims to reduce the negative consequences for human health, land, property, environment, cultural heritage and economic and social activities resulting from floods (including storm surges).</p> <p><u>Measures:</u> meteo-marine monitoring and forecasting system for the purpose of alerting with regard to the risk of coastal-lagoon flooding and river mouths and agreement between ISPRA and the Veneto Region for the use of the relative data in relation to the functions of the Civil Protection for the coastal areas of the Piave basin; interventions for the safeguarding of Venice and the Lagoon for which the State is responsible, in implementation of Law 798/84 (MOSE system), including monitoring and forecasting activities; annual maintenance and integrated management of the coastal area; surveys and analyses of the river mouth areas.</p>
	1.6 Wave motion and erosion	<p><u>Local Observations highlight:</u> heavy motorboat traffic, especially during the summer period; the presence of boats not adapted to the lagoon bed; the violation of speed limits; the lack of control by the bodies in charge; the lack of education on mobility in the lagoon and the lack of respect for those using rowing boats.</p> <p><u>Official Documents highlight:</u> the compromise of the environmental functionality of lagoon morphologies and the ecosystem, highlighting the fundamental role of intertidal elements such as salt marshes and mud flats, as well as the micro-relief of the lagoon bed, which are threatened by erosion. The morphological structures of the northern lagoon are characterised by higher average elevations and a generally lower erosion rate than those observed in the central-southern basin of the lagoon. Erosion, in addition to causing the progressive reduction of intertidal morphologies, generates sediment</p>	<p><u>Aims:</u> to contrast and reduce the erosion of intertidal lagoon forms, identifying possible interventions to restore and conserve the lagoon ecosystem; to reduce the net loss of sediment; to reorganise the transport system for people and goods; to locate new mooring systems for pleasure craft and tourism; to limit damage to the seabed caused by fishing methods; to improve accessibility, mobility and the transport system within the Site, favouring slow alternative forms of mobility.</p> <p><u>Measures:</u> reducing wave motion; channelling flows along the axis of the canals; encouraging the presence of marine phanerogams which stabilise the sediment by reducing erosion of the seabed; reusing sediments; building artificial morphological structures to limit sediment transport to the canals; protecting existing morphological</p>

		resuspension and water turbidity, a phenomenon that compromises the health of the lagoon ecosystems and the life of aquatic flora and fauna.	structures; raising shallow waters by deep injection; regulation and management of port, commercial, service and recreational navigation; connection between safeguard and integration policies in an instrument shared by all the eaves municipalities in relation to the UNESCO Management Plan; creation of a network for the access and enhancement of everyday Venice; adoption of measures to contain the dispersion and transport of suspended sediments.
(THEMATIC TABLE#2) Productive and recreational activities – Agriculture, hunting and fishing; Promotion and tourist reception	2.1 Culture and tourism	<u>Local Observations highlight:</u> the current "consumer" tourism leaves nothing to the visited realities; tourism appears as the main "lifeline" to the economic support of the territory; tourism is linked to the production of waste that cannot be efficiently managed in the periods of greatest pressure; there is a cultural problem concerning the conception of the exploitation of the territory starting from its richness (naturalistic and cultural). The evolutionary trends record the progressive promotion of places long considered marginal in the northern lagoon, even if there is a fear of the pressure that they might suffer. Many stakeholders highlight the desire to promote responsible tourism and recognise in this shared interest the basis for possible future projects of environmentally friendly management and infrastructure. <u>Official Documents:</u> they agree that tourism represents an important economic resource and a significant development opportunity, but the scale of the phenomenon and the dimensions it has assumed in recent years are having a considerable impact on the social fabric and the conservation of natural and cultural assets. The cultural specificities and assets present in the lagoon, as well as typical activities (crafts, agriculture) that constitute an important heritage, diversified and distributed throughout the territory, are highlighted.	<u>Both local observations and the official plans show that:</u> tourism is linked to a felt need for eco-compatibility, to be achieved through an evolution that respects environmental fragility (promotion of slow tourism) and accompanied by strong awareness campaigns; it is proposed to enhance a growing trend of "green" tourism linked to the discovery of a vast territory, its naturalness and the elements of cultural interest it contains; it is proposed to extend the tourist offer to less central places, to promote economies and typicalities that are still marginal; it is proposed to improve the infrastructure of the territory; it is proposed to include cultural training paths.
	2.2 Agriculture, hunting	<u>Local Observations highlight:</u> the concerns of stakeholders, who are aware that the balance of the lagoon environment is an essential condition for their activities; lack of synergy between producers in the smaller islands;	<u>Both local observations and the official plans show that:</u> climate change and environmental balance are the two crucial nodes that the lagoon production system must consider in the near future;

	and fishing	<p>shrinking agriculture, which is not very profitable and is not recognised in terms of the uniqueness of production systems in the lagoon; difficulties in managing the sale of agricultural products, linked to mobility, market access and competitiveness; fishing methods and economic fishing models which have too much impact on the balance of the lagoon; sport hunting and fishing practices practised by people from other places who are not fully aware of lagoon dynamics.</p> <p><u>Official Documents highlight:</u> Existing measures, regardless of the primary economic sector considered, address the issue of the environmental impact of production activities and recognise the interdependence between the health of the lagoon ecosystem and production-extraction models. Great value is attributed to traditional and typical lagoon activities and production methods, which certainly represent a strong point for the survival of the economic sectors in question. While productivity is not competitive on the markets in terms of quantity produced, the added value of the products, obtained with unique methods in a unique environment, is certainly a potential for the recognition of products from the Venice Lagoon.</p>	<p>the survival of economic activities linked to the primary sector depends entirely on the health of the lagoon ecosystem, so these activities will have to evolve by increasingly integrating aspects of care for the environment and resources; control of intensive (sometimes illegal) forms of resource production and extraction is increasingly necessary: from mechanised fishing methods, to the use of chemicals in agriculture, to monocultural forms on water and land, traditional production activities and those not linked to the primary system can represent a great potential for diversifying forms of tourism in the lagoon, integrating fishing tourism, hunting tourism and agri-tourism, in ways capable of raising visitors' awareness of a conscious use of the lagoon.</p>
<p>(THEMATIC TABLE#3)</p> <p>Housing in the lagoon – Policies, facilities and services; Accessibility and usability</p>	<p>3.1 Housing</p>	<p><u>Local Observations highlight:</u> scarcity of important services for the islands' community; limited accessibility and high land-water transport costs; unstable school offer; building regulations that do not incentivise habitability; limiting resolutions regarding protected areas; lack of work incentives for residents along the lagoon's edge outside agriculture; crisis of traditional crafts; lack of awareness of what the lagoon has to offer causes new generations to disperse; increase in rents for spaces hosting community activities; decisions taken by bodies and institutions often do not assess the consequences on territories considered marginal, such as islands; impoverishment of the territory due to tourist monoculture.</p> <p><u>Official Documents highlight:</u> the depopulation of the lagoon and the reduction of the city's management and administrative activities, the exhaustion of traditional craft activities, and services to citizens; an increase in inequalities</p>	<p><u>Official plans:</u> focus on urban redesign in relation to infrastructures; show the intention to protect, recover and enhance anthropic settlements (urban fabric, rural architecture), the environment and the lagoon landscape / to protect urban identity; to safeguard stable residences; to reconstruct the socio-economic fabric of historic centres and increase residences preserve and support productive employment activities, traditional production and promote new activities compatible with the characteristics of the Site; to increase the quality of existing public residential buildings; to promote a functionally balanced urban transformation and development suitable for meeting the socio-economic needs of the present without compromising the conservation and future use of resources.</p>

		<p>even in the face of settlement polarisation; an increase in housing discomfort; the risks of extreme seaside specialisation of coastal settlements and the socio-cultural segregation of residential areas. At the same time, there is an awareness that it is no longer possible to assess housing and infrastructure development needs outside the context of environmental and landscape sustainability, territorial safety and the quality of life of its inhabitants.</p>	
	<p>3.2 Mobility</p>	<p><u>Local Observations highlight:</u> general dissatisfaction of the actors for the current condition of mobility in the lagoon; negative impacts of private transport in terms of environment and safety; lack of knowledge of the places and their fragility; lack of control by the authorities in charge; difficulties in transporting not only people but also goods from and to the islands.</p> <p><u>Official Documents highlight:</u> existing measures, with the exception of specific ones concerning water mobility or the port system, tend to give ample space to land mobility issues, both car and cycle/pedestrian. The available plans recognise the negative impacts on the environment and society of vehicular traffic, which is very intense on the lagoon (Mestre - airport, but also towards Jesolo and Cavallino-Treporti). Great importance is given to strengthening the bicycle and pedestrian network, recognised as a complementary offer to environmental and excursion tourism. As far as water mobility is concerned, existing legislation defines speed limits in the network of lagoon canals, as well as the characteristics and standards of water transport means and their moorings. Little attention is given to the state of water mobility in the most peripheral parts of the Northern Lagoon, which are among the most fragile areas of the Venice Lagoon. Municipality of Ascoli Piceno owns the area, which in turn is managed by the Municipality of San Benedetto del Tronto. Moreover, the area is administratively divided by the Tronto River between Marche and Abruzzo Regions.</p>	<p><u>Both local observations and the official plans show that:</u> the approach to the mobility system between land and lagoon is focused on solving the problems generated by land-based car traffic. The urgency of a change in transport modes is recognised, which can implement the use of the public transport system and soft mobility on land. The need of the residents for a more efficient public transport system by water is recognised, as well as the need to reduce the conflicts generated by promiscuity with tourist flows. Active land mobility represents an extremely relevant potential for alternative forms of tourism capable of enhancing the less frequented parts of the lagoon, characterised by first-rate historical, cultural and environmental values. Active water mobility is not sufficiently taken into account, probably because it is traditionally associated with forms of recreation and sport, and therefore not included in the local transport system.</p>

B. PREFERRED SCENARIO

The preferred scenario is developed on the basis of the participation activities of the **Territorial labs** open to the public. It combines aspects of the trend scenario and expectations/visions/ideas considered as most important to the members of the community and engaged stakeholders. It will balance the potential reality of the future while on one side providing opportunities to adjust to changing development patterns, and the other side addressing the desired objectives of environmental protection and economic development.

Priority elements of preferred scenario are listed below: [\[Please provide a short description\]](#)

From the participatory process developed in the three Thematic Tables, held between February and April 2021, some issues have particularly stimulated the discussion with and among stakeholders. In the first table, dedicated to the protection of lagoon fragile environment, in addition to proposals related to the protection of lagoon morphologies, particular attention was paid to the modalities of water traffic, a sign of the importance of the ways of using the lagoon. In the second one, dedicated to productive activities, it has been pointed out the urgency to rethink innovative and eco-compatible forms of tourism, able to enhance the traditional forms of production related to crafts and agro-ictic-food production typical and local. In the third roundtable, dedicated to the habitability and accessibility of the lagoon, the attention has been focused on the forms of public mobility, which should be strengthened in the smaller islands, and active mobility, both land and water, able to ensure alternative forms of tourism. Some instances emerged across the tables: in particular, the need, on the part of non-institutional stakeholders, to strengthen and/or enhance the synergies and networking among local associations and between them and institutional local bodies. Finally, we report the emergence of a proposal widely shared among all stakeholders, institutional and non-institutional, namely the establishment of a "permanent table of the Northern Lagoon" able to coordinate existing and future projects.

The table below shows the collection of measures proposed by the stakeholders during the three Thematic tables. The proposed measures are divided by topic and include the indication of the actual status of the proposal: (E)= existing; (NE)= not existing; (F)= financed; (NF)= not financed

From here, further elaboration of the results is being produced and it is currently ongoing. The elaboration is producing 15 fact sheets grouping in synthetic ways the initial proposals and imagining alliances among stakeholders.

The 15 fact sheets are: 1. Permanent coordination between the associations of the northern lagoon; 2. Participatory definition of a statute for the places of the northern lagoon of Venice; 3. accessibility of public spaces along the lagoon embankment; 4. Construction of an integrated and participatory strategy for lagoon mobility; 5. Promotion of an aware and responsible use of the lagoon; 6. Enhancement of

existing thematic routes and promotion of new thematic routes; 7. Protection and enhancement of the cultural heritage of burano lace; 8. Integration and enhancement of the cultural heritage of fishing; 9. Integration and enhancement of the permanent and temporary museum heritage; 10. Integration and enhancement of the gastronomic heritage of the lagoon; 11. Promotion of community agriculture. protection and enhancement of the cultural heritage of fishing in the lagoon; 9. Integration and enhancement of the permanent and temporary museum heritage; 10. Protection and enhancement of the gastronomic heritage of the lagoon; 11. Promotion of community agriculture; 12. Protection and enhancement of the village of lio piccolo; 13. Protection and enhancement of the nature of the campalto sandbanks; 14. Initiatives for the hydro-morphological rebalancing of the lagoon; 15. Joint adaptation plan to climate change.

On the basis of the 15 fact sheets, bilateral meetings are being organized with the municipalities (first stage) and with selected stakeholders (seconda stage). The materials regarding the fact sheet are still under construction at the time of writing.

PREFERRED SCENARIO			
Strategic area	Topic	Measure	Action/Initiatives
(THEMATIC TABLE #1) Ecological and Hydromorphological protection; Wave management	ECOLOGICAL QUALITY OF WATER BODIES	Retide project (Life Retide) (Transversal project also covering Quality, Landscape, Health, Biodiversity)	<ul style="list-style-type: none"> Funding through Life programmes (E- NF)
		Vivification of the 'dead' lagoon	<ul style="list-style-type: none"> Excavation and relocation of sediments for morphological reconstruction of the lagoon (NE- NF) Extraordinary maintenance of the lagoon (NE- NF)
		"Adopt a beach" - Bacan S. Erasmo area (Project starting from the one carried out by the national Marevivo and adapted to the Lagoon, identifying an area with beach characteristics)	<ul style="list-style-type: none"> Setting up of a scientific technical committee (NE- NF) Networking with other associations (NE- NF) Environmental education (involvement of schools)(NE- NF) Prevention of waste abandonment (NE- NF) Awareness-raising actions (with signs and brochures) also in the area (NE- NF)
	ENVIRONMEN	Control of boat emissions	<ul style="list-style-type: none"> activate a specific regulation for the Lagoon of Venice (with focus on emissions) (NE- NF)

	TAL HEALTH		<ul style="list-style-type: none"> ● Census of engines and boats in the Lagoon (creation and registration in a public nautical register) (NE- NF)
	LANDSCAPE	Lazzaretto Nuovo as outpost for the enhancement of the Lagoon	<ul style="list-style-type: none"> ● Promoting and enhancing the "Sentiero delle Barene". (E - F) ● Organise an annual "Ecological Day". (E - F) ● Hosting initiatives by other associations to promote networking and to promote the territory (NE - NF) ● Organise an annual event to discuss issues related to the Lagoon (NE - NF)
	BIODIVERSITY OF HABITATS AND SPECIES	Establishing a naturalistic oasis on the Barene di Campalto	<ul style="list-style-type: none"> ● Restarting the administrative process for establishing the oasis (E - NF) ● Educating and raising awareness about the habitat (NE - NF) ● Protecting the oasis (NE - NF) ● Creating a "poster" for the oasis (E - NF)
		Installation of barriers to protect the Barene	<ul style="list-style-type: none"> ● Conservation of space and development of lagoon biodiversity (systems to be installed in the lagoon to protect salt marshes) (E - E) ● Developing ideal marine habitat ● Reducing sand loss
		PAESSC Area	<ul style="list-style-type: none"> ● Joint Adaptation Plan for Sustainable Development and Climate Change
	WAVE MOTION AND EROSION	Integrated lagoon channel management between mobility and hydromorphological dynamics (Life Retide)	<ul style="list-style-type: none"> ● Re-opening of the first 37 arches of the Ponte della Libertà bridge (E - NF) ● Restoration of the canals (differentiation of the canals between those for commercial and recreational use) (from San Giuliano to Altino) (E - NF)
		Sensitising boaters to "correct traffic" in the lagoon/correct navigation behaviour	<ul style="list-style-type: none"> ● Creation of a brochure to disseminate correct navigation rules and respect for biodiversity. The brochure could be distributed in nautical clubs (NE - NF)
		(After Life Wicker) Protection of salt marshes with vegetal materials (vimate)	<ul style="list-style-type: none"> ● Restoration of the Barene thanks to the continuation of the Life Vimine project (E - F) ● Promoting greater care and attention to the salt marshes along the airport access channel (NE - NF)
		New mobility systems in the lagoon based on non-fossil fuels	<ul style="list-style-type: none"> ● Create a new water traffic regulation dedicated to the lagoon specificity (updating of regulations) (NE - NF) ● Introduction of incentive and disincentive mechanisms (NE - NF) ● Introduction of a ticket for boats in transit (NE - NF) ● Strengthening speed controls on boats in the lagoon (NE - NF)

			<ul style="list-style-type: none"> ● Introducing green hydrogen-powered boats (capitalising on existing experience in the lagoon; paying attention to the positioning of refuelling points in the lagoon) (NE - NF)
		Propose new types of boat to replace those with fairing boards	<ul style="list-style-type: none"> ● Recovering lagoon hulls and old workers to create a new market (encouraging the rebirth of a shipbuilding industry in the lagoon for boats compatible with the characteristics and specific features of the lagoon) (NE - NF) ● Propose awareness and education actions to promote "Respect in navigation" (NE - NF)
(THEMATIC TABLE#2) Productive and recreational activities – Agriculture, hunting and fishing; Promotion and tourist reception	CULTURE	Enhancement of the historical and cultural heritage of the World War I period (Walk of Peace)	<ul style="list-style-type: none"> ● Creation of "Walk of Peace" thematic paths (E - F) ● Design, development and implementation of further valorisation activities starting from historical and cultural assets (NE - NF)
		Enhancement of the "cultural heritage of fishing"	<ul style="list-style-type: none"> ● Creating a "Cultural Heritage of Fisheries" (E - F) ● To design, develop and implement further activities starting from the valorisation of the fisheries cultural heritage (NE - NF)
		Project «Cento Cippi»	<ul style="list-style-type: none"> ● Development of dedicated itineraries for the rediscovery of the memorials (E - F) ● Development of dedicated tools for the promotional and communication launch of the project (development of a dedicated website and social channels) (E - F) ● Extension of dedicated routes in the lagoon area (NE - NF)
		Project «F'orti»	<ul style="list-style-type: none"> ● Enhancement of the S. Erasmo territory starting from the forts and fortifications present in the territory (starting from Torre Massimiliana) (E - F) ● Developing information and communication tools (especially website and possible social channels)(NE - NF) ● Possibility of extending the project to the lagoon area, creating dedicated routes along the forts present in the lagoon (NE - NF)
		Enhancement of Burano lace	<ul style="list-style-type: none"> ● Creation of a quality label (with Unesco recognition) (E - NF)
		Digitisation and transfer to a web portal of documentary material (photographs, cartography, documents, etc.) of Cavallino Treporti from the last century.	<ul style="list-style-type: none"> ● Activation of synergies for digitisation and dissemination of material (NE - NF)

		Enhancing small museums in the territory	<ul style="list-style-type: none"> ● Making the Olivi Museum in Chioggia available as a point of reference for the creation of a Museum Complex (E - F) ● To create adhoc routes between museums. To create circuits and itineraries in the territory ("the path of the lagoon museums") (NE - NF) ● Networking the museums in the lagoon area (NE - NF)
		Enhance the edible heritage of the Lagoon of Venice (with reference to the barena vegetation) by creating the "Tidal Garden" through the cultural instrument "Prometeus Open Food Lab". (Tidal Garden) through the cultural tool "Prometeus Open Food Lab".	<ul style="list-style-type: none"> ● Identifying potential gastronomic uses of lagoon vegetation (E - F) ● Analysis and research activities to identify protocols for cultivation, harvesting and use of plants (including administrative feasibility checks) (NE - NF) ● Developing a supply chain from producer to consumer (NE - NF)
		Creation of a Platform for dialogue on Food and Territory in the Lagoon	<ul style="list-style-type: none"> ● Creation of a fanzine (for the promotion of the cuisine and the region) (E - NF) ● Activate synergies with other associations to promote discussion on the subject (NE - NF) ● Develop a dedicated web platform (website) (NE - NF) ● Creation of a "periodic event" (a table) to promote lagoon gastronomy and the territory (NE - NF)
		Enhance and promote the calendar of regattas and sailing events at the Terzo	<ul style="list-style-type: none"> ● Promoting the discovery and the visit of the Lagoon territory starting from the initiatives of the regattas. (The Regatta as an opportunity to visit the Lagoon) (NE - NF) ● Enhancing the food and wine aspects together with the regatta (organising food and wine meetings in parallel with the regatta and sailing events) (NE - NF)
	TOURISM	"Save the sea recycling cooking oil" project	<ul style="list-style-type: none"> ● Placement of containers for waste oil collection in marinas (E - F) ● Creating awareness campaigns (in ports) for the correct use and disposal of edible oil (NE - NF)
		Sustainable Mobility Masterplan	<ul style="list-style-type: none"> ● Implementation of a Masterplan (covering 27 projects) on Sustainable Mobility (E - NF)
		Ecomuseum of Eastern Venice on the theme of Water	<ul style="list-style-type: none"> ● Creation of an Ecomuseum of Eastern Venice on the theme of water (E - NF)

		Eastern Venice Road System	<ul style="list-style-type: none"> To understand which parts of the Eastern Venice Road Masterplan are related to the Wetland Contract (NE - NF)
		Project for the Litoranea Veneta	<ul style="list-style-type: none"> Census of needs (Mapping of characteristics and needs along the Litorenea) (E - NF) Creating tourist routes (Checking the navigability along the Veneto coastline and activating tourist circuits, Encouraging the development of tourist activities along the coastline) (NE - NF)
		Adriatic Cycleway - Promoting Electric Mobility	<ul style="list-style-type: none"> Promoting electric mobility (boats, bicycles...) by positioning electric refuelling points (E - F) Census on the state of the art of electric charging points (E - NF) Promotion of services (sales, rental, maintenance) to encourage the use of electric vehicles (NE - NF)
		Networking of sustainable tourism operators	<ul style="list-style-type: none"> Establishment of a "Protocol for Sustainable Tourism", declined in a self-assessment form (E - F) Census of sustainable tourism operators (on the basis of a real certification that the operator is involved in sustainable tourism) (E - F) Create training courses for operators on sustainable tourism issues (NE - NF) Activation of permanent tables of confrontation between the Municipalities of the Lagoon and the sustainable tourism operators (NE - NF)
		Enhancement of the village of Lio Piccolo (both tourist and cultural)	<ul style="list-style-type: none"> Activate a feasibility study (NE - F)
	AGRICULTURE	Creation of "community farming" experience	<ul style="list-style-type: none"> Formalisation of an ODA (E - F) Recovering abandoned areas for agriculture (Launching community gardens - citizens as environmental stewards or sustainable farmers) (Inclusion of "fragile" subjects in project activities) (NE - NF) Networking sustainable farmers (NE - NF) Networking farmers with consumers/users of sustainable agriculture (tourism, commerce, private individuals...) (NE - NF) Start a subgroup of a Venetian GAS in Cavallino Treporti (NE - NF)

	FISHING	Collection of fishermen's waste during their activity	<ul style="list-style-type: none"> ● Monitoraggio dei rifiuti (E - NF) ● Possibile estensione del monitoraggio in ambito lagunare (ambiente acquatici e terricoli) (NE - NF)
		Developing income support tools to make fishermen "stewards" of their territory	<ul style="list-style-type: none"> ● Activate specific training (NE - NF) ● Identification of an operational programme with ordinary financial coverage (NE - NF) ● Finding administrative tools to activate the local workforce (NE - NF)
		Recovery and enhancement of the Terricolous Fishponds in the Cavallino Treporti area	<ul style="list-style-type: none"> ● Activate a feasibility study (NE - NF) ● Activation of a consultation table with the owners of the land where the land-based fisheries are located (NE - NF)
		Establishment of the "Fisherman's House" (recovered and renovated house to be handed over to Cooperativa Pescatori)	<ul style="list-style-type: none"> ● Creation of an operational centre for the Fishermen's Cooperative (E - F) ● Creation of an "ichthyic centre" (including the sale and consumption of the catch) (NE - F)
(THEMATIC TABLE#3) Housing in the lagoon – Policies, facilities and services; Accessibility and usability	ACCESSIBILITY BY LAND	Creation of small, diffuse and public points of embarkation and disembarkation for soft mobility vessels ("natural boating") including shore services	<ul style="list-style-type: none"> ● Feasibility analysis of public alliances within the entire Northern Lagoon (NE - NF) ● Capitalisation of the proposals that emerged from the participatory process "Il Forte e una Stella" regarding public alliances at Forte Marghera and Passo Campalto (NE - NF)
		Creation of a cycle path along the embankment separating the North Lagoon from the fishing valleys	<ul style="list-style-type: none"> ● Setting up a round table for discussion and consultation between concession holders, the Region and the Public Works Department
	ACCESSIBILITY BY WATER	Introducing a tax on boats based on their tonnage, aimed at supporting safeguarding and surveillance measures for the Lagoon	<ul style="list-style-type: none"> ● Opening of a round table with the relevant bodies to study the possibility of introducing the tax (NE - NF) ● Census of the boat park (NE - NF)
		Protection of the water space from San Giuliano to Passo Campalto	<ul style="list-style-type: none"> ● Boat speed control (NE - NF) ● Revision of the current SUMP proposal with regard to the intermodal hub at San Giuliano (the only UNESCO mainland site) (E - F)
		Creation of jetties (bicycle -	<ul style="list-style-type: none"> ● Predisposizione dei relativi PUA (E – F)

		water intermodality) and temporary/seasonal floating swings brought to specific points in agreement with some valley owners	
	INTERMODALITY	Improve connection, frequency and synchronism between public transport lines in the North Lagoon (lines 12 and 13)	<ul style="list-style-type: none"> • Set up a discussion table with AVM and the Venice City Council (NE - NF)
	HOUSING - FACILITIES	Regulating lagoon transformations in a "lagoon-friendly" way (art. 25 of the Palav)	<ul style="list-style-type: none"> • Territorial information plans accept the requests of the Lagoon Contract (NE - NF)
		Status of places in the Northern Lagoon	<ul style="list-style-type: none"> • Activate a Think Tank to understand how to formulate the statute
	OTHER	Check the state of knowledge on the morphological state of the lagoon and make it shareable	<ul style="list-style-type: none"> • Verify the state of knowledge on the morphological state of the lagoon and make it available in order to verify the naturalness or artificiality of the changes that have taken place, also in relation to the practicability of the state-owned riparian areas given in concession (NE - NF)
		Cultural recovery of the salt pans of the Lagoon	<ul style="list-style-type: none"> • Valorisation and recovery of the Saline (cultural action) (Lazzaretto Nuovo and Confraternita La Serenissima) (NE - NF) • Recovering a historical memory and enhancing a little-known past of the Lagoon (promoting new and different knowledge of the lagoon ecosystem) (NE - NF)

C. Annexes

See enclosed files:

4.3.1_1 Thematic Table#1 supporting Document

4.3.1_2 Thematic Table#2 supporting Document

4.3.1_3 Thematic Table#3 supporting Document

REPORT OF ALTERNATIVE SCENARIOS

City of San Benedetto del Tronto Sentina Natural Regional Reserve

Deliverable 4.3.1 – English summary

Final version date: 15/03/2021

Notes:

1) A.4.3 Drafting the Wetland Contract

The activity aims at implementing and subscribing the one Wetland Contract in each target area through the following progressive steps:

- identifying the institutional management bodies for the Wetlands Contracts (Coordinating Committee / Management Board and Technical Secretariat);
- developing of Territorial Labs for the participated governance;
- defining mid-long term strategic scenarios;
- sharing and assessing the strategic scenarios;
- drafting and subscription of the formal agreement of the Wetland Contract during the Local Final Conference (press conference).

The actors subscribing the Contract will be committed of: (i) acting in the frame of valorising of the subsidiarity principle, in respect of every actor's competences; (ii) activating all the partnership tools; (iii) keep working and monitoring the process even after the project end.

2) D.4.3.1 Report of Alternative scenarios

Each target area will report about the different scenarios proposed for the assessment to the Territorial Labs. The report contains the criteria used for their development and the explanation of the differences.

3) This template has been developed by UNICAM (University of Camerino). It is inspired by and coordinated with the documentation elaborated in the Project WETNET financed under Interreg MED Cooperation Programme to increase information share, data and opportunities of confrontation.



Authors: City of San Benedetto del Tronto

REPORT OF ALTERNATIVE SCENARIOS

(deliverable 4.3.1 – English summary)

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B. PREFERRED SCENARIO

A. TREND SCENARIO

This scenario seeks to reproduce the continuity of current trends in three strategic areas: governance, environment and economic and social development. In this scenario the involvement of citizens is limited, management and the conservation policies do not encourage the involvement of all territorial stakeholders. Therefore, it represents the continuation of the present development pattern, and it is not considered as the optimal framework for the achievement of the objectives, against the degradation of natural spaces.

[Please provide a sort description]

The scenario considered represents the evolution trend of the Sentina Reserve territory in the absence of significant plans or interventions to take place in the short and medium term. The scenario was defined through the integration of the Preliminary Integrated Analysis (Context Analysis and Preliminary Analysis of the planning framework) with the results of the participatory SWOT Analysis held during the second Territorial Workshop.

TREND SCENARIO			
Strategic area	Problem	Effects	Trends and critical issues
G. GOVERNANCE	PG1. Spatial planning complexity	As many as 12 planning instruments prevail in the area along with 5 different authorities (from national to municipal scale) displaying particularly complex interactions.	Overlapping of approaches and lack of coordination
	PG2. Split management of the Reserve	The management of the Sentina Reserve is hindered by the division of roles as the Municipality of Ascoli Piceno owns the area, which in turn is managed by the Municipality of San Benedetto del Tronto.	Inability to implement defined actions due to the lack of coordination.

		Moreover, the area is administratively divided by the Tronto River between Marche and Abruzzo Regions.	
E. ENVIRONMENT	PE1. Hydrogeological hazard	The area is subject to a very high flood risk. It is necessary to implement a flood management policy for upstream watercourses.	<ul style="list-style-type: none"> - Risk of community safety and buildings security - Loss of habitat and biodiversity
	PE2. Presence of the wastewater treatment plant and inadequacy of both stormwater channelling and drainage system	The presence of the wastewater treatment plant and sewer significantly affects the conservation of the area and the maintenance of its ecological connections. The sewage system is unstable during periods of heavy rainfall, causing spillage into the area, which is also favoured by the morphological conformation of the land with uneven ground planes at alternating heights that do not favour the natural flow of water. The water system, developing in the River Tronto to the south, the Sewage system to the north, the drainage canals and the small lakes, presents some important criticalities related to the management of rainwater during heavy rains.	<ul style="list-style-type: none"> - Risk of contamination related both to civil and industrial discharges and to the concentration of pollutant loads linked to agricultural activities. - Risk of salinisation of agricultural soils and inland waters. - Pollution of water bodies.

	<p>PE3. Coastal erosion</p>	<p>The coastline is strongly affected by both coastal and dune erosion, partly due to human action and partly to the fragility of the ecosystem itself. The Tronto River carries almost exclusively fine sediments into the sea, except during the highest floods, with a considerable reduction of the natural beach nourishment of the coasts and consequent backwardness of the shoreline. The presence of coastal protection works, such as the long-strengthened estuary along the Abruzzo side of the River Tronto and the barriers protecting the coastline of Porto d'Ascoli, further aggravates the tendency of the shoreline to recede. Both influence the flow of sediments by wave motion.</p>	<p>The coastal erosion severely affects the dune conservation status, that is:</p> <ul style="list-style-type: none"> - Reduction/disappearance of the dune system - Reduction/disappearance of spontaneous vegetation of the dune system - Habitat reduction/loss and biodiversity loss - Loss of landscape value of the dune
	<p>PE4. Climate change: Irregularity and poor rainfall patterns</p>	<p>The area exhibits problems with the water supply of the ponds, which depend on rainwater or on the adduction of water from the system of collectors and spillways. The erratic nature of the rainfall makes it critical to maintain the wetlands.</p>	<p>Reduction in the extent/disappearance of wetlands.</p>

	<p>PE5. Climate change: Extreme events</p>	<p>The frequency of extreme events (storms) and rising sea levels threaten the conservation of dunes and historic coastal farmhouses.</p>	<p>- Reduction/loss of dune habitats and loss of biodiversity -Loss of landscape/architectural value and social/economic potential of farmhouses.</p>
	<p>PE6. Presence of alien plant species</p>	<p>Competitivity with native species to the point of elimination, especially in dune and backdune environments. The main alien species are of the genus <i>Oenothera</i> and <i>Amorpha</i>.</p>	<p>Ecosystem instability and loss of biodiversity</p>
	<p>PE7. Lack of ecological connections with the outside world</p>	<p>Although profoundly altered by anthropic action and partially degraded, the area nevertheless presents relict ecological conditions that have now disappeared along the Marche coastal strip, which is now almost entirely anthropized. This "isolation" has an impact on the conservation of the habitats and animal species in the Special Area of Conservation.</p>	<p>Loss of biodiversity</p>
<p>D. ECONOMIC AND SOCIAL DEVELOPMENT</p>	<p>PD1. Intensive agricultural activities (use of pesticides)</p>	<p>Conflict between agricultural practice and biodiversity conservation.</p>	<p>- Activation of soil "desertification" mechanisms induced by "intensive" agronomic practices.</p>

	and chemical fertilisers)		<ul style="list-style-type: none"> - Risk of contamination related to the concentration of pollutant loads linked to agricultural activities - Loss of biodiversity - Reduction of the freshwater aquifer - Rising of the saltwater intrusion due to the various industrial and agricultural drawdowns characterising the middle lower course of the Tronto river.
	PD2. Anthropogenic pressure (fruiting and summer tourism)	Anthropic pressure caused by intense tourist flows during specific periods, <i>e.g.</i> in summer or during sports events organised within the Reserve.	Loss of biodiversity and reduction of natural features
	PD3. Poor maintenance of historic farmhouses	The farmhouses are in a state of disrepair	Loss of landscape/architectural value and potential social/economic destination of farmhouses.

B. PREFERRED SCENARIO

The preferred scenario is developed basing on the participation activities of the **Territorial** open to the public. It combines aspects of the trend scenario and expectations/visions/ideas considered as most important to the members of the community and engaged stakeholders. It will balance the potential reality of the future while on one side providing opportunities to adjust to changing development patterns, and the other side addressing the desired objectives of environmental protection and economic development.

Priority elements of preferred scenario are listed below: [\[Please provide a short description\]](#)

The Participatory Strategic Scenarios are the shared scenarios on the future (assumed year 2030) of the territory and the environment, which emerged from the involvement of local stakeholders, involved in the process through different working tables following the EASW® (European Awareness Scenario Workshop) Scenario Planning methodology.

The optimal scenario identifies the vision to which the Wetland Contract of the Sentina Regional Nature Reserve should ideally aim at in the next 10 years with respect to the two main themes:

- TOPIC 1: Water quality, nature and biodiversity, climate change, coastal erosion and hydrogeological risk

WE ARE IN 2030 the Wetland Contract has contributed to the progressive improvement of the quality and quantity of the water resource and to the implementation of a more efficient monitoring and control of contaminating sources.

- TOPIC 2: Landscape, spatial planning, use and economic development of the territory

WE ARE IN 2030 the Wetland Contract has contributed to the definition of a new governance model. Planning tools have been harmonised at different levels and for different competences.

Following the completion of specific forms by the stakeholders involved, 59 ideas were received from 20 different local actors. These ideas were systematised (merged and subdivided when necessary) into 10 sub-themes.

- 1. Quality of water resources;***
- 2. Recovery and reuse of water resources***
- 3. Soil protection and coastal erosion***
- 4. Nature conservation and biodiversity***
- 5. Climate change***
- 6. Planning and governance***

7. *Historical and cultural landscape*
8. *Sustainable agriculture*
9. *Sustainable fruition*
10. *Environmental education and awareness-raising*

3 priority areas for action emerged from the online questionnaire submitted to local stakeholders (33 voters), which are the following:

1. Soil protection and coastal erosion
2. Protection of nature and biodiversity
3. Planning and governance

PREFERRED SCENARIO				
Strategic area	Objectives	Measure	Action/Initiatives	Risks
G. GOVERNANCE	OG1. Improving the capacity of stakeholders in the Sentina area to implement shared decisions and manage conflicts	M.G.1.1 Initiation of a negotiating table between the Municipality of San Benedetto and the Municipality of Ascoli Piceno	G1 Initiation of a negotiation table between the Municipality of San Benedetto and the Municipality of Ascoli.	- Difficulties in involving the representatives of the Municipality of Ascoli Piceno
		M.G.1.2 Promotion of negotiated planning agreements		
		M.G.1.3 Setting up the process monitoring, contribution monitoring, target	G2 Monitoring of the Wetland Contract process of the Sentina Regional Nature Reserve.	

		monitoring.		
	OG2. Introduction of new governance tools for large areas	M.G.2.1 Initiating the Tronto River Interregional Contract	G3 Initiating the Tronto River Interregional Contract	<ul style="list-style-type: none"> • Delays due to the difficult involvement of other bodies
		M.G.2.2 Development and protection of the Adriatic coast between the south of Marche and the north of Abruzzo	G4 Conservation measures of the sea Site of Community Importance IT5340001 "Litorale di Porto d'Ascoli".	<ul style="list-style-type: none"> • Oppositions from fisheries representatives
	OG3. Knowledge and data sharing	M.G.3.1 Development of a complex and interdisciplinary database	G5 Realisation of a logical model and data entering of a cartographic database	<ul style="list-style-type: none"> • Difficulties and delays in data collection activities, also due to Covid-19.
E. ENVIRONMENT	OE1. Improving water quality	M.E.1.1 Environmental control activities of the Tronto river	E1 Environmental monitoring of the Tronto river by the Coast Guard	<ul style="list-style-type: none"> • Expansion of the expected time frame • Difficulty in involving other stakeholders (public authorities or private stakeholders)
		M.E.1.2 Rehabilitation of the Collector trench	E2 Requalification of the northern part of the collector ditch and neighbouring ditches	
		M.E.1.3 Monitoring of the quality of wastewater from the municipal water treatment plant of San Benedetto del	E4	

		Tronto	Adaptation of the sewage network within the Reserve	
		M.E.1.4 Monitoring of water quality in relation to the pollutant load in the final stretch of the Tronto river, in the Collector trench and in the adjacent channel	E6 Implementation of <i>fit-for-purpose</i> wastewater re-use systems	
	OE2. Recycle and reuse of water resources	M.E.2.1 Re-use of treated wastewater for irrigation and feeding lakes	E3 Water quality control of the purification plant	
		M.E.2.2 Use of sewage sludge in agriculture		
		M.E.2.3 Reduced tariff to encourage the reuse of treated wastewater and stormwater		
		M.E.2.4 Rehabilitation and upgrading of old channels and trenches		
	OE3. Improving the safety of hydraulics	M.E.3.1 New flood scenarios		
		M.E.3.2 Drafting of an emergency plan		

		for the Sentina Reserve		
OE4. Contrasting coastal erosion	M.E.4.1	Creation of breakwaters	E7 Elaboration of a specialised study for the analysis of coastal erosion processes	
	M.E.4.2	Natural beach nourishment		
	M.E.4.3	Analysis of coastal erosion processes		
OE5. Protecting nature and biodiversity	M.E.5.1	Eradication of alien plant and animal species	E5 Environmental monitoring E8 Elimination of invasive alien plant and animal species	
	M.E.5.2	Monitoring and recovery/restoration of wetland vegetation systems		
	M.E.5.3	Reintroduction of fauna species (Emys orbicularis) of conservation interest		
	M.E.5.4	Monitoring with sampling of environmental matrixes		
	M.E.5.5	Monitoring of environmental pollutants with hormone-like		

		action in aquatic ecosystems and associated wetlands		
OE6. Mitigation of degradation phenomena in the Sentina ecosystem	M.E.6.1	Collaboration between bodies and associations for the surveillance activities in the Sentina Reserve	E9 Humid environment monitoring	
	M.E.6.2	Installation of a "plastic trapping" barrier	E10 Restoration of wetlands	
	M.E.6.3	Monitoring and cleaning of the waste on the beach of the Sentina Reserve (beach litter)	E11 Reintroduction of <i>Emys orbicularis</i> E12 Collaboration between bodies and associations for the execution of surveillance activities in the Sentina Reserve E13 Installation of a "plastic trapping" barrier at the mouth of the Tronto river E14 Beach and marine litter	
OE7. Contrasting and mitigating	M.E.7.1	Environmental climatic		

	climate change	hydrogeological forestation		
		M.E.7.2 Enhancement of green infrastructures and ecological corridors (Ecological Network of the Marche Region)		
D. ECONOMIC AND SOCIAL DEVELOPMENT	OD1. Sustainable agriculture with low environmental impact (Preservation of environmental qualities and agricultural production capabilities).	M.D.1.1 Awareness-raising and training of farmers in sustainable production techniques and systems	D1 Creation of tree belts	<ul style="list-style-type: none"> • Delays in implementation • Difficult cooperation between relevant bodies responsible for the area • Difficulty in involving schools in the Covid period due to distance learning.
		M.D.1.2 Promotion of agricultural activities in harmony with the protection of the Reserve (conservation agriculture)		
		M.D.1.3 Promotion of sustainable agriculture based on multifunctionality and the creation of an agricultural		

		community (social and economic promotion and environmental protection)		
		M.D.1.4 Awareness raising for sustainable and local purchases		
		M.D.1.5 Creation of a PGI for the Sentina Reserve and creation of a sales point inside the Reserve		
		M.S.1.6 Study of payments for ecosystem services		
	OD2. Restoration, preservation and valorisation of the historical and cultural landscape and promotion of economies with a low environmental impact	M.S.2.1 Recovery (conservative restoration) of the historical agricultural building heritage (farmhouses) and economic and social promotion		
		M.S.2.2 Planting of the historical tree line and tall trees along the route of the causeway		

	OD3. Improvement of the tourist use of the area and the territory according to the principles of environmental sustainability	M.S.3.1 Sustainable cycling along the Tronto river (from the Sentina Reserve to the Spinetoli Oasis)	D2 Realizzazione di infrastrutture di mobilità dolce
		M.S.3.2 Enhancement of sustainable mobility in the Sentina Reserve	
	OD4. Environmental education and awareness	M.S.4.1 Promotion of virtuous behaviours for the safeguard and protection of biodiversity	D3 Environmental education and awareness-raising activities for students and citizens
		M.S.4.2 Awareness-raising activities for a positive reception of migratory birds	
		M.S.4.3 Organisation of awareness campaigns and environmental education on environmental sustainability (schools and citizens)	
		M.S.4.4 Children's	

		wetland contract		
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REPORT OF ALTERNATIVE SCENARIOS

Comunità Riviera Friulana

Marano Lagoon

Deliverable 4.3.1 – English summary

Final version date: 15/04/2021

Notes:

1) A.4.3 Drafting the Wetland Contract

The activity aims at implementing and subscribing the one Wetland Contract in each target area through the following progressive steps:

- identifying the institutional management bodies for the Wetlands Contracts (Coordinating Committee / Management Board and Technical Secretariat);
- developing of Territorial Labs for the participated governance;
- defining mid-long term strategic scenarios;
- sharing and assessing the strategic scenarios;
- drafting and subscription of the formal agreement of the Wetland Contract during the Local Final Conference (press conference).

The actors subscribing the Contract will be committed of: (i) acting in the frame of valorising of the subsidiarity principle, in respect of every actor's competences; (ii) activating all the partnership tools; (iii) keep working and monitoring the process even after the project end.

2) D.4.3.1 Report of Alternative scenarios

Each target area will report about the different scenarios proposed for the assessment to the Territorial Labs. The report contains the criteria used for their development and the explanation of the differences.

3) This template has been developed by UNICAM (University of Camerino). It is inspired by and coordinated with the documentation elaborated in the Project WETNET financed under Interreg MED Cooperation Programme to increase information share, data and opportunities of confrontation.



Author: Gabriele Pitacco

REPORT OF ALTERNATIVE SCENARIOS

(deliverable 4.3.1 – English summary)

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A. TREND SCENARIO

B. PREFERRED SCENARIO

A. TREND SCENARIO

This scenario seeks to reproduce the continuity of current trends in three strategic areas: governance, environment and economic and social development. In this scenario the involvement of citizens is limited, management and the conservation policies do not encourage the involvement of all territorial stakeholders. Therefore, it represents the continuation of the present development pattern, and it is not considered as the optimal framework for the achievement of the objectives, against the degradation of natural spaces.

The following is the summary of "SCENARIOS FOR THE CONSTRUCTION OF THE STRATEGIC DOCUMENT - EASW" produced by EcoAzioni.

Objective: To define a scenario starting from the question What future for the Marano Lagoon in 2030. The methodology used is the EASW® European Awareness Scenario Workshops

REFERENCE SCENARIO

- The initial perimeter of the area is defined by the intersection between the SIC / ZPS IT3320037 protected area and the administrative area of U.T.I. Riviera Bassa Friulana.
- This brackish wetland originated following the deposits of the Isonzo and Tagliamento rivers, the phenomena of subsidence and the deposit of sand and silt by sea currents. The tributary rivers Stella, Cormor and Aussa-Corno flow into it, contributing to the supply of sediments and fresh water. Located south-west of the city of Marano Lagunare, the mouths of the Stella river represent the only example in the Adriatic of a delta in the lagoon environment.
- The coastline is represented by a series of islands that create the southern border of the lagoon with the Adriatic Sea.
- The total lagoon area, estimated at 160 sq km, develops along an arched progression parallel to the coast line for about 32 km. The saline wedge penetrates the water courses that flow into the lagoon for at least another 4-5 km from their mouth. The contribution of fresh water accounts for 70-80% on the Marano lagoon.
- A complex ecosystem which, on the one hand, receives the waters from the rivers of the drainage basin and, on the other hand, communicates with the sea through the tidal mouths. continuous modeling of the seabed and the hydrodynamic equilibrium of the lagoon environment.

- The balance of the transformations of the salt marshes is negative in the most recent period, with accentuated erosion phenomena. Among these the main forcing seems to be subsidence (in particular the local one deriving from a compaction of clayey sediment and peat), followed by the transit of boats and natural wave motion. The growth processes, where present, are mostly attributable to the fluvial inputs of the Marano basin.
- The geo-morphological characteristics of the area have been largely modified by the action of man who has gradually recovered, through reclamation for agricultural or industrial uses, environments previously characterized by swamps that served as a link between the mainland and the sea.

TREND SCENARIO			
Strategic area	Problem	Effects	Trends and critical issues
G. GOVERNANCE	PG1. Misleading perception of the state of studies, projects and actions on the area. Coordination to be improved	Great richness of knowledge, studies, projects and actions in the area, which can sometimes be improved in coordination, is perceived as the opposite. Risk of fragmentation and difficulty in communicating complexity	The greatest criticality consists in the continuation of the current modalities without interventions aimed at greater coordination between bodies and institutions, at the correct communication of the state of studies, projects and actions in the territory
	PG2. The catchment/ drainage basin of the Marano Lagoon is wide and includes various rivers.	The area of influence for the Marano Lagoon includes, in addition to the contiguous Grado lagoon, a very large drainage basin that includes several rivers crossing almost all of the former provincial	The realization of a contract or a governance tool that affects the entire area of the drainage basin risks, on the one hand, not having the necessary in-depth analysis and connection with the territory, or becoming

	The Marano Lagoon is connected to the Grado Lagoon.	territory with an important number of entities, administrations and potential stakeholders. Several river contracts are active within the same basin and are in the process of being activated.	a difficult tool to manage if it is intended to involve all real stakeholders.
E. ENVIRONMENT	PE1. Pollution of the lagoon seabed blocking the dredging	The level of pollution of the lagoon seabed in relation to current legislation has, in fact, blocked the dredging with significant effects on biodiversity, navigation, economy, fishing	The impossibility of dredging would lead the lagoon to disappear. If the lagoon were left to its natural evolution, it would flatten and there would be no more ditches or canals, so the controlled action of man is important. It is important to plan that is able to maintain mud flats and sandbanks
	PE2. Climate change, sea level rise and subsidence.	Climate change is leading to a constant rise in the level of the sea and the lagoon which, in conjunction with combined atmospheric events (high tide, wind and exceptional meteorological precipitation) have significant effects on the lagoon hinterland.	L'innalzamento del livello marino combinato con la diminuzione dell'apporto fluviale modifica il bilancio idraulico della laguna con la risalita del cuneo salino ed importanti effetti sulla biodiversità e la pesca

D. ECONOMIC AND SOCIAL DEVELOPMENT	PD1. Pollution of the lagoon seabed and blocking of dredging	The inability to carry out dredging and the natural silting up of the canals creates serious repercussions on pleasure marinas, on the port, on fishing, on tourism and on economic activities in general	The impossibility of digging canals in conjunction with low tide makes it difficult, if not sometimes impossible, to cross the lagoon and reach the sea with important problems in terms of logistics and work
	PD2. Coordination and dialogue between public and private in promoting sustainable tourism	Lack of coordination in the economic and tourist development of the lagoon area. Little homogeneity in the actions on the territory for the enhancement of the landscape and its use within the regional tourism system	Among the criticalities identified are the reduced tourist visibility, the low infrastructures and the low commercialization of the product (offers not accessible and sufficiently known to the public).

B. PREFERRED SCENARIO

The preferred scenario is developed basing on the participation activities of the **Territorial** open to the public. It combines aspects of the trend scenario and expectations/visions/ideas considered as most important to the members of the community and engaged stakeholders. It will balance the potential reality of the future while on one side providing opportunities to adjust to changing development patterns, and the other side addressing the desired objectives of environmental protection and economic development.

Priority elements of preferred scenario are listed below:

The following is the summary of "SCENARIOS FOR THE CONSTRUCTION OF THE STRATEGIC DOCUMENT - EASW" report elaborated by EcoAzioni.

Objective: To define a scenario starting from the question What future for the Marano Lagoon in 2030. The methodology used is the EASW® European Awareness Scenario Workshops

2030 SCENARIO: THE MARANO LAGOON

GOVERNANCE

We are in 2030 the Wet Area Contract for the Marano Lagoon, it is a consolidated reality and has contributed to the qualitative and quantitative improvement of the water resource, associated with a new management model for the entire lagoon area. The territory was put back into operation through shared actions between the various public and private subjects and the local community. The Marano Lagoon Contract has become an effective tool that continues to bring all the private public entities of the territory around the table.

The Marano Lagoon, together with the river axes, have become not only local resources, but represent an added value for the whole Region in which to invest.

Recognizing this value, a series of interventions to improve and resolve some critical issues have been activated, starting from the areas behind the coast and the lagoon drainage basin, in order to limit potentially dangerous events for the lagoon itself.

CLIMATE CHANGE

Awareness has been raised on the issue of climate change and how it can have a significant impact on the local level. In 2030 some important measures have already been put in place to counteract some effects such as sea rise, temperature increase, storm surges and river floods from upstream

TOURISM AND ECONOMIC DEVELOPMENT

In 2030, an environmental and natural enhancement of the prestigious areas was achieved, commensurate with the estimated load capacity of the same. Tourism is also more eco-sustainable and based on an experiential qualitative model. Eco-sustainable, experiential and wellness-related offers are less impromptu and more organized.

Living the lagoon environment means guaranteeing respect for the parts of the integral reserve, but also developing a "slow and gentle" tourism, integrated between the environment, nature, typical products and small hospitality, which has allowed the creation of new forms of economy. Tourism can represent an economic integration even for those who lived only on fishing.

There has been greater attention to the tourist offer; the existing infrastructures have been integrated and others have been built. New technologies, internet, and national and European communication, have made it possible to make these environments better known, with information on what to do and where to go. The receptive structures guarantee access to everyone, even the disabled.

Some little-known and reachable areas have been enhanced, also estimating the load capacity of the environments and limiting their use

SLOW MOBILITY

In 2030 there are new services to cope with a slow and eco-sustainable use of the territory, widespread recharging points, electric boats, cycle paths, nature tourism. The offer of these particular forms of tourism are more structured, with the possibility of booking and organizing activities in a simpler way.

The Venetian coast is operational; several issues related to its navigability have been solved and services have been set up that allow companies to invest in the nautical sector of inland waterways navigation. Nautical traffic is restricted, controlled and sanctioned for abuses.

WATER AND LAGOON AREAS

In 2030, new water and sediment management models were implemented.

Interventions have been prepared to safeguard the lagoon dynamics and ecological connections, together with a new management of sediments entering from the mountain and from the mouths.

Excavation and maintenance works were carried out on the canals, also with reconstitution and protection interventions of the Barene and Velme. The management of the material excavated from the

canals and in the lagoon has a simpler process that allows it to be reused for the recovery of the salt marshes. The mouth of the Stella is safeguarded.

We contributed to the improvement of the chemical and ecological status of the waters, creating a synergy with the other river contracts in the area to improve the contribution deriving from the rivers of the drainage basin; the improved water quality has contributed to biodiversity and the maintenance of the presence of indigenous species, reducing allochthonous and alien ones (such as the blue crab). The problem of nutrients has been improved, for example by reducing nitrogen and addressing the lack of phosphorus.

LOCAL IDENTITY LANDSCAPE

The fishing valleys represent important values and in 2030 some critical issues related to the salinity of the water and the presence of some fundamental nutrients such as phosphorus were resolved. They will also have an important role in ecotourism and environmental education, as well as in projects related to the payment of ecosystem services. The mote and casoni are protected and characteristic elements of the lagoon landscape and become a tourist and historical characterization of the places.

TRAINING, ENVIRONMENTAL EDUCATION, ACTIVE CITIZENSHIP

The university plays an active role in research and scientific dissemination for the knowledge of the lagoon in its various components. New skills are developed in the university field, specific courses for new environmental challenges, implementation of new aspects of territorial planning involving undergraduates and graduates.

The territory was communicated and made known to residents, tourists and the new generations. Environmental education and information has played an important role in the re-appropriation of places by local communities.

Future plans, programs and regulations will take into account what emerges from the lagoon contract for their improvement.

PREFERRED SCENARIO				
Strategic area	Objectives	Measure	Action/Initiatives	Risks
	OG1. Sharing, coordinating and	Shared actions between the	- Implementation and updating of	Lack of resources

<p>G. GOVERNANCE</p>	<p>communicating knowledge, projects and activities</p>	<p>various public and private subjects and the local community</p>	<p>knowledge and environmental data</p> <ul style="list-style-type: none"> - Continue the activity of the Wet Area contract with activities of control and monitoring and information to the public 	
	<p>OG2. Contracts coordination and/or Contract of Contracts</p>	<p>Coordination of wetland and river contracts</p>	<ul style="list-style-type: none"> - Extend the Lagoon Contract and integrate it with the tributaries river contracts of the drainage basin - Transfer the knowledge of wetland contract to contribute to the coordination and for the creation of a control room and a coordination of the River Contracts 	<p>The different phases of the contracts may not be on the same development phase</p>
<p>E. ENVIRONMENT</p>	<p>OE1. Improve lagoon water balance</p>	<p>Restore dredging activities</p>	<ul style="list-style-type: none"> - creation of a working group for the preparation of a project proposal 	<p>Lack of funding</p>

			<p>for European / international calls</p> <ul style="list-style-type: none"> - Integrate the geomorphological study with characterization and sedimentological and geochemical analysis - dissemination of Lagoon Best Practices for the reduction of wave motion 	
	OE2. Improve water quality	Reduce water pollution in the catchment basin	<ul style="list-style-type: none"> - raise awareness of the effects of discharges in the tributaries and effects on the lagoon - Raise awareness of the importance of completing the infrastructure of sewerage and purification of waste water and connection of domestic drains 	Lack of involvement in the population of the whole catchment basin

			<ul style="list-style-type: none"> - Promote the sustainable use of plant protection products - Increase controls relating to the spreading of livestock manure - plastic free lagoon 	
	OE3.Implementing and improving Sustainable mobility	Development of the use of bicycles as a sustainable means of transport	<ul style="list-style-type: none"> - construction of a cycle-pedestrian ring to systematize the landscape and historical beauties and create a shared narration of the excellence of the local landscape - Creation of interchange micro-hubs - Promotion of the cycle-river park - “BICIPLAN” Coordination of sustainable mobility by means 	<ul style="list-style-type: none"> - lack of funding - lack of wider area coordination

			<p>of planning tools of wider area</p> <ul style="list-style-type: none"> - administrative tools to involve private individuals in the maintenance of cycle-touristic routes and guarantee continuous maintenance 	
	OE4. Protect biodiversity	Reduce anthropogenic disturbance to birds nesting	<ul style="list-style-type: none"> - Study and definition of pre-park and nursery areas for birds - activities and information and awareness-raising actions on anthropogenic disturbance to nesting 	Public involment
D. ECONOMIC AND SOCIAL DEVELOPMENT	OD1. Restore lagoon main canal dept	Restore dredging activities	<ul style="list-style-type: none"> - creation of a working group for the preparation of a project proposal for European / international calls - Integrate the geomorphological 	Lack of funding

			<p>study with characterization and sedimentological and geochemical analysis</p> <p>- dissemination of Lagoon Best Practices for the reduction of wave motion</p>	
	<p>OD2. Enhance the Marano Lagoon as a sustainable touristic destination</p>	<p>Promote the Marano Lagoon system as a sustainable touristic destination</p>	<p>- Mapping of sustainable tourism activities already present and active in the area</p> <p>- Qualification of the tourist offer and promotion of excellence</p> <p>- coordinated set of actions for the promotion of the Marano Lagoon system as a sustainable destination</p>	-

			- Training for communication and tourism enhancement of the Lagoon area of Marano	
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REPORT OF ALTERNATIVE SCENARIOS

Public institution for the management
of protected natural areas of
Dubrovnik-Neretva County

Neretva River Delta

Deliverable 4.3.1 – English summary

Final version

Date: 18/01/2021

Notes:

1) A.4.3 Drafting the Wetland Contract

The activity aims at implementing and subscribing the one Wetland Contract in each target area through the following progressive steps:

- identifying the institutional management bodies for the Wetlands Contracts (Coordinating Committee / Management Board and Technical Secretariat);
- developing of Territorial labs for the participated governance;
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The actors subscribing the Contract will be committed of: (i) acting in the frame of valorising of the subsidiarity principle, in respect of every actor's competences; (ii) activating all the partnership tools; (iii) keep working and monitoring the process even after the project end.

2) D.4.3.1 Report of Alternative scenarios

Each target area will report about the different scenarios proposed for the assessment to the Territorial labs. The report contains the criteria used for their development and the explanation of the differences.

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Authors: Public Institution for the Management of Protected Natural Areas of Dubrovnik-Neretva County

REPORT OF ALTERNATIVE SCENARIOS

(deliverable 4.3.1 – English summary)

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A. TREND SCENARIO

B. PREFERRED SCENARIO

A. TREND SCENARIO

This scenario seeks to reproduce the continuity of current trends in three strategic areas: governance, environment and economic and social development. In this scenario the involvement of citizens is limited, management and the conservation policies do not encourage the involvement of all territorial stakeholders. Therefore, it represents the continuation of the present development pattern, and it is not considered as the optimal framework for the achievement of the objectives, against the degradation of natural spaces.

Through the 1st Territorial lab, i.e. questionnaires conducted with 81 local stakeholders, current and alternative scenarios on governance, environment and socio-economic development were assessed. During the 2nd Territorial lab the biodiversity, cultural and socio-economic values were identified and prioritized by the stakeholders. In this way the current trends of the governance, biodiversity and socio-economic aspects was shared among the participants.

TREND SCENARIO			
Strategic area	Problem	Effects	Trends and critical issues
G. GOVERNANCE	PG1. The managing authority (Public Institution Dubrovnik-Neretva County - PIDNC) lacks staff in the Neretva River Delta (NRD) office for more continuous cooperation with local stakeholders	Due to the lack of local personnel, the local community is not in continuous contact with the PIDNC and does not receive regular education about biodiversity of the area. This results in the continuous devastation of the remaining natural values of Neretva Delta. There is only one staff member of PIDNC in the NRD, which is a complex	Staff from the main office of the PIDNC, from Dubrovnik, continue to travel to the Neretva Delta area (around 100 km distance) to help out their colleague in the NRD office concerning these activities: <ul style="list-style-type: none"> • Cooperation with the local stakeholders. • Monitoring the area. There are still no wildlife rangers in the NRD area to monitor it daily and cooperate with the most important stakeholders, i.e. law enforcement officers, firefighters, etc. Thus, threats to biodiversity in the area

		<p>area with many stakeholders and protected areas. Thus, involving the local community is often a struggle due to lack of capacities.</p> <p>From the perspective of the PIDNC, the local community often feels like someone from “Dubrovnik” is coming to the area and dictating rules of conduct. The local stakeholders would feel more understood if there were more representatives of the PIDNC from their local area.</p>	<p>are not mitigated in a continuous manner.</p>
	<p>PG2. The managing authority (PIDNC) is not recognized in the local area as a key institution</p>	<p>The PIDNC was founded very recently, in 2004, and is relatively unknown among the local populations. This was confirmed by a questionnaire given to selected local stakeholders, which is presented in document “Sharing and assessing scenarios”. The result of questionnaires is submitted as Annex A.1. Results of the 1st Territorial lab (in Croatian).</p>	<p>The fact that the management authority is still not fairly recognized among the local community still leads to these issues:</p> <ul style="list-style-type: none"> • The PIDNC is not always timely consulted in development/investment projects from certain sectors (agriculture, hunting, fishing, tourism, energetics) • Certain local stakeholders do not understand the main roles of the PIDNC and have unrealistic expectations. For example they expect the PIDNC to solve high-level political problems and

			unemployment in the area, manage cultural values, etc. As the PIDNC is not competent to solve these problems, this often creates disappointment and local stakeholders continue to view nature protection as a low priority in their work.
	PG3. Governance authorities of other sectors (agriculture, tourism, fishing and hunting) do not take into account the nature protection sector in the NRD and do not consult the PIDNC	The main natural values in the NRD are threatened and destroyed by unsustainable practices in other sectors. The natural values are not regarded positive, but as obstacles for the development of the area.	The cooperation between the PIDNC and representatives of other sectors is not continuous and the natural values continue to be destroyed by development and investment projects (more in detail in E. environment section).
E. ENVIRONMENT	PE1. Occurrence of reedbed wildfires	The quality of reedbeds is significantly impaired by the numerous wildfires that are recorded in the NRD every season. Such wildfires continue to destroy perennial and intact reedbeds, which are essential for nesting of numerous protected bird species. Due to inaccessibility, fires cannot be put out from the	Each year large areas of reedbeds are destroyed due to wildfires. Fires still occur during winter months when water levels drop. Most fires are actually arson (intentional fires) and locals still continue this practice each year. Since reedbeds are not valorised, there is no economic mechanism that can assess the damage of these wildfires. Thus, both experts and the general public can often not relate to the real importance of these habitats.

		mainland and the use of air forces is necessary.	
	PE2. Biodiversity of the Neretva River Delta is threatened by illegal activities such as poaching	Illegal killing of birds is one of the main threats for migratory birds in the area. In the scientific review of illegal killing in the Mediterranean (Brochet <i>et al</i> 2016 ¹), Neretva Delta was identified as a blackspot in Croatia for illegal hunting activities. These activities include hunting with electronic lures, plastic decoys, automatic firearms, hunting during night and hunting in ornithological reserves.	Poaching is still one of the main threats to biodiversity in the area. The reedbeds continue to be “a death trap” for birds on migration. Law enforcement officers continue to be passive concerning crimes against nature in the area. The NRD is not monitored by PIDNC continuously due to lack of staff.
	PE3. Biodiversity of the Neretva Delta River mouth is degraded by further touristic pressures on the area	The shallow coastal sea of the Neretva Delta River mouth is an important wintering, nesting and stopover site for many migratory bird species. . Therefore, even seemingly harmless tourist activities such as swimming, i.e. any increased concentration of people in the habitat, can	Advanced devastation is still happening today. Local politicians, the tourist sector and visitors are not aware of the pressures to biodiversity on the Neretva River Mouth.

1. ¹ Brochet, A. *et al.* (2016). Preliminary assessment of the scope and scale of illegal killing and taking of birds in the Mediterranean. *Bird Conservation International*, 26: 1-28. doi:10.1017/S0959270915000416

		have unforeseeable consequences for biodiversity. It should be taken into account that the coastal area is already significantly devastated, by the construction of the port of Ploče in the past.	
	PE4. Data regarding the biodiversity of the Neretva River Delta not collected from all stakeholders	The PIDNC is not aware of data on biodiversity collected by other stakeholders in the area. For example, Hrvatske vode – the legal entity for water management in Croatia, collects data on quality of water in the Delta area.	The input from other stakeholders on the biodiversity of Neretva River Delta is not collected and critical issues are not addressed timely. Such critical issues can for example be the water quality of certain biodiversity hotspots on Neretva River Delta.
	PE5. Other stakeholders not involved in eradication of invasive alien species	Invasive alien species continue to threaten the native biodiversity of the Neretva River Delta.	Stakeholders such as Hrvatske vode, Hrvatske šume (legal entity for forest management in Croatia) and hunting associations are not aware of invasive alien species in the area. Thus, they either do not collaborate on eradication of these species, or even worse – introduce them into nature.
D. ECONOMIC AND SOCIAL DEVELOPMENT	PD1. The local community is not aware of the importance of biodiversity of the NRD.	The area continues to be destroyed by unsustainable practices.	Most of the local community is not educated on the biodiversity of the area and is not aware of the existence of the PIDNC. Individuals continue their unsustainable practices, such as use of pesticides, poaching and usurping state land for agricultural

			practices. Individuals in local communities are not aware who to contact in case of filling a complaint regarding crimes against wildlife.
	PD2. Local counties and other decision makers do not take into account preserving the biodiversity of the area	The biodiversity of the area continues to be degraded by not implementing certain development projects or conducting harmful ones.	Activities and projects in the utilities, agriculture and processing industries such as sewage systems, wastewater treatment plants, waste separation and disposal are still degrading the biodiversity of the area.

B. PREFERRED SCENARIO

The preferred scenario is developed basing on the participation activities of the Territorial lab open to the public. It combines aspects of the trend scenario and expectations/visions/ideas considered as most important to the members of the community and engaged stakeholders. It will balance the potential reality of the future while on one side providing opportunities to adjust to changing development patterns, and the other side addressing the desired objectives of environmental protection and economic development.

During the 3rd Territorial lab the preferred scenario of the governance, biodiversity and socio-economic aspects was determined with the participants. Activities from that workshop are also the core of the Wetlands Contract Action plan. In the final, 4th Territorial lab, these activities received a spatial context, i.e. it was determined which activities are appropriate for each of the proposed zones in the protected areas of Neretva Delta.

Priority elements of preferred scenario are listed below:

- **Biodiversity protection.** During the Territorial labs, the participants have determined and prioritized the most valuable biodiversity elements of their area and threats to them. They have also suggested activities contributing to preserve biodiversity of the area.
- **Socio-economic aspects.** During the Territorial labs, the stakeholders have determined and prioritized the most valuable socio-economic elements of their area and threats to them. The

stakeholders have also determined activities that the PIDNC should implement to encourage the socio-economic development of the area.

- **Cooperation of nature protection sector with other governance structures.** During the 1st Territorial lab the respondents emphasized the need of cooperation between different governance institutions in Neretva Delta. During the 3rd and 4th Territorial labs activities were identified to facilitate cooperation between the PIDNC and other governance structures.

PREFERRED SCENARIO				
Strategic area	Objectives	Measure	Action/Initiatives	Risks
G. GOVERNANCE	OG1. The Public Institution Dubrovnik-Neretva County (PIDNC) is recognized in the local community as the key institution for biodiversity management.	Staff of PIDNC are more present in the area. Local community aware of the competence of the PIDNC.	<ul style="list-style-type: none"> • Set up PIDNC office in Neretva River Delta • Employ more PIDNC staff in Neretva River Delta, especially a wildlife ranger • Educate local community about biodiversity by PIDNC staff • Organize a workshop for the local population on the Natura 2000 ecological network and other concepts related to nature protection, as well as livelihood opportunities in the area 	<ul style="list-style-type: none"> • No available funds for further employment of staff • Staff of other governance bodies reluctant to share data • Local community does not participate in educational activities

			<ul style="list-style-type: none"> • Create promotional materials on the biodiversity values of the Neretva River Delta • Participate in activities for the promotion of intangible cultural heritage • Organize regular meetings between PIDNC and other governance bodies in the area (for example counties, water and forest management entities, tourist sector, etc.) • Promote sharing of data important to nature protection between different sectors 	
E. ENVIRONMENT	OE1. Valuable habitats and species, especially wetlands and	The biodiversity of the area is researched and monitored	<ul style="list-style-type: none"> • Conduct regular research and monitoring of most valuable and threatened 	<ul style="list-style-type: none"> • Not enough funds for monitoring and research of all species

	marine coastal habitats, have been protected and preserved.	regularly by experts	<p>species and habitats</p> <ul style="list-style-type: none"> • Revitalize and preserve suitable habitats for nesting and feeding of endangered bird species • Collect data on water quality from competent institutions • Cooperate with other stakeholders (Hrvatske vode, hunting associations) to eradicate invasive alien species • Establish vegetation along the edge of the Galičak lagoon to provide a suitable habitat for birds on stop over 	<ul style="list-style-type: none"> • Lack of support from other organizations
		Favourable condition of reedbed habitats is ensured.	<ul style="list-style-type: none"> • Employ additional personnel in Neretva Delta to monitor illegal activities • Conduct regular surveillance of 	<ul style="list-style-type: none"> • Due to inaccessibility, fires cannot be put out from the mainland and the use of air forces is necessary,

			<p>reedbeds to prevent the intentional occurrence of reed fires</p> <ul style="list-style-type: none"> • Establish joint preventive measures between sectors to prevent the outbreak of reed fires • Conduct regular supervision over the spread of private agricultural land to wetlands, in cooperation with Hrvatske vode and the State Inspectorate • Keep records of the number of reedbed fires and extent of burned areas • Develop and upgrade the video surveillance system for reedbed fires • Implement a program of preventive fire 	<p>thus lack of funds for such actions is risk</p> <ul style="list-style-type: none"> • As planting wildfires in reedbeds is sometimes a consequence of traditional activities, changing these mind sets can be challenging. For example, there is a theory among older people that wetlands are unhealthy and reeds need to be burn every year
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			<p>protection measures</p> <ul style="list-style-type: none"> • Collaborate with county and local public fire departments on fire prevention • Organize educational activities for local community on the values of reedbeds 	
		Poaching has decreased in the area	<ul style="list-style-type: none"> • Employ additional personnel in Neretva Delta to monitor illegal activities • Conduct regular surveillance of poaching (count number of illegal shots, map illegal hunting objects) • Cooperate with the police to increase their engagement to tackle poaching • Cooperate with NGOs in tackling poaching • Develop and upgrade the video 	<p>Neretva Delta was identified as a blackspot in Croatia for illegal hunting activities.¹ There are still no “environmental police units” in Croatia and this decreases the chance to prosecute poachers.</p> <p>Part of the local community does not recognize IKB as a mayor threat to biodiversity.</p> <p>Poaching is sometimes done by hunters, who</p>

			<p>surveillance system for poaching</p> <ul style="list-style-type: none"> • Strengthen cooperation between PIDNC and the county hunting association and local hunting associations • Supervise the aspect of nature protection in the game management plans • Set up a “Young rangers” programme • Cooperate with local associations (mountaineering, fire brigade, NGOs,...) with the aim of establishing a monitoring and reporting service 	<p>consider certain illegal activities as “traditions”.</p>
D. ECONOMIC AND SOCIAL DEVELOPMENT	OD1. The local community understands the importance of preserving natural values and the	The local community is educated about biodiversity of the area and is involved in	<ul style="list-style-type: none"> • Organize educational activities for local community on the natural values of Neretva delta 	<ul style="list-style-type: none"> • Poor turn out to events • If lecturer is someone from outside of the delta area, local community will

	resources are used sustainably	certain nature protection activities.	<ul style="list-style-type: none"> • Create promotional materials on the biodiversity values of the Neretva River Delta • Establish cooperation with various institutions and associations that organize local events and organize lectures on the topic of nature protection • Organize workshops for the local population on the Natura 2000 ecological network and benefits of protected areas to the local community • Revitalize and preserve suitable habitats for nesting and feeding of endangered bird species, along with the local community 	<p>have a sense that “someone from the outside is telling them how to live”</p> <ul style="list-style-type: none"> • Other topics more important to locals (Covid pandemic, agriculture, etc)
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	<p>OD2. Decisions in other sectors influencing nature preservation are made together with the nature protection sector</p>	<p>Local counties and other decision makers are educated about preserving the biodiversity of the area and cooperate with PIDNC.</p>	<ul style="list-style-type: none"> • Data on biodiversity is shared among different sectors (for example on water quality) • Encourage the development of selective forms of tourism (rural, gastro, green tourism, adventure tourism ...) • Determine the carrying capacity of areas where recreational and tourist activities occur (especially in protected areas, on beaches, sea and open fresh water) • Cooperate with forestry sector on preserving pastures and mosaic landscapes • Supervise the implementation of conditions and measures for nature protection in forest management plans 	<p>Decision makers support large infrastructural projects due to financial gain for the area</p>
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			<ul style="list-style-type: none"> • Supervise the implementation of the "Program of water maintenance and protection against the harmful effects of waste water" (prevent the regulation of the remaining natural parts of the watercourse, prevent the removal of vegetation along the watercourse) • Participate in the development of guidelines and conditions for the restoration of illegally reclaimed areas and water arms • Cooperate with the water management sector on the topic of river salinization • Participate in appropriate assessments, strategic environmental 	
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			<p>assessments and environmental assessments</p> <ul style="list-style-type: none"> • Participate in processes connected to development plans in the area • Organize meetings with other sectors and decision makers regularly 	
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REPORT OF ALTERNATIVE SCENARIOS

“Natura Histrica” - Public Institution
for the Management of Protected
Natural Areas in Istria County
Special Ornithological Reserve Palud - Palù

Deliverable 4.3.1 – English summary

Final version

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Notes:

1) A.4.3 Drafting the Wetland Contract

The activity aims at implementing and subscribing the one Wetland Contract in each target area through the following progressive steps:

- identifying the institutional management bodies for the Wetlands Contracts (Coordinating Committee / Management Board and Technical Secretariat);
- developing of Territorial labs for the participated governance;
- defining mid-long term strategic scenarios;
- sharing and assessing the strategic scenarios;
- drafting and subscription of the formal agreement of the Wetland Contract during the Local Final Conference (press conference).

The actors subscribing the Contract will be committed of: (i) acting in the frame of valorising of the subsidiarity principle, in respect of every actor's competences; (ii) activating all the partnership tools; (iii) keep working and monitoring the process even after the project end.

2) D.4.3.1 Report of Alternative scenarios

Each target area will report about the different scenarios proposed for the assessment to the Territorial labs. The report contains the criteria used for their development and the explanation of the differences.

3) This template has been developed by UNICAM (University of Camerino). It is inspired by and coordinated with the documentation elaborated in the Project WETNET financed under Interreg MED Cooperation Programme to increase information share, data and opportunities of confrontation.



Authors: Svjetlana Lupret-Obradović, “Natura Histrica” - Public Institution for the Management of Protected Natural Areas in Istria County

REPORT OF ALTERNATIVE SCENARIOS

(deliverable 4.3.1 – English summary)

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A. TREND SCENARIO

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This scenario seeks to reproduce the continuity of current trends in three strategic areas: governance, environment and economic and social development. In this scenario the involvement of citizens is limited, management and the conservation policies do not encourage the involvement of all territorial stakeholders. Therefore, it represents the continuation of the present development pattern, and it is not considered as the optimal framework for the achievement of the objectives, against the degradation of natural spaces.

During the 1st Territorial lab, SWOT analysis was conducted, problems and values of Palud area analysed. On the basis of the results, trend scenario was developed.

TREND SCENARIO			
Strategic area	Problem	Effects	Trends and critical issues
G. GOVERNANCE	PG1. Inadequate visitor infrastructure and equipment	<ul style="list-style-type: none"> • Visitors are not aware of the rules of conduct and restrictions in the Reserve • Visitors have no knowledge of the natural and cultural values of the Reserve • Uncontrolled parking next to the sea or besides natural and cultural values leading to the degradation of habitats • Dusty roads and paths used by vehicles, cyclists and walkers, leading to the reduced experience of the area 	<ul style="list-style-type: none"> • Lack of financial resources • Insufficient communication and dialogue with state and county authorities • Unresolved legal and property issues

	<p>PG2. Inadequate surveillance of the area</p>	<ul style="list-style-type: none"> • Unregulated camping, parking, fire and noise • Dissatisfaction and distrust of inhabitants and users of the area and the landowners • Poaching • Damage to existing infrastructure 	<ul style="list-style-type: none"> • Insufficient number of rangers (only 4 rangers for all area of Istria County – 28 protected areas) • Lack of communication with local inhabitants
	<p>PG3. Unresolved legal and property issues and lack of management documentation for the Reserve</p>	<ul style="list-style-type: none"> • Unsustainable use of the area • Illegal building within the Reserve and its vicinity • Coastal area is under the pressure of high number of tourists in the season, both from the land (automobiles, non-regulated parking, camping etc.), and from the sea (waste, motor boats...) • Partial loss of the identity of the area (due to abandonment of traditional activities and agriculture...) • Impossibility of the infrastructural development • Impossibility of applying to some sources of funding due to lack of prepared project documentation 	<ul style="list-style-type: none"> • High number of landowners • Resolving of legal and property issues are not in the competence of the Public Institution • Insufficient communication and dialogue with state and county authorities

	<p>PG4. Restriction of development because of incompatibility of different legal regulations</p>	<ul style="list-style-type: none"> • Holders of concessional permits do not make long-term investments and improvement of their business which leads to their dissatisfaction and lack of dialogue with Public Institution • Impossibility of regulation of the wild boar population causing damage to local inhabitants • Abandonment of agriculture and other activities (i.e. tourism) • Impossibility of encouragement of eco-friendly activities (i.e. cycling) 	<ul style="list-style-type: none"> • Overlapping of authorities in management of the area • Outdated “Decision on protection measures of Palud ornithological reserve”, and restrictions imposed by it • Insufficient communication and dialogue with state and county authorities
<p>E. ENVIRONMENT</p>	<p>PE1. Potential threats to biodiversity</p>	<ul style="list-style-type: none"> • Threats to fundamental values of Palud Ornithological Reserve, and Natura 2000 habitats and species • Potential loss of protected area status • Reduction of biodiversity and appearance of invasive species • Loss of areas’ attractiveness and opportunities to increase the added 	<ul style="list-style-type: none"> • Ignorance of values and vulnerability of the area • Lack of funds for research • Inadequate surveillance > poaching • Agricultural abandonment and neglected land > spreading of invasive species • Climate change

		value of the products and services (i.e. ecological production)	
	PE2. Succession and change in water quality and composition	<ul style="list-style-type: none"> • Changes in habitat condition and population structure of plant and animal species • Cessation of former traditional activities (i.e. eel and mullet fishing) 	<ul style="list-style-type: none"> • Climate change • Unregulated inflow of sea water through the barrier • Ignorance of hydrological conditions • Lack of funds for research • Lack of maintenance of the connecting canal leading to accumulation of waste in it
	PE3. Unprotected and insufficiently valorised cultural heritage	<ul style="list-style-type: none"> • Deterioration of rich cultural and historical heritage • Loss of areas' attractiveness and opportunities to increase the added value based on cultural heritage 	<ul style="list-style-type: none"> • Insufficient interest of competent authorities to solve the problems • Insufficient communication and dialogue and linking of natural and cultural heritage in the Reserve • Lack of investments in valorisation and restoration of cultural heritage in the Reserve
D. ECONOMIC AND SOCIAL DEVELOPMENT	PD1. Abandonment and not recognizing the possibilities for development of traditional activities	<ul style="list-style-type: none"> • Potential loss of value of agricultural land • Reduced use of common reed (used for roofing, fences etc) • Cessation of traditional activities (eel and mullet fishing) • Loss of opportunities for development and added value of autochthonous products and branding 	<ul style="list-style-type: none"> • Unresolved legal and property issues • Lack of management plan and other management documents • Insufficient communication and dialogue with local inhabitants, tourist sector and local/regional authorities

		<ul style="list-style-type: none"> • Illegal building and trend towards unsustainable tourism 	
	<p>PD2. Insufficient information, promotion and education about the Reserve</p>	<ul style="list-style-type: none"> • Reserve is not recognized as a valuable tourist destination for nature lovers • Visitors can hardly reach information on how to approach the area • Local inhabitants are not informed and educated enough to be able to give quality information to visitors and increase their experience of the area • Not enough interest from local schools and other educational institutions for education about Palud • Information is mainly restricted to the basic phenomenon of the Reserve- birds and the swamp, although protected area encompasses other valuable areas (grasslands, forest, cultural heritage) 	<ul style="list-style-type: none"> • Insufficient communication and dialogue with state and local authorities, and cooperation with educational and tourist sector • Lack of management documents • Insufficient communication and dialogue with land owners and their education • Lack of a person in charge of information dissemination in the Institution
	<p>PD3. Insufficient tourist valorisation</p>	<ul style="list-style-type: none"> • Reserve is not recognized as a 	<ul style="list-style-type: none"> • Insufficient communication and dialogue with state and local

	<p>and networking with other tourist attractors on a regional level</p>	<p>valuable tourist destination</p> <ul style="list-style-type: none"> • Cultural heritage is not recognized as a valuable tourist element of the area • Loss of opportunities for development and added value of autochthonous products and branding • Limited visitor offer – Reserve is offering specific experience and attracts tourists interested in it (bird watchers and alike); besides, costal area is under pressure from swimmers 	<p>authorities, and cooperation with tourist sector</p> <ul style="list-style-type: none"> • Lack of management documents • Insufficient communication and dialogue with land owners and their education • Inadequate visitor infrastructure
	<p>PD4. Insufficient international co-operation and using of EU funds</p>	<ul style="list-style-type: none"> • Difficulties in financing of management and investment in visitor infrastructure • Loss of opportunities for development and added value of autochthonous products and branding • Insufficient protection of biodiversity and specific water ecosystem 	<ul style="list-style-type: none"> • Lack of management documents • Unresolved legal and property issues

B. PREFERRED SCENARIO

The preferred scenario is developed basing on the participation activities of the Territorial lab open to the public. It combines aspects of the trend scenario and expectations/visions/ideas considered as most important to the members of the community and engaged stakeholders. It will balance the potential reality of the future while on one side providing opportunities to adjust to changing development patterns, and the other side addressing the desired objectives of environmental protection and economic development.

During the 1st and the 2nd Territorial lab the preferred scenario was developed leading to subsequent development and formulation of the activities of the Wetland Contract, in the 3rd and the 4th territorial labs.

Priority elements of preferred scenario are listed below:

PREFERRED SCENARIO				
Strategic area	Objectives	Measure	Action/Initiatives	Risks
G. GOVERNANCE	OG1. Producing management plan	Management plan produced and implemented	<ul style="list-style-type: none"> Already in progress as part of the project of the Ministry 	<ul style="list-style-type: none"> Long procedure Refusal of some stakeholders to obey the rules
	OG2. Resolving illegal building and property issues	Decreased number of illegal objects Special regimes inscribed in the cadastre and official land register	<ul style="list-style-type: none"> Actions towards relevant authorities Gather of geodetic data and initiate inscription in the official registers 	<ul style="list-style-type: none"> Slow inspections and other competent authorities Long procedures
	OG3. Better visibility of regulation in the area – <i>online</i> and <i>in situ</i>	Signalization put in the area	<ul style="list-style-type: none"> Make a concept of signalization Adapt web site and social media 	<ul style="list-style-type: none"> n/a

		Web site improved		
	OG4. Hiring a person in charge exclusively for Palud area	Person(s) employed	<ul style="list-style-type: none"> • start procedures towards county authorities to approve additional workers 	<ul style="list-style-type: none"> • Not enough funds
	OG5. More efficient surveillance; Protocol for monitoring of poaching	Lower number of incidents Protocol produced	<ul style="list-style-type: none"> • Reorganize surveillance plans • Consult other Public institutions with similar problems • Hire a consultant to help with writing a protocol 	<ul style="list-style-type: none"> • Not enough funds • Lack of willingness to change the old way of work
	OG6. Additional posts for ranger and educator	Person(s) employed	<ul style="list-style-type: none"> • start procedures towards county authorities to approve additional workers 	<ul style="list-style-type: none"> • Not enough funds
	OG7. Monitor a Programme for disposition of agricultural land	Area of land encompassed by the programme	<ul style="list-style-type: none"> • Explore the possibilities of inclusion in the programme 	<ul style="list-style-type: none"> • N/a

			<ul style="list-style-type: none"> Oversee the land encompassed by the programme 	
	OG8. Improve the parking system	<p>New parking lots established</p> <p>Less unregulated parking</p>	<ul style="list-style-type: none"> Write a project documentation for new parking places Communicate plans to wider public Apply for EU and other sources of funding Contract an enterprise Conduct works 	<ul style="list-style-type: none"> Public disapproval Failure to attract funding Problems with construction works
	OG9. Regulate anchoring, limit numbers of boats and protect coastal areas from anchoring	<p>Decrease in number of boats anchoring along the reserve's coast</p> <p>Number of new acceptable anchoring points</p>	<ul style="list-style-type: none"> Start the necessary procedures to regulate the anchoring 	<ul style="list-style-type: none"> The activity is outside the scope of the future Wetland Contract
	OG10. Improvement of traffic infrastructure	<p>Road condition improved</p> <p>Parking lots established</p>	<ul style="list-style-type: none"> Write a project documentation for new parking places 	<ul style="list-style-type: none"> Public disapproval Failure to attract funding

		Less unregulated parking	<ul style="list-style-type: none"> • Communicate plans to wider public • Apply for EU and other sources of funding • Contract an enterprise • Conduct works 	<ul style="list-style-type: none"> • Problems with construction works
	OG11 Improving existing infrastructure for agricultural use	No. of infrastructure improved	<ul style="list-style-type: none"> • Assess the need for improvement • Find interested stakeholders 	<ul style="list-style-type: none"> • Possible complicated procedures
	OG12. Infrastructural improvement (circular path, additional observation points, information points, interpretive tables and paths, photo point, souvenir shop etc.)	<p>Infrastructure renewed and /or new infrastructure established</p> <p>Number of paths, observation, information and photo points, souvenir shops etc.</p>	<ul style="list-style-type: none"> • Write project documentation • Communicate plans to wider public • Make a financial plan • Write interpretive texts 	<ul style="list-style-type: none"> • Inadequate funding > prolongation of project implementation

E. ENVIRONMEN T	OE1. Analysis of hydrological conditions	Background data collected Monitoring protocols established Monitoring put in place and regularly conducted	<ul style="list-style-type: none"> Establish connections with relevant scientists and experts Purchase of the adequate fieldwork equipment Education of the Public Institution Staff for collecting data 	<ul style="list-style-type: none"> Not enough funds to accomplish tasks fully
	OE2. Research and monitoring of ecological conditions of water and sediment	Background data collected Monitoring protocols established Monitoring put in place and regularly conducted	<ul style="list-style-type: none"> Establish connections with relevant scientists and experts Purchase of the adequate fieldwork equipment Education of the Public Institution Staff for collecting data 	<ul style="list-style-type: none"> Not enough funds to accomplish tasks fully
	OE3. Research and monitoring of surface and underground waters	Background data collected Monitoring protocols established	<ul style="list-style-type: none"> Establish connections with relevant scientists and experts Purchase of the adequate 	<ul style="list-style-type: none"> Not enough funds to accomplish tasks fully

		Monitoring put in place and regularly conducted	<p>fieldwork equipment</p> <ul style="list-style-type: none"> • Education of the Public Institution Staff for collecting data 	
	OE4 Regulation of water levels with automatic barrier	Operational regulation system put in place	<ul style="list-style-type: none"> • Resolve property issues • Establish contacts with Croatian Waters • Make a project • Implement the system 	<ul style="list-style-type: none"> • Long procedures • Difficulties in funding
	OE5. Management of habitats to improve status of some species	<p>Protocols for habitat management produced</p> <p>Number/area of specific habitats managed</p> <p>Monitoring of the effects of the management established</p>	<ul style="list-style-type: none"> • Make detailed analysis of the needs for management of certain habitats types • Discuss different options with experts • Produce protocols • Implement measures • Monitor changes 	<ul style="list-style-type: none"> • Lack of funds

	OE6. Maintenance of wetland habitats	<p>Protocols for wetland habitat management produced</p> <p>Number/area of wetland habitats managed</p> <p>Monitoring of the effects of the management established</p>	<ul style="list-style-type: none"> • Make detailed analysis of the needs for management of certain habitats types • Discuss different options with experts • Produce protocols • Implement measures • Monitor changes 	<ul style="list-style-type: none"> • Lack of funds
	OE7. Zonation	<p>Map of the zones produced</p> <p>Results integrated into management plan</p>	<ul style="list-style-type: none"> • Analysis of existing data • Consultation process with stakeholders and experts • Describe the zones • Writing the zones on the map 	<ul style="list-style-type: none"> • lack of quality data
	OE8. Bird monitoring	<p>List of bird species and numbers</p> <p>Photographs</p>	<ul style="list-style-type: none"> • Hiring experts for certain bird groups • Organizing ornithological camp • Regular fieldwork 	<ul style="list-style-type: none"> • n/a

	OE9. Control of numbers of wild boar	Number of wild boar under control Regular monitoring established	<ul style="list-style-type: none"> • establish contact with experts • define methodology • produce monitoring protocols • implement measures • conduct monitoring 	<ul style="list-style-type: none"> • Legal issues (permits, procedures etc.)
	OE10. Maintenance of the area – cleaning, removing vegetation	Number/ area of the territory cleaned	<ul style="list-style-type: none"> • Make an annual plan • Engage adequate sources (workers, tools etc.) 	<ul style="list-style-type: none"> • Possible overlap of jurisdiction
	OE11. Revalorisation of cultural heritage	Background data on the current state of cultural heritage collected	<ul style="list-style-type: none"> • Establish contacts with experts • Conduct a field survey • 	<ul style="list-style-type: none"> • n/a
	OE12. Development of cultural tourism	Itineraries for cultural tourism produced	<ul style="list-style-type: none"> • Establish contacts with experts • Develop itineraries • Education for the Public Institution staff 	<ul style="list-style-type: none"> • n/a

	OE13. Revitalisation of traditional praxes (fishing eels and mullets)	Traditional praxes established No/wight of the fish collected	<ul style="list-style-type: none"> • Make the analysis of possibilities to revitalize certain • Find people willing to perform 	<ul style="list-style-type: none"> • Collision with the protected area status of the Reserve
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D. ECONOMIC AND SOCIAL DEVELOPMENT	OD1. Incentives for revitalization of traditional economy	No. of SMEs with traditional production	<ul style="list-style-type: none"> • Explore the possibilities • Contact potential SMEs interested in such an activities • Conduct necessary procedures 	<ul style="list-style-type: none"> • Long , expensive and complicated procedures • Lack of interest among stakeholders
	OD2. Incentives for ecological production	No. of SMEs with ecological production introduced Area of the land marked for ecological production	<ul style="list-style-type: none"> • Explore the possibilities • Contact potential SMEs interested in such an activities • Conduct necessary procedures 	<ul style="list-style-type: none"> • Long , expensive and complicated procedures • Possible environmental pollution (air, soil)
	OD3. Production of Marketing strategy	Mid-term Marketing strategy produced	<ul style="list-style-type: none"> • Hire experts in marketing • Make wider consultations • Produce strategy 	<ul style="list-style-type: none"> • N/a
	OD4. New tourist itineraries and packages	No. of itineraries and packages produced	<ul style="list-style-type: none"> • Establish contacts with experts • Develop itineraries • Education for the Public Institution staff 	<ul style="list-style-type: none"> • n/a

	OD5. Resolving property issues as a pre-condition for development	No. of cadastre parcels with clear status Inscription of "special regimes" to cadastre and land register, according to Law on nature protection	<ul style="list-style-type: none"> • Actions towards relevant authorities • Gather of geodetic data and initiate inscription in the official registers 	<ul style="list-style-type: none"> • Long, expensive and complicated procedures
	OD6. Organization of events to promote traditional values	No. of events per year	<ul style="list-style-type: none"> • Consultancies with wider public • Create ideas for events • Contact older people and collect their memories on traditional values • Create a timeplan 	<ul style="list-style-type: none"> • n/a
	OD7. Development Strategy for branding of Palud through EU projects	Strategy produced	<ul style="list-style-type: none"> • Hire experts in marketing and branding • Make wider consultations • Produce strategy 	<ul style="list-style-type: none"> • n/a

	OD8. Development and implementation of intelligent surveillance systems (ISS)	ISS put in place	<ul style="list-style-type: none"> • Connect with experts • Make a project for ISS • Apply for financing • Acquire equipment needed 	<ul style="list-style-type: none"> • Difficulties in finding finances
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REPORT OF ALTERNATIVE SCENARIOS

Natura Jadera

Veliko i Malo blato

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Notes:

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Authors: Natura Jadera

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TREND SCENARIO			
Strategic area	Problem	Effects	Trends and critical issues
G. GOVERNANCE	PG1. Local community not involved enough	<p>The local community does not recognize the potential or importance of the location.</p> <p>This disinterest in the location and its future makes it more susceptible to external interests and exploitation.</p> <p>The location is more susceptible to natural or man-made degradation.</p> <p>The locals use the location primarily as pasture, without further developing its potentials.</p>	<p>These effects result in neglect of the Veliko and Malo blato reservation because without public support it's harder to ask or to implement any improvements.</p> <p>Public disinterest also makes the location and its surroundings prone to external effects/stakeholders: a landfill will be built in the close proximity of the location with the effects to Veliko and Malo blato yet to be determined. Without the public to enhance and give more legitimation to the experts' opinions it leaves the ecological potential of the location in a weak position.</p>

			<p>Long term, this can result in location being fully dependent on any external factor, which can mean slow stagnation over time at best or a fight for survival at worst. Overall, the issue of the reservation being good as it is now for purely environmental purposes leaves it vulnerable to external stakeholders that might have other interests beside the natural sustainability. Without the public interest to manage the reservation in a sustainable way any positive change is harder to implement.</p>
	<p>PG2. Lack of experts/staff working full time on the development of the location</p>	<p>It's difficult to implement any improvements without a designated responsible person(s) governing the location itself and its day to day activities.</p> <p>Development of the reservation especially at this point needs full time attention and lack of it results in stagnation.</p> <p>Numerous parties are involved as they can be in the location, but improvement is slow at</p>	<p>The most critical issue is that even when an external stakeholder is interested in the reservation lack of clear chain of command and any on-site operability hinders ideas from developing. Plans for hiring people to work at the location have been made but with unclear scope of responsibilities and functions; on the other hand due to lack of content at the site there is no immediate pressure or necessity to invest in a reservation manager or a</p>

		<p>best without anyone to push for change.</p> <p>No staff working on the location hinders any possibility of (sustainable) tourism.</p>	<p>guiding expert or a ticket salesman or any other function that might be possible with further development.</p> <p>Several parties (Natura Jadera, Hrvatske vode, Općina Poveljana) have interest and power over the location, yet no one has the location as its priority interests as these institutions serve a different function. However, without at least a person fully invested in the locations future any change will be difficult to implement.</p> <p>This issue relates to the public involvement as well. The local community might have an idea of what the reservation and the community needs, but without experts to voice those concerns it's a lot harder for their voice to be heard.</p> <p>This results in dispersed voicing of the interested opinions, making it harder to attract investment or make long term plans, as well as to protect it from external factors.</p>
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	<p>PG3. Lack of strategic documents and their implementation</p>	<p>This effects in no clear vision for the future of the reservation, or even if it's mutually agreed upon there is no written rationale to back up the ideas that are to be financed</p> <p>Without clear vision it's difficult to maintain the interest of the regional stakeholders and a focus on cooperative development of the location</p>	<p>The most critical issue resulting from this is that the activities to be implemented are yet to be discussed and approved, which means that the actual implementation of any activity can take a while.</p> <p>Secondly, without proper planning and long-term strategy there is a greater chance of investing in something harmful to the environment or just unsustainable, which again leads to stagnation.</p> <p>Finally, strategic document besides giving points on what and how (assuming they are realistic and well-written) elaborate and justify both public and private investments.</p>
<p>E. ENVIRONMENT</p>	<p>PE1. Without proper maintenance the location might get overgrown with sedge</p>	<p>If the reservation gets overgrown with sedge it will lose its function as a source of fresh water on the island.</p> <p>This effects the reservation in a twofold way: firstly, if there is no water the reservation as a natural habitat for birds on</p>	<p>The critical issue here is that without water the entire ecosystem of the reservation will cease to exist.</p>

		<p>Adriatic flyaway will be ruined. Secondly, fresh water can be used in case of emergency if waterline supplies stop functioning on the island.</p>	
	<p>PE2. Poaching – the location attracts illegal hunters on birds and fishes.</p>	<p>Without proper care, overfishing and poaching can endanger the wildlife at the reservation.</p> <p>This would in turn diminish a lot of the value of the reservation, especially its ornithological/educative potential.</p>	<p>Veliko and Malo blato reservation attracts a lot of different bird species, and along with the sweet water fish (which is an interesting attraction on an island) it is a small but unique location. Poachers are long term undesirable visitors, as that kind of activity ruins the inhabiting wildlife which in turn ruins the purpose of the reservation.</p>
	<p>PE3. Maintaining the water quality.</p>	<p>Fresh water is the key element of the reservation and by degrading its quality it endangers the reservation from being a suitable location for the inhabiting wildlife.</p>	<p>The reservation might get threatened by a sudden wild waste disposals or any similar pollution effect. A number of construction stakeholders have an interest in the surroundings of the reservation so there is always a potential threat that pollution in any form will reach the reservation as well.</p>

	PE4. Lack of data transparency on environmental issues	This makes it difficult to approach any planning and hinders determining what criticality needs to be prioritised	As the reservation is under jurisdiction of several authorities getting the required data for interested parties is problematic and it reflects on monitoring the environment in the reservation.
D. ECONOMIC AND SOCIAL DEVELOPMENT	PD1. “The situation is good as it is”	The resulting development problem reflects on the previously mentioned problems, which effects the future of the reservation with no clear vision and power to exist on its own.	<p>The criticality here is that all things considered, without making any effort, the reservation will keep on existing without ever reaching its full potential for the local and regional community, but it should maintain its environmental function (unless other interested stakeholders determine that landfill or similar construction areas would take priority over environment).</p> <p>On the other hand, if any action is to be made, it will require a lot of effort and careful planning to develop the locality from an interesting site to a sustainably led attraction beneficial for the community. The problem could be put like this: option a) is low investment with low rewards while option b) is high</p>

			investment with mid rewards. However, option a) comes with a lot more risk for the future sustainability and should not be a desired development.
	PD2. Lack of public interest	<p>This is the resulting effect of both governance and developmental issues.</p> <p>The location is perceived as interesting especially among the bird watching tourist and experts, but due to lack of content its potential is not fully optimized. This hinders possibilities for the local community to be more involved in the reservation development.</p> <p>In a sentence, without developing the reservation potential, its function as “public good” is very limited and the added value of fully developed ornithological reservation is not recognized by the regional public.</p>	<p>While the site has potential to become an example of a ornithological reservation with sustainable touristic offer and education, for now it’s used mainly as a pasture. This in turn makes it difficult for the local community to get more attached to the reservation, so its development is slowed down as it’s not a priority.</p> <p>This hinders further development, as unified interest in the reservation development would make a stronger case for investments.</p>
	PD3. Lack of eco-friendly infrastructure	<p>Potential of the reservation is very limited due to this issue. Without proper ticketing office, birdwatching towers,</p>	<p>At this moment the location is underdeveloped, while at the same time a noticeable concern is present among the</p>

		<p>signalization etc the location cannot fulfil its full potential of a sustainable ornithological reservation with educative purposes</p>	<p>stakeholders that any investment in the infrastructure might lead to mass tourism and in that way harm the location in its current purpose as a bird watching reservation. In that regard, a sustainable and purposeful solution is yet to be found.</p>
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B. PREFERRED SCENARIO

The preferred scenario is developed basing on the participation activities of the **Territorial** open to the public. It combines aspects of the trend scenario and expectations/visions/ideas considered as most important to the members of the community and engaged stakeholders. It will balance the potential reality of the future while on one side providing opportunities to adjust to changing development patterns, and the other side addressing the desired objectives of environmental protection and economic development.

Priority elements of preferred scenario are listed below:

PREFERRED SCENARIO				
Strategic area	Objectives	Measure	Action/Initiatives	Risks
G. GOVERNANCE	OG1. Ensuring that the local community is more involved in the governance of the reservation	Networking: making contact with the relevant stakeholders and agreeing upon mutually defined activities	<p>Presentation of ideas gathered from the CREW project</p> <p>Common workshop to agree upon short-term</p>	Any sort of group meeting at the current situation is not an optimal solution, which might affect the communication

			<p>issues and responsibilities</p> <p>Wetland contract</p>	<p>among the stakeholders.</p> <p>Stakeholders might not be interested in proposed activities or even if they are, cannot ensure contribution.</p>
	<p>OG2. Full time work position at the Veliko and Malo blato locations</p>	<p>At least one person employed full time</p>	<p>The reservation at this point needs a capable ranger to attend to all the different tasks needed for successful development of the reservation.</p> <p>These different tasks include guided tours, environment quality monitoring, education, engagement with the public and other day to day activities.</p> <p>Ideally, after a period of investments, certain profit</p>	<p>The first risk is that is that no institution could hold the financial responsibility of an employee, especially if the reservation would serve only as a public good with little financial gain and added value for regional economy.</p> <p>Secondly, even if the person is employed, s/he might deal with institutional setbacks that would hinder the development.</p>

			<p>would develop to further invest in the reservation, but its main purpose would remain to be a public good that will generate added value to regional economy.</p> <p>At least one qualified person would be employed.</p>	
	<p>O4: Developmental plans</p>	<p>Establishing a common vision on long-term strategy of the reservation.</p> <p>Implementation of the activities.</p>	<p>Writing a strategic document that would address the common needs of all the regional stakeholders in accordance to the reservations potential. This would include several points: sustainable tourism, educative material on bird-watching and touristic promotion plan that would serve to present the</p>	<p>Risks of not being able to find a commonplace for everyone's interests are always present when dealing with a number of institutions.</p> <p>Furthermore, the issue of responsibilities is to be determined – which stakeholder will be in charge of what activities.</p>

			<p>reservation as a part of the islands broader natural and cultural heritage. In short, a management plan should be made.</p> <p>Implementation of the actions in the document might start with soft activities (data gathering, networking or similar) and then proceed to infrastructure.</p> <p>Finally, having a clear vision and goals offers a much stronger position to discuss the reservation future with any external stakeholder that might in any way threaten the environment of the locations.</p>	<p>Activities envisioned must be in line with the aim to keep the locations environment safe as much as possible. Any indication of mass tourism or similar activities that might endanger the location put at risk the purpose of the reservation. In that regard, there is always a risk of activities being planned for the sake of economic profit instead of a public good.</p> <p>In that regard, the planned activities should be proven to be economically sustainable long term, but that should not be the priority. Focus of development should be sustaining the workforce in the</p>
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				reservation while contributing to adding value to regional tourism offer and economy in that way.
E. ENVIRONMENT	OE1. Ensuring the most endangered aspects of the reservation are protected	<p>Excess sedge is successfully removed.</p> <p>Quality of water is monitored periodically.</p>	<p>Activities for sedge removal include a basic operation of sedge cutting and removal.</p> <p>Water quality is to be monitored by the instruments placed on representative key points of the reservation.</p>	The largest risk of these activities is a possibility that the needed equipment might not function properly and that further investment in it needs to be made.
	OE2. Ensuring that the reservation is well protected from environmental harm	<p>Poaching activities are reduced.</p> <p>Locations are well protected from external factors (landfill, wild waste disposals etc).</p>	Monitoring and reacting to any smaller environmental threat would be one of the responsibilities of an employed ranger.	Risk of not being able to finance the employee is present, as well as institutional neglect over time due to other priorities.
	OE3. Establishing a comprehensible	A complete database of existing data	Gathering the existing data on water quality,	Lack of founding is the biggest risk for these activities as

	<p>monitoring system in the reservation</p>	<p>(CREW GIS database).</p> <p>A consistent monitoring system established before enhancing touristic activities.</p> <p>Monitoring that invasive species do not threaten the existing eco-system.</p>	<p>existing flora and fauna etc.</p> <p>Establishing the environmental standard and implementing control points at the locations.</p> <p>Prompt reaction to any threatening anomalies found through monitoring of the reservation.</p>	<p>well. This also might lead to lack of interest due to prioritising other tasks.</p> <p>Climate changes can affect the reservation as well. It can affect the periods the birds are flying or just make the reservation unsuitable for wildlife.</p>
<p>D. ECONOMIC AND SOCIAL DEVELOPMENT</p>	<p>OD1. Establishing a common vision of Veliko and Malo blato as educative public good that serves the regional development as a whole, especially in terms of reduction of touristic seasonality</p>	<p>Creating the conditions for sustainable touristic offer (bird-watching).</p> <p>Establishing the reservation as a part of regional identity and niche touristic offer.</p> <p>Connecting with other reservations and institutions of the same interest to expand the touristic offer and exchange</p>	<p>Implementation of the infrastructure – bird-watching towers, educative panels, pathways, bathrooms, touristic stands and similar.</p> <p>Promotional activities – cooperation with the regional touristic board, making connections with other cultural and natural sites to</p>	<p>The largest risk in this point is that no finances will be allocated for the infrastructure and the staff, so to keep that risk as low as possible elaboration of the investment benefits must be well made (through strategic document).</p> <p>By keeping it as niche tourism it should still get</p>

		<p>experiences and information.</p>	<p>present a unified offer.</p> <p>Cooperation with other bird-watching locations in the region and beyond to further expand the reservation visibility on the ornithological map.</p>	<p>enough interested visitors despite the risk of touristic traveling due to COVID-19 pandemic.</p> <p>Further connecting with similar reservations or locations would open new possibilities of cooperation and expand the visibility of the reservation, as well as it might open up new investment possibilities with already established ornithological reservations.</p>
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REPORT OF ALTERNATIVE SCENARIOS

Agency for Occupation and Development in North Barese / Ofantina Area Ofanto River

Deliverable 4.3.1 – English summary

Final version

Date: 14/04/2021

Notes:

1) A.4.3 Drafting the Wetland Contract

The activity aims at implementing and subscribing the one Wetland Contract in each target area through the following progressive steps:

- identifying the institutional management bodies for the Wetlands Contracts (Coordinating Committee / Management Board and Technical Secretariat);
- developing of Territorial Labs for the participated governance;
- defining mid-long term strategic scenarios;
- sharing and assessing the strategic scenarios;
- drafting and subscription of the formal agreement of the Wetland Contract during the Local Final Conference (press conference).

The actors subscribing the Contract will be committed of: (i) acting in the frame of valorising of the subsidiarity principle, in respect of every actor's competences; (ii) activating all the partnership tools; (iii) keep working and monitoring the process even after the project end.

2) D.4.3.1 Report of Alternative scenarios

Each target area will report about the different scenarios proposed for the assessment to the Territorial Labs. The report contains the criteria used for their development and the explanation of the differences.

3) This template has been developed by UNICAM (University of Camerino). It is inspired by and coordinated with the documentation elaborated in the Project WETNET financed under Interreg MED Cooperation Programme to increase information share, data and opportunities of confrontation.



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REPORT OF ALTERNATIVE SCENARIOS

(deliverable 4.3.1 – English summary)

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A. TREND SCENARIO

This scenario seeks to reproduce the continuity of current trends in three strategic areas: governance, environment and economic and social development. In this scenario the involvement of citizens is limited, management and the conservation policies do not encourage the involvement of all territorial stakeholders. Therefore, it represents the continuation of the present development pattern, and it is not considered as the optimal framework for the achievement of the objectives, against the degradation of natural spaces.

Within CREW, trend scenarios have emerged during Territorial Labs mostly in the form of individual contributions based on previous groundwork from participants, stakeholders and problem-holders. The methodology chosen – based on a structured co-creation workshop - has helped the scenario analysis and the collective journey mapping, also by including a significant part of discussion with designers of previous or foreseen river basin interventions.

TREND SCENARIO			
Strategic area	Problem	Effects	Trends and critical issues
G. GOVERNANCE	PG1. Responsibility in the "limit" areas	<p>Current legislative framework on river areas impose changes in the cultivation and management of riparian and floodplain lands.</p> <p>A certain degree of unacceptance by local stakeholders and/or lack of long-term and strategic institutional planning could hinder the construction of an innovative dialogue for the sustainable protection of floodplain areas.</p>	Both the civic and agricultural communities have become aware of the particular value of river environments, which constitute precious cores of naturalness for lowland areas and buffer strips between river dynamics and urbanized areas. The activation of river area redevelopment and management programs is yet to be widely accepted as a spring for the tourist development of the area, and an opportunity for work and for ascertaining the patrimonial and cadastral context of the land adjacent to the watercourse.

	<p>PG2. Progressive loss of outreach and significance for territorial pacts</p>	<p>As a core example, the 'Val d'Ofanto Pact', signed in Avellino in 2014, still has a significant and untapped strategic potential, and could constitute a strong basis for territorial advocacy both at the National and EU levels.</p>	<p>The work on territorial pacts must be carried on according to a trial-and-error methodology and based on a wide participation of local actors and problem-holders. Previous WC and other programmatic documents insisting on the Ofanto River area must be reconciled with the current trends and re-actioned when possible.</p>
E. ENVIRONMENT	<p>PE1. Ecological outflow and the consequences of the droughts</p>	<p>Associated risks for biodiversity and the minimum vitality in the riverbed in relation to the Ofanto water basin.</p>	<p>Significant negative reporting by several local stakeholders, especially those falling in the category of Private No-Profit (NGOs).</p>
	<p>PE2. Sedimentological deficit in the middle valley</p>	<p>Important sedimentological deficit in the middle valley of Ofanto River, with related problems of incision of the riverbed. At the same time, an excess of sediments in the lower valley.</p>	<p>Stable issue reporting by stakeholders, grounded on the analysis of the temporal planimetric evolution of the river, the evolutionary trend and range of mobility. Especially pursued by stakeholders falling in the Research Body category.</p>

D. ECONOMIC AND SOCIAL DEVELOPMENT	PD1. Lack of strategic long-term vision	Significant legacy of past infrastructural interventions that did not take into account the use of naturalistic engineering techniques and eco-compatible materials, thus are not in compliance with the provisions of current landscape legislation.	Hindering the touristic and green-economy potential of the Ofanto River area.
	PD2. Role of farmers	Consistent request from the involved category of taking into account financial tools that must be further enhanced, since the environmental and land maintenance services today struggle to offer adequate forms of remuneration for the owners and tenants of the funds.	Creating obstacles to a meaningful and reciprocal cooperation with sectoral stakeholders.

B. PREFERRED SCENARIO

The preferred scenario is developed basing on the participation activities of the **Territorial Labs** open to the public. It combines aspects of the trend scenario and expectations/visions/ideas considered as most important to the members of the community and engaged stakeholders. It will balance the potential reality of the future while on one side providing opportunities to adjust to changing development patterns, and the other side addressing the desired objectives of environmental protection and economic development.

Priority elements of preferred scenario are listed below:

PREFERRED SCENARIO				
Strategic area	Objectives	Measure	Action/Initiatives	Risks
G. GOVERNANCE	OG1. Wetland Contract as a decision-hub	Convergence of coordinated large spending areas in European funds, also in relation to the Recovery Fund, toward the WC as a governance body.	Find clear opportunities within innovative scenarios of coordinated governance for dialogue at national and European level.	Obstacles in the legal and formal qualification of the WC.
		Hypothesis for the construction of a scheme in which the territorial dimension of the WC could be used within the potential sources of national and European funding.	A database of projects of high strategic value, both tangible and intangible, contained in a "Ofanto Cluster", and whose structure will be further defined in the next WC's Action Plan .	
	OG2. Re-actioning of the 2014's Val d'Ofanto Pact	Reconfirming its purposes, i.e. the definition of trans-regional actions and programs in the new European programming 2021-2027 that the three	Produce a joint note of 4 Provinces and Prefectures (BAT, Foggia, Potenza, Avellino) for the involvement of the regions and the Presidency of the Council of Ministers for the activation of a	A high-degree of cooperation with stakeholders is required, especially with those falling in the Public Body / Authority category.

		involved Regions are defining.	specific discussion table.	
	OG3. ITI to WC Areas (i.e. Integrated Territorial Investments to the Wetland Contract)	Building upon the recent debate on the ZEA extension to all protected areas established pursuant to Law n. 394, going further than their originally envisaged application to national parks only.	Identification of possible training protocols for "food districts", with direct implications on the establishment of the ZEA ('Environmental Economic Zones'), with advantageous taxation and incentives for economic actions based on sustainability.	
E. ENVIRONMENT	OE1. Enhance the systemic potential of the riparian / ecotonal habitats of their river	Contributing to the construction of an "evolved" knowledge framework for the Wetland Contract.	Consolidation of the embankments, regulation of sediments and containment of hydrogeological instability.	Hindering the Ofanto River as a provider of hydraulic safety service.
		Standardization of administrative protection for interregional or cross-border assets	On a local level, this strongly resonated with the case of the stretch of River Ofanto falling in the Basilicata region - in the Municipalities of Melfi and Lavello – as well as the Valloni system between Spinazzola and Montemilone. All	A high-degree of cooperation with stakeholders is required, especially with those falling in the Public Body / Authority category.

			reference stakeholders were involved and were aligned with this specific objective.	
	OE2. River restoration	Discussion on the very relationship between nature and hydraulic requirements, particularly in the embanked sections.	Restoring the natural expansion capacity of the River pursued mainly with the remodeling of the alluvial plain near the mouth, aimed at widening the footprint of the watercourse with the excavation of valleys in terraced areas	Hindering the Ofanto River as a provider of hydraulic safety service and climate mitigation.
			Encourage the establishment of natural biocoenoses also with the introduction of native essences	
			Pursue the construction of islands connected to the riverbed of the river with morphodynamic purposes also in order to reactivate a natural management of sediments to counteract the phenomenon of	

			retreat of the river mouth and the coast line;	
			Cleaning of floodplain areas by removing trees from agricultural crops.	
D. ECONOMIC AND SOCIAL DEVELOPMENT	OD1 Unitary projects with a multifunctional approach	Discussing the opportunities for local planning in the urban adaptation / updating phases, in relation to the superordinate plans (PPTR, PAI, PGRA, PGA, etc.)	Work on a set of specific measures relating to the updating of the PGRA of the Authority of the Southern Apennine District	A high-degree of cooperation with stakeholders is required, especially with those falling in the Public Body / Authority category
		Frame the area of the hydrographic basin and the valley as a unitary system for the identification of a tourist brand entirely built within the physiographic dimension of the river as a natural / cultural settlement, aggregating landscape, artistic and eno-gastronomic elements.	Development of the territory of national and transnational cycling networks.	
			Assessment of the opportunities to relaunch the Barletta-Spinazzola and Rocchetta S.A. railway networks Scalo-Avellino	
			Assess opportunities offered by the widespread system	Verify for each company the existence of a

			of agricultural companies qualified as tourist hot-points	provision of cultural constraint pursuant to Part II of the Code of Cultural Heritage. Any building activity must be authorized in advance pursuant to art. 21 cited Code.
			Assess the themes of hospitality and services linked to the itinerary promoted by the Park (hotel accommodation, bicycle repair shops, intermodality)	
		Farmers can play a fundamental role in the conservation of the river ecosystem through the provision of environmental services, as required by the decree of orientation and modernization of the agricultural sector no. 228 of 18-5-2001 ("Orientation and modernization of the agricultural sector, in accordance with Article 7 of Law 5-3-2001, no. 57").	<i>Ad hoc</i> resources should be identified for this type of intervention, perhaps drawing on the funds provided for by law no. 183 of 18-5-1989 ("Rules for the organizational and functional reorganization of soil defense"), and to those of the CAP.	Not managing to identify widespread lamination areas for a "controlled flood" that are used during floods as a defence tool against hydraulic risk, but also as basins from which to draw water for agriculture could pose a risk to possibile synergies with farmers who choose to operate within these areas.

	<p>OD2.</p> <p>Production of energy from renewable sources</p>	<p>The plants for the production of energy from renewable sources within sensitive areas (on-board areas, interclosed, near regional borders), are assessed in compliance with the Renewables Guidelines of the Regione Puglia PPTR.</p>		<p>A high-degree of cooperation with stakeholders is required, especially with those falling in the Private For Profit (SMEs) category</p>
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