FROM SHARED RESOURCES
TO JOINT SOLUTIONS

# INTERREG V A Italy – Croatia CBC Programme

## Call announcement – Annex n 1

## Strategic Themes Concepts

Version n. 1 of 17th September 2019

# A. INTRODUCTION

This annex provides a framework for the 11 strategic themes as indicated in the Call announcement identified with the institutional top-down approach. It identifies for each strategic themes the macro-activities, the contribution to the output indicators, the expected outputs and the categories of partners to be involved by the project. The document also describes how the cross-border dimension should be taken into account.

This document then describes in detail the technical requirements that the projects shall have in order to be funded by the Programme under this Call.

For each strategic theme, the following contents have been defined, which constitute a binding reference for the strategic project proposal drafting:

a. **Strategic theme description.**
   Framework description of the strategic theme.
b. **Objectives.**
   Overall goal related to the selected theme within the Specific Objective of the Cooperation Programme.
c. **Macro-activities.**
   List of macro-activities that the beneficiary has to carry out within the project.
d. **Contribution to output indicators.**
   Outputs indicators to be considered by the project.
e. **Expected output.**
   Outputs that have to be produced by the activities of the project.
f. **Categories of partners to be involved.**
   Identifies the minimum requirements of the partnership in terms of 1) geographic coverage 2) specific typologies of partners that have to be involved given their specific roles and competence at regional/national level.
g. **Cross-border dimension.**
   Describes how the cross-border approach has to be translated into project activities.

# B. STRATEGIC THEMES

The work carried out during the preparatory phase in 2018-2019 led to the identification of the following strategic themes:

| PRIORITY AXIS | Specific Objective | Strategic themes |
|---|---|---|
| 1:**Blue Innovation** | 1.1: Enhance the framework conditions for innovation in the relevant sectors of the blue economy within the cooperation area. | 1.1.1: Blue technology - Developing innovative technologies for sustainability of Adriatic Sea. |
| 2:**Safety and resilience** | 2.1: Improve the climate change monitoring and planning of adaptation measures tackling specific effects, in the cooperation area. | 2.1.1: Climate change adaptation – Climate change data and modeling systems for knowledge and cooperation improvement for adaptation and mitigation strategies planning in urban coastal and marine environment. |
| | 2.2: Increase the safety of the Programme area from natural and man-made disaster. | 2.2.1: Flood risk - Developed methods and tools to be used for managing flood risks and their related impact in Programme area. |
| | | 2.2.2: Oil spills and other marine hazards, fire and earthquake - Strengthening of preparedness and prevention of hazards. |
| 3:**Environment and cultural heritage** | 3.1: Make natural and cultural heritage a leverage for sustainable and more balanced territorial development. | 3.1.1: Coastal and inland tourism - Smart specialization and improved quality in tourism for a green and sustainable development for Mediterranean islands, coastal and inland. |
| | 3.2: Contribute to protect and restore biodiversity. | 3.2.1: Marine environment - Improve the environmental quality conditions and biodiversity of coastal, marine, and inland waters and ecosystems consolidating sustainable and innovative technologies and |

| | | |
|---|---|---|
| | | approaches related to integrated monitoring, modeling systems and restoration. |
| | | 3.2.2: Fisheries and aquaculture - Shared Governance of Sustainable fisheries and aquaculture activities as leverage to protect marine biodiversity resources in the Adriatic sea. |
| | 3.3: Improve the environmental quality conditions of the sea and coastal area by use of sustainable and innovative technologies and approaches. | 3.3.1: Marine Litter - Shared actions and plans for integrated and cross-border management of the coastal and marine litter in a life cycle approach perspective. |
| 4: **Maritime transport** | 4.1: Improve the quality, safety and environmental sustainability of marine and coastal transport services and nodes by promoting multimodality in the Programme area. | 4.1.1: Maritime Transport - Enhancing the environmental sustainability of port operations in the Programme Area. |
| | | 4.1.2: Mobility of Passengers - Multimodal transport solutions and services for fostering, supporting and promoting a new passenger sustainable mobility. |
| | | 4.1.3: Nautical services - Small ports as driver for improvement of maritime transport and sustainable development in the Adriatic area. |

These themes represent the main challenges identified during the implementation of the Programme in order to achieve its objectives. The strategic themes are in line with the Programme intervention logic and EUSAIR compliance; moreover, in order to define the strategic themes it has been considered the gap between indicators covered by already financed Standard+ and Standard projects and indicators and targets set for the Programme.

Applicants must submit a proposal that is consistent with all the requirements set out in this document. All macro-activities listed must be included in the strategic project proposal, that shall contribute to the achievement of the set output indicators. The partners involved into strategic projects shall belong exclusively to the categories listed in the concerned theme concept. It is

strongly recommended to involve in the partnership all indicated categories. The project proposal shall foresee a clear contribution to the "expected outputs" mentioned in the concerned strategic theme concept.
In accordance with the institutional top-down approach that characterizes these strategics Calls for proposals, starting from the recognition of the strategic value for the cross-border area of the concerned themes, they were subsequently deepened in contents in collaboration with national delegations; this was done taking into account both the results of previous calls and the governance of EUSAIR pillars. As a result of the preparatory activity of these strategic projects Calls for proposals, on the basis of both the relevance of the need and institutional and technical know-how and taking into consideration the links between the role of the two Countries compared to EUSAIR pillars were relevant, it has been defined whether the leadership of the project proposal shall be Italian or Croatian.

- In coherence with this approach, the following strategic themes shall be led by a Croatian lead partner:

1.1.1: Blue technology - Developing innovative technologies for sustainability of Adriatic Sea.
2.2.1: Flood risk - Developed methods and tools to be used for managing flood risks and their related impact in Programme area.
2.2.2: Oil spills and other marine hazards, fire and earthquake - Strengthening of preparedness and prevention of hazards.
3.1.1: Coastal and inland tourism - Smart specialization and improved quality in tourism for a green and sustainable development for Mediterranean islands, coastal and inland.

- The following strategic themes shall be led by an Italian lead partner:

2.1.1: Climate change adaptation – Climate change data and modeling systems for knowledge and cooperation improvement for adaptation and mitigation strategies planning in urban coastal and marine environment.
3.2.1: Marine environment - Improve the environmental quality conditions and biodiversity of coastal, marine, and inland waters and ecosystems consolidating sustainable and innovative technologies and approaches related to integrated monitoring, modeling systems and restoration.
3.2.2: Fisheries and aquaculture - Shared Governance of Sustainable fisheries and aquaculture activities as leverage to protect marine biodiversity resources in the Adriatic sea.
3.3.1: Marine Litter - Shared actions and plans for integrated and cross-border management of the coastal and marine litter in a life cycle approach perspective.
4.1.1: Maritime Transport - Enhancing the environmental sustainability of port operations in the Programme Area.
4.1.2: Mobility of Passengers - Multimodal transport solutions and services for fostering, supporting and promoting a new passenger sustainable mobility.
4.1.3: Nautical services - Small ports as driver for improvement of maritime transport and sustainable development in the Adriatic area.

### 1.1.1 Blue technology - Developing innovative technologies for sustainability of Adriatic Sea.

**a. Theme description**

Creation of innovative network for underwater robotics and sensors based on request and offers from private and scientific research sector from Croatian and Italian side that will help to enhance the framework conditions for innovation in the monitoring and surveillance sector. Enhancing the transfer of knowledge within the cooperation area between the enterprises, R&D centers, higher education and the public sector, thus creating the premises for the commercialization of the research results and broaden the access to knowledge. Development of innovative technologies in robotics and sensors for monitoring of pollution in Adriatic sea based on technology maturity of *TRL* 4. It is crucial for cross-border relevance to capitalize already existing expertise in robotics, modeling, biology, environmental protection. The main change sought is to increase the effectiveness of the innovation activities in monitoring and surveillance sector by using fields of robotics and sensors for enhancing the transfer of knowledge and technology within the cooperation area between the enterprises, R&D centers, higher education and the public sector.

**b. Objectives**

To improve the performance of the Programme area in the field of innovation by establishing and developing mechanisms which contribute to a better exploitation of the existing potential. To strengthen innovation relationships between SMEs and research centers operating in Programme area.

**c. Macro-activities**

1) Development of a cross-border network for scientific-research and private sector.
2) Exchange of good practices to develop human capital, increase skills regarding novel technologies.
3) Joint development and piloting of eco-innovative tools and processes in the field of robotics and sensor for sea pollution prevention.
4) Development of DIH (Digital Innovation HUB) and living lab for underwater robotics and sensors in Adriatic sea to sustain future update on innovative technologies, raising competences, knowledge sharing and development of trainings.
5) Joint actions aimed at improving framework conditions for raising collaboration and networking in the field of robotics and sensors for further steps in public policies based on quadruple helix approach by developing strategy and action plan.

**d. Contribution to output indicators**

- Productive investment: Number of enterprises receiving support.

- Productive investment: Number of enterprises receiving grants.
- Productive investment: Number of enterprises receiving non-financial support.
- Productive investment: Number of research institutions participating in cross-border, transnational or interregional research projects.

**e. Expected output**

1) Development of a cross-border network for scientific-research sector and the private sector based on demand and offers.
2) Developed tools and workshop materials for raising human capital.
3) Designed and implemented questionnaire for stakeholders.
4) Developed methodology and business plan for DIH for innovative underwater robotics and sensors and living lab in Adriatic sea.
5) Pilot action I. - creating a prototype that is innovative robotic solution as a platform for development of solutions for monitoring and prediction of the sea pollution.
6) Pilot action II. – analysis of the obtained results on pilot action I and guidelines for the improvement of underwater conditions.
7) Established DIH for innovative underwater robotics and sensors and living lab in Adriatic sea.
8) Developed strategy and action plan for the enhancement of framework conditions for raising collaboration and networking in the field of robotics and sensors for further steps in public policies based on quadruple helix approach.

**f. Categories of partners to be involved**

**Eligible lead partners -** for this theme, only Chambers of Economy shall be considered as eligible lead partners.

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

**Eligible categories of project partners:**

- Regions/Counties.
- Chambers of Economy/Chambers of Commerce.
- National/regional/local agencies.
- Universities/faculties/research institutions/centers.
- SMEs/business support organizations.
- Maritime clusters

**g. Cross-border dimension**

For bringing added value to cross-border dimension it is crucial to understand that both coastlines are facing same problems that could have effect on fisheries and tourism sector because of the pollution. Based on this, it is crucial to act on cross-border dimension by jointly developing pilot actions and raising innovation level of included stakeholders. The supported operations have to demonstrate focus on the implementation of joint cross-border actions demonstrating the added value of the territorial cooperation. Developing cross-border network based on expertise and experience from quadruple helix stakeholders in fields of underwater robotics and sensors should bring to capitalization of existing activities, technologies and results that will have effect on raising innovation level on Croatian and Italian side. Joint development of human resources and knowledge sharing along with increasing capabilities in using new technology should be done through establishment of DIH and living lab.

## 2.1.1 Climate change adaptation – Climate change data and modeling systems for knowledge and cooperation improvement for adaptation and mitigation strategies planning in urban coastal and marine environment.

**a. Theme description**

The Programme Area is experiencing a growing trend of climate change effects with negative impacts especially in the vulnerable marine and coastal areas, at the same time, there is a lack of homogeneous and comparable data which makes adaptation potentiality of the marine and coastal systems poorly known. The theme shall contribute to fill this gap by developing new and advanced integrated monitoring, modeling and knowledge-based tools with a special focus on maritime dimension and which downscale existing global and regional climate scenarios into regional (Adriatic basin level) and local datasets and indicators; these tools, thanks to the definition of a shared and harmonized methodology and specific trainings addressed to main stakeholders, local authorities in particular, will strengthen capacity of planning adaptation measures and shall be used to design and adopt local plans of adaptation in coastal areas.

**b. Objectives**

To improve knowledge and cooperation on climate change data collection and modeling systems in order to plan adaptation measures and mitigation strategies, with a special focus on specific climate change effects affecting coastal areas (such as: sea level rise, sea temperature and salinity, coastal erosion and salinization of fresh waters).

**c. Macro-activities**

1) Coordination and improvement of the access to observing and modeling products (data platform, distributed database, innovative access tools), upgrading already existing monitoring observing systems at Adriatic basin level.
2) Setting up of high-resolution integrated meteo-hydro-ocean-eco-sediment climate numerical models.
3) Definition of main climate risks for the societal and economic sectors and ecosystem services and following assessment of impacts and vulnerability, through pilot case studies.
4) Involvement of stakeholders, at first, in order to collect main needs from territories and refine tools and methodologies to be developed and made available and, then, to train them in order to strengthen their capacity to develop and implement instruments for climate change adaptation.
5) Development of new local coastal adaptation plans, as a result of stakeholders' involvement in workshop and trainings and their following adoption by local authorities in coastal territories.

6) Setting up of a specific cross-border Expert Management Board consisting of multidisciplinary experts and supporting the project implementation, by participating in trainings, communication and dissemination activities and favoring the adoption of adaptation plans. This board should last after the project end in an advisory capacity, able to orientate monitoring, strategic planning, action plans related to climate change issues at Adriatic basin level.

**d. Contribution to output indicators**

- Climate change monitoring systems put in operation.
- Plans of adaptation measures put in place.

**e. Expected outputs**

1) Cross-border methodologies/protocols set up, aimed at harmonizing and improving accessibility of observing and modeling tools and products.
2) Regional integrated Monitoring Systems developed, with a special focus on hydro-meteo-marine climatological dimension (at least three integrated monitoring systems put in place – each dealing with different typologies of data).
3) Climate change risks and vulnerability maps developed for targeted pilot case studies.
4) Workshops and trainings addressed to stakeholders carried out.
5) Local plans of adaptation designed and adopted by local authorities in coastal territories (at least two plans should be adopted within the program area by local authorities in coastal territories: one in Italy and one in Croatia).
6) Permanent cross-border Expert Management Body set up.

**f. Categories of partners to be involved**

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

- Regions/Counties.
- National/regional/local agencies.
- Universities /faculties/research institutes/centers.
- Italian/Croatian cities and municipalities.

**g. Cross-border dimension**

Cross-border dimension shall be clearly demonstrated and common methodologies, protocols, tools and management structures shall be delivered. In particular, all main outputs shall be set up as a cooperation between Italian and Croatian partners. Data exchange shall be implemented and consolidated to ensure the cross-border and international data availability.

### 2.2.1 Flood risk - Developed methods and tools to be used for managing flood risks and their related impact in Programme area.

**a. Theme description**

The theme supports the development of flood risk maps and risk receptors, flood risk management plan and stakeholder training, an early warning system, an integrated probabilistic forecasting system and an integrated local public authorities system, fire brigades, police, mountain rescue service associations and civilian protection to minimize the response time during a crisis.

The main natural and man-made disasters this theme aims to tackle are floods. Joint development of human resources and knowledge sharing, along with increasing capabilities in using new technology is important for both sides. Data sharing, practice exchange and capacity building will bring additional valuable know-how to stakeholders from both Croatia and Italy, as their experiences are often complementary. Another important factor is related to geography. Regions covered by the theme have access to the Adriatic and high-level of flood risk which is visible when during the small amount of rainfall many settlements and cities are flooding.

**b. Objectives**

1) Contribute to the reduction of human, natural and material damage through increased readiness and management of operational risk of floods, as well as contributing to sustainable development by reducing environmental damage.
2) Develop methods and tools to be used by practitioners of emergency agencies and utilities responsible for managing flood risks and related impact.
3) Analyze the impacts of future changes, including climate change, land use and socioeconomic changes, in order to provide guidelines for mitigation and adaptation measures.

**c. Macro-activities**

1) Develop and realize flood cadastre (including flood hazard maps and flood risk maps).
2) Concretization of risk receptors (refreshment of flood risk maps) and preparation of Flood Risk Management Plan.
3) Development of technologies and systems needed to implement early warning system, integrated probabilistic forecasting system and integrated system for local governments, fire brigade, police, mountain rescue service associations and civil protection.
4) Implement training for stakeholders and ensure dissemination of activities.

**d. Contribution to output indicators**

- Risk prevention and management: Population benefiting from flood protection measures.
- People reached by initiatives for increasing awareness.

**e. Expected outputs**

1) 1 flood cadaster created/updated per Country and 1 shared portal for the involved flood cadasters realized.
2) 1 Flood Risk Management Plan (it must include flood risk maps and risk receptors) per Country created/updated and 1 shared Flood Risk Management Plan created.
3) 1 technology/system for the early warning developed in Programme area and integrated in the Flood Risk Management Plan.
4) At least 500 people from relevant stakeholders trained in each Country about the Flood Risk Management Plan realized (ref. to output 2) and about the technology/system for the early warning developed (ref. to output 3).
5) Events: 3 public events for the dissemination of the project outputs per each involved territory; 5 events to train civil protection units to increase the level of preparedness of inhabitants to react properly in case of natural/man-made disaster (flood).

**f. Categories of partners to be involved**

**Eligible lead Partners -** for this theme, only Regional Development Agencies shall be considered as eligible lead partners.

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

**Eligible categories of project partners:**

- Regions/Counties.
- National/regional/local agencies.
- Universities/faculties/research institutes/centers.
- National water management authorities.
- Italian/Croatian cities and municipalities.

**g. Cross-border dimension**

Cross-border cooperation dimension relies on the fact that both Croatian and Italian side share the common interest of reduction of the negative impacts of floods on both sides of the Adriatic sea. This will reflect in joint development of human resources and knowledge sharing, along with increasing capabilities in using new technology. The theme aims to stimulate the development of common tools and schemes for monitoring

the risks and managing the emergencies using the cross-border approach to the problem, thus it deals with increasing the safety of the Programme area from natural disasters, more precisely from floods. It encourages the development of disaster management systems and furthering recovery capacities while minimizing damage. The theme seeks to improve both the monitoring of risks and increasing the management capacity to promptly react to disasters by creating and developing risk maps and flood risk management plans.

### 2.2.2 Oil spills and other marine hazards, fire and earthquake - Strengthening of preparedness and prevention of hazards

**a. Theme description**

The theme supports the development of disaster management systems, furthering the capacity of recovery while minimising damages. The main natural and man-made disasters this theme aims to tackle are oil spill and other marine hazards, fire and earthquake. In order to effectively tackle these emergencies, it is essential to adopt joint approaches and common monitoring strategies and management systems. This theme aims at improving a cross-border emergencies management system, able to further the capacity of recovery while minimising damages, through strengthening administrative and technical capacities (by harmonizing procedures and legislation), raising awareness, educating, equipping and preparing population (by involving them in a participatory process) and rescue teams and strive towards sustainable development.

**b. Objectives**

Increase the overall capacity of emergency service organizations to cross-border operate in tackling natural and man-made disasters in the Adriatic basin, decreasing the exposure of the populations to the impact of hazards and increasing the safety of the Croatian and Italian Adriatic basin from natural and man-made disasters by improving emergency prevention and management measures and instruments.

**c. Macro-activities**

1) Improvement of existing Emergency Services Regulatory System, enhancing their level of uniformity and similarity and improving their overall efficiency, according the EU principle of co-operation and subsidiarity (EU Civil Protection Mechanism).
2) Improvement of an innovative cross-border Emergency Management Systems (EMS), aimed at observing and predicting geophysical factors influencing people and their properties, coordinating the emergency interventions and activating channels of communication with interventions teams and affected citizens.
3) Activation of citizens' participatory process, increasing the level of involvement of the population on risk prevention, monitoring and crisis management, transforming population from vulnerable elements to active sensors.
4) Specific pilot actions tailored to each main risk (oil spills, forest fire and earthquake).

**d. Contribution to output indicators**

- Risk prevention and management: Population benefiting from forest fire protection measures.
- People reached by initiatives for increasing awareness.

- Population benefiting from oil spills and other marine hazards protection measures.

**e. Expected outputs**

1) Standardized cross-border procedures to tackle risks between Italy and Croatia, developed and adopted.
2) Advanced training centers focused on cross-border management of main risks addressed set up.
3) Improvement of cross-border Emergency Management System.
4) Campaigns for raising awareness carried out, involving population living in municipalities at high level of risk – specific guidelines on how to contribute to civil protection activities of natural and man-made risks forecasting, prevention, monitoring and management within its own living territory.

**f. Categories of partners to be involved**

**Eligible lead partners -** for this theme, only Counties and Regional Development Agencies shall be considered as eligible lead partners.

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

**Eligible categories of project partners:**

- Regions/Counties.
- National/regional/local agencies.
- Universities /faculties/research institutes/centers.
- Coast guards.

**g. Cross-border dimension**

Cross-border dimension shall be clearly demonstrated and common methodologies, protocols and tools shall be delivered. The cooperation dimension relies on the fact that both Croatian and Italian side share the common interest of increase the capacity to tackle the man-made and natural disaster on both sides of the Adriatic sea. This will reflect in joint development of human resources and knowledge sharing. The theme aims at improving a cross-border emergencies management system.

### 3.1.1 Coastal and inland tourism - Smart specialization and improved quality in tourism for a green and sustainable development for Mediterranean islands, coastal and inland.

**a. Theme description**

Adriatic region as a single cross-border accessible, all-year-round green tourist destination creates an opportunity to foster sustainable and more balanced economic and territorial development by exploiting the potentials of joint natural and cultural heritage in underdeveloped (and overexposed at the same time) coastal, island, inland and rural areas while preserving them and increasing their value. The quality of tourism offer is to be improved by triggering creation of value chain within all segments of accessible and sustainable tourism destination services and products: from valorisation of the landscape, vernacular architecture, supporting green traditional professions and productions, agriculture, gastronomy, lifestyle, etc..

**b. Objectives**

Establish, manage and promote Adriatic Region as integrated sustainable accessible, all-year-round green tourist destination based on joint natural and cultural heritage of islands, coastal, inland and rural area by triggering a high quality level of services and products in sustainable tourism offer through stimulating knowledge, networking and transferring cross-border partnership processes focusing on joint natural and cultural heritage and smart specialization concepts.

**c. Macro-activities**

1) Development of strategic framework and methodology with policy instruments for diversification of tourism offer and measures for supporting innovative tourism products and services for sustainable management of integrated cross-border tourist destination based on natural and cultural heritage.
2) Establishment of cross-border platform for quality management of Adriatic region integrated and sustainable tourist destination and offer.
3) Testing measures on pilot areas of protected integrated natural and cultural heritage sites in public-private partnership and with community of practice.
4) Marketing and promotion of new sustainable Adriatic region tourist destination and offer.
5) Promotion and implementation of green certification/ecolabel for SMEs, products and services in agro tourism and gastronomy.
6) Development of marketing for common and sustainable Adriatic tourism products, integrating territorial tourism services and piloting matchmaking actions (with common branding).
7) Development of cross-border cluster of sustainable typical products and services based on natural and cultural heritage.

8) Improvement of accessibility and promotion of natural and cultural heritage sites in islands, rural, inland and coastal Adriatic area ( open-air and virtual museums).
9) Cross-border cooperation for enhancing human resources of stakeholders and tourism professionals, through networking and transferring knowledge processes focusing on green, slow and sustainable tourism.

**d. Contribution to output indicators**

- Actors involved in actions aimed at promoting natural and cultural heritage (including typical products, joint branding and tourism).
- Cultural and natural heritage (tangible and intangible) promoted.
- Beneficiaries with ecolabel/green certification.
- Natural and cultural heritage destinations with improved accessibilities (e.g.: to disabled tourists, virtual tourists etc.) in place.

**e. Expected outputs**

1) Cross-border partnership platform of scientific, private and public sector for joint strategic planning and management of cross-border tourist destination.
2) Strategic framework based on smart specialization for management of cross-border tourist destination through digitalization, cultural industries and promotion of cultural and natural heritage.
3) marketing and promotional campaign of cross-border tourist destination.
4) 10 ecolabel/green certifications obtained, promotional campaign about ecolabel/green certification and their importance for the sustainable tourism.
5) natural/cultural heritage sites with improved accessibility put in place.

**f. Categories of partners to be involved**

**Eligible lead partners**

- for this theme, only Counties shall be considered as eligible lead partners.

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

**Eligible categories of project partners:**

- Regions /Counties.
- National/regional/local agencies.
- Universities/ faculties/research institutes/centers.
- Association/organizations working in the field of tourism/culture.

**g. Cross-border dimension**

The Adriatic region tourist destination should be addressed as a single common asset. Cross-border dimension shall be clearly demonstrated in the activities, common methodologies, protocols, tools and management structures foreseen within the proposal. Cross-border implementation shall be applied to all foreseen activities with a specific focus on common standard methods, standardization of criteria and capacity building of tourism sector.

### 3.2.1 Marine environment - Improve the environmental quality conditions and biodiversity of coastal, marine, and inland waters and ecosystems consolidating sustainable and innovative technologies and approaches related to integrated monitoring, modeling systems and restoration.

**a. Theme description**

The Programme area is strongly characterized by the Adriatic sea which is a common, shared resource, hosting fragile ecosystems and rich marine biodiversity which are often threatened by human activities. This theme aims at protecting them by improving ecosystems monitoring and modeling, through the development of new tools able to integrate hydrology, oceanography and ecosystem modeling capacity and their pilot application on targeted ecosystems and endangered species.

**b. Objectives**

The main objectives is to increase marine knowledge through the consolidation of inland and marine waters monitoring and modeling tools to address environmental vulnerability, fragmentation, and the safeguarding of ecosystem services, to support the protection of marine ecosystems, and to develop science based restoration methodologies and systems to assess the impacts of extreme events on marine ecosystems.

**c. Macro-activities**

1) enhance monitoring and modeling activities for inland/coastal and marine environment, also fostering existing modeling capacity at Mediterranean sea level (e.g Mediterranean Operational Network for the Global Ocean Observing System - MONGOOS network) and European level (e.g. Copernicus Marine Service).
2) Pilot restoration actions for restoring ecosystems and protect endangered species.
3) Dissemination activities, including guided tours and scuba diving for scientific, tourist and recreational purposes.
4) Setting up of a shared web GIS data platform regarding monitoring and modeling of inland and marine waters avoiding overlaps with existing platforms.
5) Elaboration of bio-indicators and water management plans, following requirements of the Integrated Monitoring and Assessment Programme (IMAP)/Ecosystem Approach (EcAp) and Marine Strategy Framework Directive (MSFD).
6) Development of decision support tools for integrated management of sea, coastal and river environment and of cross-border natural resources such as coordinated Maritime Spatial Planning (MSP) taking into consideration Land-Sea Interactions (LSI) and Integrated Coastal Zone Management (ICZM).
7) Stakeholders engagement and capacity building.

**d. Contribution to output indicators**

- Restoration actions supporting endangered species.
- Integrated management systems (sea, coastal and river environment) put in place.
- Monitoring systems and data collections for protecting biodiversity and ecosystems put in place.
- Natural ecosystems supported in order to attain a better conservation status.

**e. Expected outputs**

1) Integrated monitoring and modeling tools (hydrological, oceanographic and ecosystem) tested and implemented.
2) Pilot restoration actions addressed to marine endangered species and related ecosystems carried out.
3) Data platform collecting information and data regarding monitoring and modeling of inland and marine waters at Adriatic level made available.
4) MSP, ICZM, LSI decision support framework set up.

**f. Categories of partners to be involved**

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

- Regions/Counties.
- National/regional/local agencies.
- Coastal cities and municipalities.
- Universities/faculties/ research institutes/centers.
- Environmental no profit organizations active in marine protection.

**g. Cross-border dimension**

Cross-border dimension shall be clearly demonstrated and common methodologies, protocols, tools and management structures shall be delivered so that to improve and further expand the water and atmosphere monitoring capabilities in the areas of Italian and Croatian water sharing consolidating sustainable and innovative technologies and approaches related to integrated monitoring, modeling systems and restoration.

### 3.2.2 Fisheries and aquaculture - Shared Governance of Sustainable fisheries and aquaculture activities as leverage to protect marine resources in the Adriatic sea.

**a. Theme description**

The reduction of conflicts of use insisting on marine environment in order to increase the protection of biodiversity and ecosystems services is one of the main aims pursued by the Specific Object 3.2. The theme addresses this topic by strengthening the Adriatic institutional dialogue in order to reinforce the knowledge-based decision-making process for the governance of Adriatic marine habitats and fish resources and to develop models for species monitoring, as well as to promote the adoption of common sustainable fisheries models.

**b. Objectives**

Protection of marine biodiversity thanks to sustainable governance of the Adriatic sea and its resources.

**c. Macro-activities**

1) to establish a common Adriatic framework for governance, supported by scientific findings, in which Adriatic institutions competent for fisheries and aquaculture management are able to act as a whole and to represent the Adriatic basin needs at European and international level.
2) To harmonize the collection and assessment of fisheries and aquaculture data in the whole Adriatic basin.
3) To conduct direct and indirect pilot actions oriented to protect marine species and restore marine habitats.
4) To improve the sectorial capacities and know-how to change the behaviors of Adriatic fishery and aquaculture operators towards sustainability along the whole chain (from production to consumptions) of fish products.

**d. Contribution to output indicators**

- Natural ecosystems supported in order to attain a better conservation status.
- Monitoring systems and data collections for protecting biodiversity and ecosystems put in place.

**e. Expected outputs**

1) Common Adriatic governance framework for fisheries and aquaculture management implemented.
2) Common protocols and guidelines of specific Maritime Spatial Planning operative tools and monitoring protocols for small scale fisheries.

3) Direct and indirect pilot actions carried out (testing of innovative methods for strengthening demersal marine populations; positioning of artificial devices for benthic and demersal species restocking; setting up of multi-purpose artificial reefs in aquaculture area; testing of co-management protocols of fishing areas by Adriatic fishermen; establishment of demonstration and experimental aquaculture centers).

**f. Categories of partners to be involved**

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

- Ministries.
- Regions/Counties.
- National/regional/local agencies.
- Public research institutes/centers.

**g. Cross-border dimension**

Cross-border dimension shall be clearly demonstrated and common methodologies, protocols, tools and management structures shall be delivered. A coordinated and integrated approach, implemented by shared multi-level decisions and activities, will be needed in order to involve both Italian and Croatian operators.

### 3.3.1 Marine litter - Shared actions and plans for integrated and cross-border management of the coastal and marine litter in a life cycle approach perspective.

**a. Theme description**

In the EU, 150.000 to 500.000 tonnes of plastic waste enter the oceans every year. In addition to harming the environment, marine litter causes economic damage to activities such as tourism, fisheries and shipping. Regardless many recent projects there are still no systematic and relevant / quantitative data on marine litter pressure in the Adriatic sea area, partially due to absence of proper technological solutions and management mechanisms, which would allow concrete idea on real dimension of marine litter negative impact on ecosystems. The theme aims to contribute to the improvement of the quality of the water of the sea by using innovative technologies in waste management and treatment, as well as new integrated approaches in facing several problems, including the emerging issue of marine litter. Knowledge and information exchanges on the use of new technologies for the collection, treatment and recycling of several type of waste with particular attention to the microplastic waste are supported as the improvement of conditions on one side of the border brings immediate benefits to the other side. Additionally, the introduction of new technologies in this sector could be appreciated in view of creating job opportunities and supporting youth employment and disadvantaged people inclusion. New approaches on ecosystem service concepts and requirements of the key water related EU acquis could be developed to improve planning and management of environmental problems of the marine system.

**b. Objectives**

To improve the environmental quality conditions of the sea and coastal area in the Adriatic sea by improving capabilities to monitor, manage, prevent and remove marine litter by means of sustainable and innovative technologies suitable to prevent, recovery and treat plastics in a circular economy perspective.

**c. Macro-activities**

1) Governance - cross-boundary management plan: due to the intrinsic cross-boundary nature of marine litter problem, the project should aim to go beyond national/regional approach to marine litter and promote cooperation within the Adriatic area, by establishing a cross-border governance platform for marine litter also in order to promote the removal of the regulatory constraints. Taking into consideration the lack of knowledge on the sources, places of accumulation on the issue of marine litter in general, including microplastics and nanoplastic, it is necessary to develop a joint plan for marine litter management, aligned primarily at the national and sub-regional level.

2) The management plan should include determining the origin of the litter, reducing or preventing its entry into the marine ecosystem, methods of collecting and potential recycling or reuse.
3) Identifying innovative technologies for the collection/removal of marine debris and litter. Apply these new technologies in order to collect the microplastic waste in marine areas.
4) Assessing marine litter, beached and/or laid down on seafloor, impact on different key sectors (ecosystem services, food, tourism).
5) Public awareness raising initiatives in order to minimizing the impact of residual debris.
6) Establish best practices aimed at eliminating the injection of plastics into the sea.

**d. Contribution to output indicators**

- Microplastic waste collected in marine areas.
- Environmental friendly technological solutions (and approaches) implemented.

**e. Expected outputs**

1) Marine litter prevention and capture: use of innovative materials (bio-plastics biodegradable) in aquaculture; assessment of new production technologies for aquaculture. Prevention of beached litter. Testing of commercial waste and microplastic collectors (for example Seabin) in touristic marinas; modeling of the current circulation patterns including marine litter and environmental impact assessment indicators. Collection and disposal in special facilities of fishing nets abandoned at sea through the capitalization of the main outputs of previous projects. Collection and disposal of beached litter. Assessment of litter rivers contribution.
2) Marine litter assessment: assessment of the chemical composition of original plastic materials through analytical elemental and molecular methods; analysis of major components and potential trace contaminant and chemical parameters to minimize risks and assess the quality of the final products obtained by micro plastic and plastic treatment; set-up an integrated environmental monitoring network to assess the composition of marine litter.
3) Marine litter treatment: application of an innovative thermo-chemical technology, for producing high-calorific fuels as oil and gas. Assessment and test technologies for plastic, micro plastic and marine litter management and bio-degradation. Implemented pilot actions.
4) Promotion campaign about marine litter impacts on sea and coastal environment with capitalization of the main outputs of previous projects.

**f. Categories of partners to be involved**

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

- Ministries.
- Regions/Counties.
- National/regional/local agencies.
- Coastal cities/municipalities and their associations.
- Environmental no profit organizations active in marine protection.
- Universities/faculties/research institutes/centers.
- SMEs / business support organizations.

**g. Cross-border dimension**

Implementation of joint cross-border actions demonstrating the added value of the territorial cooperation should be assured. Cross-border dimension shall be clearly demonstrated and common methodologies, protocols, tools and management structures shall be delivered. The cross-border approach will stimulate the joint development of human resources and knowledge sharing along with increasing capabilities in using new technology.

### 4.1.1 Maritime Transport - Sustainable Ports through fostering alternative fuels, sustainable energy sources and energy efficiency

**a. Theme description**

Ports of the Programme area face the same overall challenge: decrease the environmental impact of port operations as a whole. Two mains components of interventions can be identified: 1) providing alternative fuels for ships, notably *LNG* but also on-shore power supply (*OPS*); 2) improving the performance of the components of port operations, e.g. monitoring air quality, lighting, port vehicles (e-mobility), etc.(holistic approach). All ports of the Programme area, in addition, need to abide by the EU Directive 94/2014, that will make available alternative fuels for ships, notably *LNG*, and on-shore power supply (*OPS*) to reduce their environmental impact. Besides the theme is in line with the Interreg Italy-Croatia Cooperation Programme where on the PA4 cites "Green upgrading of the logistic system linked with maritime transport sector" and it is complementary to the current Interreg Italy-Croatia Programme interventions. Moreover, the theme is in line also with the main national planning indications, (e.g. "Guidelines for the elaboration of the energy and environmental planning Masterplan of Port Authorities" Italian Ministry of Environment, Dec. 2018).

**b. Objectives**

1) To enhance the knowledge & competences of involved ports in jointly planning on environmental sustainability and energy efficiency.
2) To harmonize measures and policies on environmental sustainability and energy efficiency at cross-border level related to ports activities.
3) To provide a strategic framework for environmental sustainability and energy efficiency of the ports.

**c. Macro-activities**

- Enhancing cross-border competences on port environmental sustainability and energy efficiency.
  1. Analysis (E.g. AS-IS + SWOT analysis) of the Programme area concerning sustainability and energy efficiency of port activities and maritime transport, in accordance with the priorities identified by TSG2 of EUSAIR (notably, use of *LNG* and *OPS*).
  2. Elaboration of a cross-border model of a "port sustainability action plan" and its application on port's areas, identifying short, medium and long-term measures and relevant funding needs and opportunities.
- Testing enhanced port environmental sustainability and energy efficiency.
  3. Implementation of concrete pilot actions on environmental sustainability and energy efficiency, also through small-scale infrastructures. Pilot actions will be

jointly evaluated, especially among ports having cross-border links connecting them.

- Capitalization process and policies development.

4. Establish or developing cross-border cooperation networks for port environmental sustainability and energy efficiency.
5. Elaboration of cross-border strategy model and proposal to enhance the environmental sustainability and energy efficiency of port operations in the Programme area, to be embedded in the development policies at port and national level.
6. MoU/Agreements on cross-border level on environmental sustainability and energy efficiency of port operations.
7. Recommendations for EUSAIR, EUSALP and EUSDR are drafted for uptake of the project's results even beyond the Programme area.

**d. Contribution to output indicators**

- Improved multimodal transport services.

**e. Expected outputs**

1) Port sustainability action plan model.
2) Application in the port's areas of the action plan.
3) Pilot actions on environmental sustainability and energy efficiency.
4) Cross-border cooperation networks.
5) MoU/Agreements on cross-border level.
6) Policy recommendations for EUSAIR strategy.

**f. Categories of partners to be involved**

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

- Regions/Counties.
- National/regional/local/development agencies.
- BSOs - business support organizations.
- Port authorities.
- Universities/faculties/research institutes/centers.
- No profit organizations active for the development of intermodal transport and logistics.
- Enterprises/transport association including maritime clusters.

**g. Cross-border dimension**

Cross-border dimension shall be clearly demonstrated and common methodologies, protocols, tools and management structures shall be delivered.

Only by adopting a common model of planning environmental sustainability and energy efficiency as part of a coordinated and permanent governance plan, will ports be able to guarantee both environmental protection and economic development in the Program area.

### 4.1.2 Mobility of Passengers - Multimodal transport solutions and services for fostering, supporting and promoting a new passenger sustainable mobility.

**a. Theme description**

The strategic theme significance lies in the need of sharing a common cross-border approach, at institutional level, in planning and in implementing transport services for providing effective multimodal solutions, able to face the challenge to meet the passengers needs and to push for a change in people behaviors towards their mobility choices, overcoming some of the present gaps and lacks in terms of availability and of quality of services and in information accessibility. The theme is related to the sustainability of the mobility of the people in the Programme area, by increasing the use of multimodality and the level of services available for passengers at transport nodes. Upon improving the knowledge of the passengers' needs and behavior, as well as the understanding of their attitudes towards sustainable transport solutions, a new approach for the cross-border area on transport offer should be tackled at institutional level for making travelling multimodal perceived as an innovative and trendy experience for passengers. For doing so, having in mind the final user point of view, and involving the operators and the infrastructure managers acting on the mobility services and nodes, it must be improved the offer of a wider range of regional and cross-border passenger interconnections alternative to road transport, pushing for greener multimodal solutions and, on the other side, to act on the range of services to be made available to passengers at transport nodes in an harmonized way within the Programme area. Additionally, to guarantee the sustainability of the expected theme results, permanent cooperation and dialogue at institutional level needs to be defined and established.

**b. Objectives**

1) To increase the knowledge ad use of the alternative low-carbon modalities of transport of inhabitants and tourists, as well as the change in travellers' behavior.
2) To improve the multimodal passenger connections and green multimodal solutions with an integrated set of sustainable transport modes, alternatives to individual car travelling between Italy and Croatia.
3) To establish a cross-border network to foster a stable dialogue at cross-border level.
4) To harmonize alternative transport modalities and standardization of services.

**c. Macro-activities**

- Enhancing competences on cross-border sustainable mobility options implementing:
  1. Analysis of the Programme area concerning sustainable and multimodal transport, in accordance with the priorities identified by TSG2 of EUSAIR.

2. Elaboration of a cross-border model of a "transport sustainability action plan" and its application on main transport nodes in the area.
3. Knowledge raising about existing and new sustainable mobility options, promoting integrated multimodal routes at regional and cross-border level.

- Testing enhanced sustainable transport modalities implementing:
  4. Concrete pilot actions on sustainable different transport modalities and e-services.
  5. Concrete pilot actions in connecting different transport nodes.
  6. Concrete pilot actions for adopting the technological solutions for emissions reducing.
  7. Elaboration of cross-border planning model and proposal to enhance maritime transport and the innovative services for the mobility in the Programme area.

- Innovative solutions for the sustainable intermodal transport implementing:
  8. Analysis of existing, re-use and development of new smart technological tools and advanced solutions for mobility, also through small-scale infrastructures.
  9. Improving the accessibility of transport nodes for people with special needs.
  10. Enhancing the green transport modalities and interconnections from the nodes (ports, railway stations, bus stations, intermodal nodes) and the cycling axis.

- Action of transferability and capitalization of results:
  11. MoU/Agreements/protocols on cross-border level on multimodal sustainable transport and emission reducing operations.
  12. Establishing a permanent cross-border network able to influence policies at National and EUSAIR level.

**d. Contribution to output indicators**

- Improved multimodal transport services.
- Harmonized services for passengers put in place.

**e. Expected outputs:**

1) Knowledge data repositories on public transport services.
2) Awareness and behavior campaigns at regional and cross-border level.
3) Participatory of transport planning processes.
4) User survey about habits.
5) Analysis to assess the carbon footprint of the passengers' choices.
6) Integrated actions applied on different transport modes such as sea, rail, air and road public transport.

7) Prototypes on payment systems applications.
8) Info mobility tools and smart solutions.
9) Bike parking places and services for the accessibility of passengers travelling with bike in the main nodes.

**f. Categories of partners to be involved**

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

- Ministries.
- Regions/Counties.
- National/regional/local agencies.
- International organizations.
- Universities/faculties/research institutes/centers.
- No profit organizations active for the development of intermodal transport and logistics.
- SMEs and other private companies.
- Port authorities.
- Public railway transport company.

**g. Cross-border dimension**

Cross-border dimension shall be clearly demonstrated and common methodologies, protocols, tools and management structures shall be delivered. Since the main problems related to the mobility of people in a sustainable way between the two countries have not been solved yet, a new cross-border approach is needed and it can be guaranteed only involving the appropriate institutional levels on both the countries, making the most of all the results and outcomes coming from all the previous and running cooperation project focused on sustainable mobility in the Programme area. To tackle the lack of passengers' mobility multimodal sustainable solutions and to improve the cross-border accessibility substantially, cross-border cooperation is necessary, where the responsible authorities and other organisations of both Italy and Croatia deploy services in a coordinated and harmonized way.

### 4.1.3 Nautical services - Small ports as driver for improvement of maritime transport and sustainable development in the Adriatic area.

**a. Theme description**

The starting point is the need for a regional strategy for the improvement of a tighter coordination among the players and stakeholders which should take into consideration the needs to preserve and, were possible, valorize the peculiarities of the two coastal areas as fundamental element of attractiveness. The small ports will be key elements for making marine and coastal transport services more secure and more environmentally sustainable. The main goal is the definition of a strategic common framework for the development and planning of small ports along the Adriatic coasts should take place, thus recognizing and emphasizing them as gates to the internal territories as well as drivers for sustainable growth of coastal areas. The strategic theme tackles potentialities of small ports in delivering innovative services and facilities in order to create concrete development opportunities, improving cooperation for managing the mobility of the coast, thus paving the way to the establishment of new and easier connections between small ports of the area and, at the same time, potentially allowing an higher level of coordination in terms of services to be offered to users. Additionally, the expected improvements of internal connections of such minor nodes should improve potentialities of intermodal connections with the hinterland. Such set of non-exhaustive topics will build up on common framework in line with EUSAIR Pillar 2 SO.

**b. Objectives**

1) To enhance the knowledge & competences of involved small ports and local authorities in jointly planning on environmental and sustainability themes.
2) To harmonize measures and policies on spatial solutions at cross-border level related to ports activities, services and facilities for small ports.
3) To provide a strategic framework conditions for improving the quality, safety and environmental sustainability of marine and coastal transport services.
4) To develop ICT and/or web based innovative services, aimed at facilitating e-government.

**c. Macro-activities**

- Enhancing cross-border competences aim at increasing the attractiveness of the small ports by means of:
    1. planning of policies enabling the definition of a specific and homogeneous set of services and facilities for small ports along the Adriatic area.

2. Elaboration of a cross-border model of a guidelines and its application on port's areas, for local authorities and business and social stakeholders as to ensure the attractiveness of the small ports in terms of nautical services.

- Implementing innovative e-solutions for port services smart management:
  3. development of innovative ICT tools aimed at facilitating e-government as well as the whole set of initiatives and bureaucracies to be processed accordingly (meteo-marine, geo-localization, ship routing, publicly owned areas, security issues, …), thus ensuring the smart management of services and initiatives.
  4. Development of innovative web tools aimed at facilitating proving of services on small ports surroundings.
- Capitalization process and policies development:
  5. Agreements on cross-border level on joint spatial planning and nautical services of the small ports.
  6. Guidelines and policy recommendations for the development of initiatives and services basically orientated to the support of environmental and sustainability themes (protected areas, energy savings, renewable energy, water quality …).

**d. Contribution to output indicators**

- Improved multimodal transport services.
- New links established.

**e. Expected outputs**

1) Services and facilities for small ports along the Adriatic area, to create a common framework in order to increase the opportunities for the establishment of new typologies of links (nautical connections between the small ports of the Adriatic coasts, such as like "boat sharing").
2) Local authorities and business and social stakeholders involved in the attractiveness plans.
3) ICT tools aimed at facilitating e-government.
4) Innovative web tools.
5) Guidelines and policies recommendations.
6) Agreements on cross-border level.

**f. Categories of partners to be involved**

Partnership shall ensure that the whole Programme area is covered to the maximum possible extent by partners, activities and outcomes.

- Ministries.

- Regions/Counties.
- National/regional/local agencies.
- Italian/Croatian Coastal cities/municipalities.
- Universities/faculties/research institutes./centers
- SMEs.
- Transport operators, public services providers.
- Port Authorities.
- Ports of regional/local interest management authorities.
- No profit organizations active for the development of intermodal transport and logistics.

**g. Cross-border dimension**

Cross-border dimension shall be clearly demonstrated and common methodologies, protocols, tools and management structures shall be delivered. Since the main theme is the definition of a strategic common framework, similar conditions of services and infrastructural opportunities must to be available in both sides of the Adriatic coasts. This will eventually be leading to an homogeneous overall improvement of small hubs, favoring the enhancement of new connections as well as their overall attractiveness.