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Italy – Croatia

ITHR0600813

VITA

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A - Project identification

A.1 Project identification

Project id (automatically created)	ITHR0600813
Name of the lead partner organisation	Provincia di Rimini
Name of the lead partner organisation in English	Province of Rimini
Project title	Implementation and Validation of an Integrative support system for the proTection of the autochthonous biodiversity of the Adriatic Sea
Project acronym	VITA
Programme priority	Green and resilient shared environment
Specific objective	2.2: Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution
Project duration in months	30

A.2 Project summary

Please give a short overview of the project and describe:

- the common challenge(s) of the programme area you are jointly tackling in your project;
- the overall objective of the project and the expected change(s) your project will make to the current situation;
- the main outputs you will produce and those who will benefit from them;
- the approach you plan to take and why a cross-border approach is needed;
- what is new/original CB solution the project proposes.

The biodiversity of the Adriatic Sea is currently experiencing a significant decline, increasingly threatened by a combination of intense and largely unregulated human activities. These include overfishing, chemical pollution, maritime traffic, aquaculture and tourism, pressures that are further intensified by the ongoing impacts of climate change. This loss of biodiversity has cascading implications for key ecosystem services, ultimately undermining the health, resilience, and livelihoods of coastal communities. These complex and interconnected challenges cannot be effectively addressed by fragmented local interventions alone: they require coordinated transboundary strategies to integrate local solutions at the system level, considering the Adriatic Sea as a single living system. The VITA project aims to develop and validate an integrated biodiversity support system to protect and restore the native biodiversity of the Adriatic Sea, to be implemented as a local solution for supporting biodiversity at the system level. By combining innovative technologies, cutting-edge scientific research, and active community engagement, VITA will provide a tool to monitor biodiversity loss in an at-risk site, computing the consequences in terms of ecosystem and societal service decline, and delivering tailored solutions, such as conservation actions and habitat restoration measures, to recover the full natural diversity. Conceived to strengthen local capacities for managing, protecting, and restoring ecosystems, the VITA biodiversity support systems is designed to be implemented across the whole Adriatic basin, within the framework of active cross-border cooperation. The aim is to provide a flexible, science-based approach to monitor and reverse the biodiversity loss in the Adriatic Sea, establishing a transboundary action plan for the marine biodiversity protection and the long-term sustainability of the Adriatic Sea. Integrated within the VITA biodiversity support systems, the main outputs of the project will include: (i) a database serving as a comprehensive repository of past, present, and future biodiversity conditions in the Adriatic Sea; (ii) a set of bioindicators for monitoring biodiversity loss; (iii) an ICT tool designed to assess the risk and extent of biodiversity loss at specific sites, identify the main anthropogenic drivers, and evaluate the resulting short- and long-term ecological impacts in terms of lost ecological and societal services; and (iv) a set of biodiversity protection solutions tailored to the threats identified by the ICT tool. Solutions will be based on an integrative toolbox of modular remediation and subsequent revitalization strategies, including pilot interventions using animal-based biologicals, such as pollutant-resistant macrobenthos for bioremediation. The VITA biodiversity support systems will be implemented and validated during the project in historically impacted sites along the Italian and Croatian coasts. At each site, a field lab will be established, where citizens and scientists will collaborate in assessing the VITA indicators - to be uploaded to the VITA ICT tool - and in the deployment of the tailored solutions for restoring and protecting the site's natural biodiversity. Selected sites represent archetypes of 5 main anthropogenic impacts, such as: (i) industrial pollution; (ii) sewage discharges; (iii) agricultural discharges (iv) tourism and (v) trawling, enabling the development of a toolbox of solutions for biodiversity protection in response to the wide range of anthropogenic stressors threatening the Adriatic sea. A strength of the project lies in the VITA cross-border approach, where universities, public bodies, NGOs and development agencies from Italy and Croatia will co-design and jointly implement the actions, ensuring transferability, long-term sustainability and alignment with EU environmental policies, such as the Marine Strategy Framework Directive. This integrated and cross-border model, combining cutting-edge science with concrete, on-the-ground actions to identify nature-based solutions and restore habitats, is being translated into practical tools, pilot initiatives, and shared policies and guidelines. These outputs are designed to inspire and support other regions facing environmental challenges in the Adriatic basin. In doing so, VITA will help build a greener, more resilient, and better-connected Adriatic region, where biodiversity is embraced as a shared value and a key driver of sustainable development.

A.4 Project outputs and result overview

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output	Output Title	Output target value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
Jointly developed solutions	6,00	solutions	Output 1.1	Validated approaches and technologies for the micro to macro /mega-size biota biodiversity assessment	1,00				
			Output 1.2	VITA biodiversity database	1,00				
			Output 2.1	A minimal set of new indicators for the biodiversity monitoring in the Adriatic Sea	1,00				

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output	Output Title	Output target value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
			Output 2.2	A multilayer model allowing to connect the Adriatic Sea biodiversity, the major threats, the diversity response and the following impact in term of loss ecosystem services	1,00				
			Output 2.3	A publicly accessible VITA website and App, as implemented VITA in the integrative biodiversity-support system	1,00				

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output	Output Title	Output target value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
			Output 3.1	Biodiversity protection guidelines	1,00				
Public events across borders jointly organised	20,00	events	Output 4.1	Educational events, festival, kick off event, mid term event and final event	20,00				
Participations in joint training schemes	100,00	participations	Output 4.2	Training campaigns	100,00				
Pilot actions developed jointly and implemented in projects	2,00	pilot actions	Output 3.2	Validated revitalization actions	1,00				
			Output 4.3	Citizen and stakeholders meetings in the impacted sites	1,00				

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output	Output Title	Output target value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
						Solutions taken up or up-scaled by organisations	0,00	4,00	solutions
						Completion of joint training schemes	0,00	60,00	participants

B - Project partners

Partners overview

Number	Status	Name of the organisation in english	Country	Organisation abbreviation	Partner role	Associated organisations	Partner total eligible budget
1	Active	Province of Rimini	Italia (IT)	PoR	LP		263.900,00
2	Active	Alma Mater Studiorum - University of Bologna	Italia (IT)	UniBO	PP		358.227,37
3	Active	Polytechnic University of Marche	Italia (IT)	UNIVPM	PP		301.060,00
4	Active	University of Zadar	Hrvatska (HR)	UNIZD	PP		349.788,00
5	Active	Association for Nature and Environment Conservation and Sustainable Development	Hrvatska (HR)	ARGONAUTA	PP		200.000,00
6	Active	Cetacea Foundation	Italia (IT)	CF	PP		200.400,00
7	Active	Istrian development agency - IDA Ltd.	Hrvatska (HR)	IDA	PP		211.455,00
8	Active	Blue World Institute of Marine Research and Conservation	Hrvatska (HR)	BWI	PP		199.530,00

B.1 Lead partner	
Partner number	1
Partner role	LP
Name of the organisation in original language	Provincia di Rimini
Name of the organisation in english	Province of Rimini
Organisation abbreviation	PoR
Department / unit / division	N.A.
Partner main address	
Country	Italia (IT)
NUTS 2	Emilia-Romagna (ITH5)
NUTS 3	Rimini (ITH59)
Street, House number, Postal code, City	via Dario Campana 64 47922 Rimini
Homepage	https://www.provincia.rimini.it/
Address of department / unit / division (if applicable)	
Country	Italia (IT)
NUTS 2	Emilia-Romagna (ITH5)
NUTS 3	Rimini (ITH59)
Street, House number, Postal code, City	via Dario Campana 64 47922 Rimini
Legal and financial information	
Type of partner	Local public authority
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	0.84.11
VAT number (if applicable)	91023860405
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Legal and financial information	
Tax number	91023860405
PEC address	pec@pec.provincia.rimini.it
PIC (from EC Participant Register)	988117952
Contact	
Legal representative	Mr Jamil Sadegholvaad
Contact person	Mr Antonio Gabellini
Email	staffprogetti@provincia.rimini.it
Telephone no.	+393398318113
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	

Motivation

The Province of Rimini (POR) is a public territorial body including 27 municipalities with an extension of approximately 920 km² and a resident population of approximately 340,000 inhabitants

As a province with over 30 km of coastline, the sea has always been a fundamental environmental resource and a great driving force for economic development. The seaside tourism industry that has developed since the Second World War has also generated a strong vocation for internationality. For all these reasons, since it existed (1995), the POR has designed its own development horizon within the great objectives set by the European Union.

Since the third edition of the Territorial Cooperation programs (2000-2006) POR has participated, as Lead or Project partner, in several dozen of cross-border, transnational and interregional projects, many of which concerning the environment and the challenges posed by climate change. Among these, the following deserve particular attention: CERREC, ZERO WASTE, SAWAATACA, STREFOWA, SURFACE, Circular WEEEP and GIFT (the last two currently in progress). With specific regard to the Adriatic Sea, the Province of Rimini has developed the ADRIASAFE, a project concerning the cetacean population of the Adriatic sea, and 4Power, concerning renewable energy production in the Adriatic.

With the VITA Project, the Province of Rimini is setting itself a new challenge. In fact, the project has a high scientific content (guaranteed by the involvement of 3 universities and 3 research and conservation institutes), which will allow to update knowledge on marine biodiversity and the factors that threaten it. This research path will be accompanied, from its initial setting up to the final results, by a strong citizen science activity that will take the form of dissemination actions and involvement of groups of stakeholders/citizens (institutions, sea operators, tour operators, associations, students, etc.).

In this dissemination activity, which will also be developed in an itinerant way using mobile means, particular attention will be paid to schools: groups of primary and secondary school students will be involved in the "narration" of the development of the project through "logbooks" that will describe in plain language and different registers, (videos, photos, sculptures, theater) the theme of marine biodiversity and climate change, accompanying the different steps of the research activity up to the final results.

The involvement of Policy makers will instead be aimed at preparing guidelines on policies and strategies to safeguard the biodiversity of the sea to deal with the challenges of climate changes.

In other words, the continuous and widespread ways of involving the stakeholders, will make it possible not to "keep in a drawer" the results of this scientific and research activity, stimulating the community to know the conditions of the sea, as a prerequisite for actively participating in concrete actions to improve marine habitats.

What is the role (contribution and main activities) of your organisation in the project?

Motivation			
<p>PoR will contribute in the coordination of communication work package, defining the communication activities, creating a Communication Plan, involving in project event stakeholders and target groups like students, NGOs, local regional and national institutions, Research Institutes, general public, scuba diving, pleasure boats, fishermen and SMEs. In order to improve the collection of scientific data for the project PoR will involve audience in citizen science activities. POR also contribute in the definition of the pilot site and will participate in the monitoring of the site in front of Riccione. In particular, within WP1, the Province of Rimini will carry out work in progress restitution activities to schools, local navies, diving groups, licencees of bathing establishments, of the technical actions in progress, with the aim of presenting the actions in a comprehensible and less technical form.</p> <p>The Province of Rimini will directly take care of all the activities that will involve the students in the narration of the developments of the research activity including the organization of specific events (photo competition, art competitions, sea trips, etc.).</p> <p>In addition to this, as Lead partner, it will develop technical and organizational assistance to ensure, also by the partners, the effective implementation of the project actions and the correct administrative and financial management.</p>			
Co-financing			
Source	Amount	Percentage	
ERDF	211.120,00	80,00%	
Partner contribution	52.780,00	20,00%	
Partner total eligible budget	263.900,00	100,00%	
Origin of partner contribution			
Source of contribution	Legal status of contribution	Amount	% of total partner budget
PoR	Public	0,00	0,00%
Italy Ministry of Economy and Finance - Fondo I.G.R.U.E. 2021-27 - Ex Law n. 183/1987 and CIPESS Decree n. 78/2021	Automatic Public	52.780,00	20,00%
Total			
Sub-total public contribution		0,00	0,00%
Sub-total automatic public contribution		52.780,00	20,00%
Sub-total private contribution		0,00	0,00%
Total		52.780,00	20,00%
State Aid			

State aid criteria self-check	
Criterion I: Is the partner involved in economic activities through the project?	
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No N.A.
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No N.A.
Criterion II: Does the partner receive an undue advantage in the framework of the project?	
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No N.A.
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No N.A.
Result of State aid criteria self-check:	No risk of state aid
State aid relevant activities	
GBER scheme / de minimis	

B.1 Project Partner 2	
Partner number	2
Partner role	PP
Name of the organisation in original language	Alma Mater Studiorum - Università di Bologna
Name of the organisation in english	Alma Mater Studiorum - University of Bologna
Organisation abbreviation	UniBO
Department / unit / division	Dipartimento di Scienze Mediche Veterinarie - UOS Cesenatico
Partner main address	
Country	Italia (IT)
NUTS 2	Emilia-Romagna (ITH5)
NUTS 3	Bologna (ITH55)
Street, House number, Postal code, City	via Zamboni 33 40126 Bologna
Homepage	www.unibo.it
Address of department / unit / division (if applicable)	
Country	Italia (IT)
NUTS 2	Emilia-Romagna (ITH5)
NUTS 3	Forlì-Cesena (ITH58)
Street, House number, Postal code, City	Viale A. Vespucci 2 47042 Bologna
Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	P.85.42
VAT number (if applicable)	01131710376
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Legal and financial information	
Tax number	01131710376
PEC address	scriviunibo@pec.unibo.it
PIC (from EC Participant Register)	999993953
Contact	
Legal representative	Mr Pier Paolo Gatta
Contact person	Mr Ivan Sgandurra
Email	aric.interreg@unibo.it
Telephone no.	+39 0512088164
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	

Motivation

Aquaculture group, Department of Veterinary Medical Sciences (DIMEVET) and Fano Marine Center (FMC)

DIMEVET has a specific center called "University Center for Blue Growth" equipped with marine recirculation aquaculture systems to rear bivalve species from spat to adult stage. The center is equipped with instruments to evaluate the growth, physiology, and quality of mollusk, as well as feeding status and water quality parameters. T

Microbiome Science and Biotechnology Unit, Department of Pharmacy and Biotechnology (FABIT) and FMC

This unit, belonging FABIT and affiliated to the FMC, is currently involved in several projects related to the study of marine microbial ecosystems in relation to their strategic role in the marine biology and health. The unit is specialized in metagenomics and related bioinformatic analysis, including sequencing, data analysis and modelling. Finally, the unit also has a strong experience as Coordinator and Participants of EU projects dealing with marine microbiomes. The group has access to the Laboratory of Advanced Metabolomics with long lasting expertise in activities devoted to mass spectrometric strategies for the identification of emerging pollutants.

Biocomputing Group, FABIT

The group focuses its interests on different aspects of sequence analysis, mainly the implementation of predictive algorithms based on methods out of machine learning approaches, including Neural Networks, Support Vector Machines, Conditional Random Fields, Random Forests, Deep Learning. The aim of the group is to define tools to link sequence/structure information to biologically meaningful knowledge, in a System Biology perspective.

The University of Bologna, founded in 1088, is the oldest university in Western World. In Interreg Italy-Croatia, the departments and operative units of the coast participated in 11 projects, of which 3 coordinated. The lead Department of the VITA project is the DIMEVET, having two Units, one in Ozzano (not participating) and one in Cesenatico, already dealing with MARLESS strategic IT-HR project. The FABIT is a multidisciplinary Department that offers research and teaching activities in different fields of biotechnology. FABIT has labs equipped for several standard and "omics" analyses. FABIT is also among the founder Departments of FMC for UNIBO, participating to FMC with 2 post-docs, an Assistant Professor, a Full Professor and 4 PhD students. Overall, the FMC hosts multidisciplinary, integrated, cooperative research on marine biodiversity, resources, and biotechnologies, for a sustainable development of Blue Growth in the Adriatic Sea. The specific scientific fields of researchers are many and span from marine biology and ecology to the study of marine microorganism genome, from citizen science to bioremediation in marine sediments and matrixes, from the study of marine biomineralization mechanisms to the technological and biotechnological applications of biominerals, to circular economy.

What is the role (contribution and main activities) of your organisation in the project?

Motivation			
<p>Aquaculture group, DIMEVET and FMC The aquaculture group will be involved in the implementation of revitalization actions (WP3), providing a reproduction and/or an on-growing protocol for flat oyster spat reared in captivity.</p> <p>Microbiome Science and Biotechnology Unit, FABIT and FMC The group will be involved in WP1 and WP2, with microbiome assessment and modelling activities, respectively. More specifically, in WP1 the unit will apply the most advanced multi-omics approaches for the characterization of marine microbiomes, elucidating mechanistical connections between the marine microbiomes and the most relevant ecosystem services. Further, the main drivers of marine microbiome variations, will be dissected by exploiting correlative models.</p> <p>Biocomputing Group, FABIT The group will set up the project database of the biotic and abiotic indicators for the state of art of the micro and macro biological diversity in the Adriatic Sea (WP1). In WP2, the research group will apply machine-learning approaches to derive robust predictive multidimensional associations between biotic and abiotic indicators for biodiversity loss. Also, in WP2 the group will create the multi-layer model for assessing the risks (or degree) of biodiversity loss, deriving the main anthropogenic drivers, and the ultimate consequences in terms of loss of ecosystem services. An ICT version of the multilayer model will be created.</p>			
Co-financing			
Source	Amount	Percentage	
ERDF	286.581,89	80,00%	
Partner contribution	71.645,48	20,00%	
Partner total eligible budget	358.227,37	100,00%	
Origin of partner contribution			
Source of contribution	Legal status of contribution	Amount	% of total partner budget
UniBO	Public	0,00	0,00%
Italy Ministry of Economy and Finance - Fondo I.G.R.U.E. 2021-27 - Ex Law n. 183/1987 and CIPESS Decree n. 78/2021	Automatic Public	71.645,48	20,00%
Total			
Sub-total public contribution	0,00	0,00%	
Sub-total automatic public contribution	71.645,48	20,00%	
Sub-total private contribution	0,00	0,00%	
Total	71.645,48	20,00%	

State Aid	
State aid criteria self-check	
Criterium I: Is the partner involved in economic activities through the project?	
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No N.A.
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No N.A.
Criterium II: Does the partner receive an undue advantage in the framework of the project?	
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No N.A.
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No N.A.
Result of State aid criteria self-check:	No risk of state aid
State aid relevant activities	
GBER scheme / de minimis	

B.1 Project Partner 3	
Partner number	3
Partner role	PP
Name of the organisation in original language	Università Politecnica delle Marche
Name of the organisation in english	Polytechnic University of Marche
Organisation abbreviation	UNIVPM
Department / unit / division	Department of Materials, Environmental Sciences and Urban Planning (SIMAU)
Partner main address	
Country	Italia (IT)
NUTS 2	Marche (IT13)
NUTS 3	Ancona (IT132)
Street, House number, Postal code, City	Via Brece Bianche 12 60131 Ancona
Homepage	https://www.univpm.it
Address of department / unit / division (if applicable)	
Country	Italia (IT)
NUTS 2	Marche (IT13)
NUTS 3	Ancona (IT132)
Street, House number, Postal code, City	Via Brece Bianche 12 60121 Ancona
Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	M.71.11
VAT number (if applicable)	00382520427
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Legal and financial information	
Tax number	00382520427
PEC address	protocollo@pec.univpm.it
PIC (from EC Participant Register)	999866689
Contact	
Legal representative	Mr Gian Luca Gregori
Contact person	Mrs Cinzia Corinaldesi
Email	c.corinaldesi@staff.univpm.it
Telephone no.	+39 0712204294
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	
<p>The UNIVPM team is composed of marine biologists and ecologists with consolidated international expertise in the field of marine ecology, in the assessment of biodiversity and functioning of marine ecosystems, and in finding solutions to improve their health (through bioremediation and restoration) as well as the services they provide to humans. The team has conducted research activities worldwide with specific attention on coastal (both hard and soft bottoms) and deep-sea areas, including the Western and Eastern Mediterranean, Atlantic, Pacific, Arctic, and Antarctic Ocean, and Sub-Antarctic regions.</p> <p>UNIVPM team owns highly-qualified research groups and laboratories operating in the fields of marine biology and ecology, nature conservation and restoration and collaborate with many Centres and Universities all over the world (USA, Canada, Belgium, France, Spain, UK, Germany, Norway, Austria, Greece, Croatia, Indonesia, Vietnam, Madagascar, Singapore, Israel, and Japan) in the framework of national and international research projects and networks of excellence. The team has participated over the last 15 years in more than 20 EU projects and has a wealth of experience in the coordination and management of EU and international projects, including the coordination of projects (MERCES, AFRIMED, BIOBLUETECH) specifically devoted to the restoration of degraded marine ecosystems.</p>	
What is the role (contribution and main activities) of your organisation in the project?	

Motivation

The UNIVPM team is composed of marine biologists and ecologists with consolidated international expertise in marine biology and ecology, marine biodiversity, and functioning, and in finding solutions to improve the health of marine ecosystems (through bioremediation and restoration) and the services they provide to humans. In the VITA PROJECT, the UNIVPM team will make its know-how available to assess the health status of the benthic ecosystems, in terms of biodiversity, functioning, and services they provide. In particular, the UNVPM researchers will be co-responsible for defining the procedures to be applied to analyze the distribution and diversity of the benthic components in the different sites investigated through molecular and microscopy-based approaches and will contribute to feeding the multilayer model to estimate the degree of potential biodiversity loss and ecosystem services in the anthropogenically impacted sites. The UNIVPM will also contribute to identifying areas in the Adriatic Sea with high ecological relevance (e.g., hosting endemic and locally endangered species and rare habitats, and refuge habitats), and subject to current and foreseeable intense anthropogenic impacts, and to define defining prioritization criteria for conservation and for the designation of future protected areas. Furthermore, the UNIVPM team will be devoted to applying new pilot approaches of ecological restoration based on the use of species of macroalgae and fauna that create habitats to recover the coastal systems affected by the historical contaminations of the Falconara Marittima site, facing the western coast of the Adriatic Sea. These habitat-forming species have a crucial role in supporting biodiversity and food webs, therefore the VITA project will offer an unprecedented opportunity to restore a degraded environment and, at the same time, to produce knowledge and skills to be transferred to other systems for upscaling. Transplantation of juveniles of macroalgal forests (e.g., *G. barbata*) obtained from a donor population will be performed and its restoration success will also be assessed. In addition, other restoration actions based on the translocation of bio-constructors and engineering species will be implemented to assess their feasibility and efficacy. The contribution of the UNIVPM team to the VITA project will also materialize in the identification of new approaches based on the use of macro-megabenthos capable of reclaiming/bioaccumulating organic contaminants to be used in programs for restoring polluted environments.

Co-financing

Source	Amount	Percentage
ERDF	240.848,00	80,00%
Partner contribution	60.212,00	20,00%
Partner total eligible budget	301.060,00	100,00%

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
UNIVPM	Public	0,00	0,00%
Italy Ministry of Economy and Finance - Fondo I.G.R.U.E. 2021-27 - Ex Law n. 183/1987 and CIPESS Decree n. 78/2021	Public	60.212,00	20,00%

Total		
Sub-total public contribution	60.212,00	20,00%
Sub-total automatic public contribution	0,00	0,00%
Sub-total private contribution	0,00	0,00%
Total	60.212,00	20,00%
State Aid		
State aid criteria self-check		
Criterium I: Is the partner involved in economic activities through the project?		
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No	N.A.
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No	N.A.
Criterium II: Does the partner receive an undue advantage in the framework of the project?		
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No	N.A.
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No	N.A.
Result of State aid criteria self-check:	No risk of state aid	
State aid relevant activities		
GBER scheme / de minimis		

B.1 Project Partner 4	
Partner number	4
Partner role	PP
Name of the organisation in original language	Sveučilište u Zadru
Name of the organisation in english	University of Zadar
Organisation abbreviation	UNIZD
Department / unit / division	Department of Ecology, Agronomy and Aquaculture
Partner main address	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Zadarska županija (HR033)
Street, House number, Postal code, City	Ulica Mihovila Pavlinovića 1 23000 Zadar
Homepage	https://www.unizd.hr
Address of department / unit / division (if applicable)	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Zadarska županija (HR033)
Street, House number, Postal code, City	Trg kneza Višeslava 9 23000 Zadar
Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	P.85.42
VAT number (if applicable)	10839679016
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Legal and financial information	
Tax number	10839679016
PEC address	rektorat@unizd.hr
PIC (from EC Participant Register)	991684060
Contact	
Legal representative	Mr Josip Faričić
Contact person	Mrs Andreja Baraba
Email	abaraba1@unizd.hr
Telephone no.	+385 23 200 692
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	

Motivation

As Croatia's largest integrated university (with 27 departments, two laboratories, five research/two training centres and the Centre for Science, Projects and Technology Transfer), UNIZD performs scientific and educational activities and provides expertise in the field of biotechnology, humanities, engineering and social, natural and biomedical sciences. UNIZD engages in complex, innovative and integrative projects, obtaining status of an intellectual authority and a prominent institution in the region. UNIZD cooperates with other higher education and research organizations, national /international associations, local/regional authorities and the business sector, resulting in various joint initiatives, knowledge and technology transfer, scientific projects and the development of new study programs. UNIZD has a strong institutional capacity for project management, interdisciplinary collaboration and internationalisation of research and education. Within the last six years, UNIZD has participated in scientific and expert EU-funded projects worth more than 25 mil. EUR, financed through ESI Funds (ERDF, ESF, EAFRD, EMFAF), EEA Grants, ETC and programs such as WBIF, ERASMUS, HORIZON, LIFE etc. Some of UNIZD's most significant INTERREG projects (ongoing or completed) are: ADRIREEF (ID: 10045901), MADE IN-LAND (ID: 10048184), EXCOVER (ID: 10047202), STRONGER (ID: 2017HR-BA-ME 191), PESCAR (ID: 2017HR-BAME277), SAN (ID: KK.01.2.1.01.0100), 2CODE (ID: 2020HR-BA-ME539), STREAM (ID: 10249186). UNIZD also takes part in Erasmus+ projects, including: Joint Master Programme in Marine Biotechnology (ID: 101050597), CAPP4APP (ID: 572706-EPP-1-2016-1-HR-EPPKA3-SUP-APPREN), DIGITClue (ID: 2020-1-AT01-KA226-HE-092663), ILO (ID: 2016-1-AT01-K203-016762), INVITE (2024-1-HR01-KA220-VET-000255960) and many more. Under the Horizon 2020 and Horizon Europe, UNIZD is engaged in research projects: BLUE CONNECT (ID: 101061595), OPERAS-P (ID: 871069), CRAFT-OA (ID: 101094397), EU-CONEXUS ENABLES (ID: 101136822) etc. Within the LIFE program, UNIZD participates in the project LIFE-MICROFIGHTER (ID: 101074218-LIFE21-ENV-IT).

Established in 2006., the Department of Ecology, Agronomy, and Aquaculture approached the agricultural production in emphasizing integrated and eco-friendly practices suited to Mediterranean conditions with a strong focus on ecological principles and sustainable management. It offers the undergraduate programs Applied Ecology in Agriculture and Underwater Science and Technologies (established through TEMPUS project) and master's program Sustainable Management of Aquatic Ecosystems (through BLUE SMART-Blue Education for Sustainable Management of Aquatic Resources / EMFF). INTERREG projects were: PESCAR (2017HR-BA-ME277), STRONGER (2017HR-BA-ME 191), ADRIREEF (ID: 10045901), DORY and BLUE BOOST, whose total worth was over 5.600.000 EUR.

What is the role (contribution and main activities) of your organisation in the project?

UNIZD, Department of Ecology, Agronomy and Aquaculture, will be involved in WP1 for scientific data collection from impacted and control sites across different seasons and for experimental design on the Eastern part of the Adriatic Sea. UNIZD will be in charge of the coordination of the sampling and visual census in the selected sites, collaborating with the other Croatian partners for the in-site campaigns. More specifically, UNIZD will perform macro and mega-benthos analysis for the Croatian sites in terms of abundance, biomass and diversity (visual census), and they will also assess the diversity of meiofauna communities and abiotic indicators. UNIZD will also be involved in the collection of available historical data for the selected sites to be harmonized in the VITA database. In WP3, UNIZD will be involved in the identification of priority areas for conservation in the Adriatic Sea and for future protected areas with high ecological relevance. UNIZD will be involved in the implementation of biodiversity protection guidelines and restoration actions, in collaboration with WP4, and in the validation of the revitalization actions to be performed, with special focus on detection and removal of invasive species, such as invasive algae detected during the visual census of the area in accordance with Croatian national laws relevant to National parks and NATURA 2000 areas.

Co-financing			
Source		Amount	Percentage
ERDF		279.830,40	80,00%
Partner contribution		69.957,60	20,00%
Partner total eligible budget		349.788,00	100,00%
Origin of partner contribution			
Source of contribution	Legal status of contribution	Amount	% of total partner budget
UNIZD	Public	69.957,60	20,00%
Total			
Sub-total public contribution		69.957,60	20,00%
Sub-total automatic public contribution		0,00	0,00%
Sub-total private contribution		0,00	0,00%
Total		69.957,60	20,00%
State Aid			
State aid criteria self-check			
Criterium I: Is the partner involved in economic activities through the project?			
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No	N.A.	
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No	N.A.	
Criterium II: Does the partner receive an undue advantage in the framework of the project?			
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No	N.A.	

Criterium II: Does the partner receive an undue advantage in the framework of the project?	
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No N.A.
Result of State aid criteria self-check:	No risk of state aid
State aid relevant activities	
GBER scheme / de minimis	

B.1 Project Partner 5	
Partner number	5
Partner role	PP
Name of the organisation in original language	Udruga za zaštitu prirode i okoliša te promicanje održivog razvoja ARGONAUTA
Name of the organisation in english	Association for Nature and Environment Conservation and Sustainable Development
Organisation abbreviation	ARGONAUTA
Department / unit / division	N.A.
Partner main address	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Šibensko-kninska županija (HR034)
Street, House number, Postal code, City	Pijaca Društva seoske izobrazivosti 2 22243 Murter
Homepage	www.argonauta.hr
Address of department / unit / division (if applicable)	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Šibensko-kninska županija (HR034)
Street, House number, Postal code, City	Pijaca Društva seoske izobrazivosti 2 22243 Murter
Legal and financial information	
Type of partner	Interest groups including NGOs
Subtype of partner	
Legal status	Private non-profit
Sector of activity at NACE group level	M.74.90
VAT number (if applicable)	76837967141

Legal and financial information	
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Tax number	76837967141
PEC address	sanja.mihic@argonauta.hr
PIC (from EC Participant Register)	943860635
Contact	
Legal representative	Mrs Ivona Jadrić
Contact person	Mrs Sanja Đurman
Email	sanja.mihic@argonauta.hr
Telephone no.	+385 912066657
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	

Motivation

NGO Argonauta has been working for more than 15 years on the protection of natural and cultural heritage and sustainable development of an extremely valuable area- Šibenik- knin and Zadra County in Croatia, where a relative small space encompasses 2 national parks, 3 nature parks and numerous places protected under NATURA 2000. The whole area inspired many projects that Argonauta organized, coordinated and implemented. In cooperation with schools, universities, institutes and other NGOs, Argonauta worked on researches related to microplastic in sea, protection of sea mammals as dolphins and sea turtles, protection of habitat for Mediterranean monk seal, explored the presence of caulerpa cylindracea and many more. Beside that, Argonauta presented the results of researches and actions to the public, in order to increase the awareness about the importance of preservation and protection of sea, coast and environment in general.

During the years, Argonauta implemented many projects in order to discover, protect and promote local marine values. Above all, Argonauta has the goal to valorize all possible values of area in which operates, speaking about natural or cultural heritage. Its employees are educated in marine topics and capacitated work in project implementation (logistic, finance, project management), as seen from the list of part of the projects implemented during the years.

-Contribution to sustainable development of the coast and islands of Šibenik-Knin County, Dutch Governments MATRA programme

-Initiator of Festival of Sustainable Development of the Coast and Islands of Šibenik-Knin County

-Promotion of active protection of biodiversity of the Kornati Islands and Contribution to the conservation of biodiversity of the Kornati Islands

-Reviving local traditional practices of sustainable use of the resources of the island of Murter and its natural region- IPA

-Blue eco patrol- extracurricular educational program for sustainable development in coastal and island local communities of Šibenik-Knin County intended for elementary schools- Swiss- Croatian programme of cooperation, Department for NGOs

-Blue project- contribution to the development of socially useful learning programs at the Faculty of Veterinary Medicine in Zagreb, National Agency for development of NGO, ESF

-HCKZ- Croatian Corals Center of Zlarin, partner, Croatian Ministry of Regional development and EU funds

-Taste from amphora- contribution to the valuation of maritime heritage in the territory of the FLAG Galeb

-TANGRAM- "Transnational pArks aNd Gardens Resources in Adriatic and Ionian tourist Marketplace, Interreg Adrion

Most of the projects above mentioned include education and rising the awareness about the problem of the sea pollution- with the special accent on plastic pollution, and especially micro plastic which is still a poorly known problem but with a strong presence and destructive for the marine environment.

What is the role (contribution and main activities) of your organisation in the project?

Argonauta, together with associated partner NP Kornati, can contribute to the project with existing researches about posidonia replanting or other, if relevant. Argonauta can contribute with the educational and training campaigns, especially if working with children and youth, but also with stakeholders, policy makers, institutions etc. our staff is experienced in marketing and promotion, which can be helpful in such an project, that is focused around researches, which usually stays away from wide public. Since Argonauta has a lots of experience along the coast on organization and implementation of diving cleaning actions, we may be in charge for organization and coordination of monitoring actions together with NP Kornati and numerous diving clubs along Adriatic (Croatian) coast.

Co-financing			
Source		Amount	Percentage
ERDF		160.000,00	80,00%
Partner contribution		40.000,00	20,00%
Partner total eligible budget		200.000,00	100,00%
Origin of partner contribution			
Source of contribution	Legal status of contribution	Amount	% of total partner budget
ARGONAUTA	Private	40.000,00	20,00%
Total			
Sub-total public contribution		0,00	0,00%
Sub-total automatic public contribution		0,00	0,00%
Sub-total private contribution		40.000,00	20,00%
Total		40.000,00	20,00%
State Aid			
State aid criteria self-check			
Criterium I: Is the partner involved in economic activities through the project?			
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No	N.A.	
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No	N.A.	
Criterium II: Does the partner receive an undue advantage in the framework of the project?			
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No	N.A.	

Criterium II: Does the partner receive an undue advantage in the framework of the project?	
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No N.A.
Result of State aid criteria self-check:	No risk of state aid
State aid relevant activities	
GBER scheme / de minimis	

B.1 Project Partner 6	
Partner number	6
Partner role	PP
Name of the organisation in original language	Fondazione Cetacea
Name of the organisation in english	Cetacea Foundation
Organisation abbreviation	CF
Department / unit / division	N.A.
Partner main address	
Country	Italia (IT)
NUTS 2	Emilia-Romagna (ITH5)
NUTS 3	Rimini (ITH59)
Street, House number, Postal code, City	Viale Torino 7A 47838 Riccione
Homepage	www.fondazionecetacea.org
Address of department / unit / division (if applicable)	
Country	Italia (IT)
NUTS 2	Emilia-Romagna (ITH5)
NUTS 3	Rimini (ITH59)
Street, House number, Postal code, City	Viale Torino 7A 47838 Riccione
Legal and financial information	
Type of partner	Other
Subtype of partner	
Legal status	Private non-profit
Sector of activity at NACE group level	M.74.90
VAT number (if applicable)	02620650404
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Legal and financial information	
Tax number	02620650404
PEC address	Fondazionecetacea1988@pcert.postecert.it
PIC (from EC Participant Register)	913985702
Contact	
Legal representative	Mr Sauro Pari
Contact person	Mrs Alice Pari
Email	incontricolmare@fondazionecetacea.org
Telephone no.	+393402305184
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	
<p>Cetacea Foundation (CF) is working in the field of marine environment from 1988: it manage one of the oldest and most important Sea Turtles Rescue Center of the Adriatic sea and it has twenty years experience also in cetaceans rescue. CF involves stakeholders like local, regional and national administration, NGO's, fishermen and other economical actors in environment conservation, specially of the sea. It works in sensibilization of public through communication activities, like conferences, festivals, communication materials, artistic performances, guided visits.</p> <p>CF had experience in Interreg Italy Croatia: it participated at project SOUNDSCAPE, MARLESS and RESISTANCE.</p> <p>In recent years CF has been involved as a partner in EU-funded national and international projects:</p> <ul style="list-style-type: none"> - Sharklife (2011-2014 Life + project) for the conservation of the elasmobranchs; - NetCet (2012-2015 IPA Adriatic Project) a networking for the conservation of the sea turtles and cetaceans in the Adriatic sea where organized the online database on sea turtles, implemented its rescue center and organized the monitoring of dolphin with photo identification activity in north Adriatic sea; - Tartalife (2013-2018 Life Nature project) on reduction of mortality of sea turtles for bycatch where among the different activities it organized training for fishermen about first aid for sea turtles caught in nets; <p>Interreg Italy Croatia SOUNDSCAPE like partner responsible for WP Communication.</p> <p>CF participated at different project regarding marine litter like Clean Sea Life (2016-2019 Life Biodiversity project) and Interreg MARLESS (where manage testing activities with fishermen).</p> <p>In Project Cluster Interreg Italy Croatia RESISTANCE, CF helps PP1 Communication Manager in the coordination and implementation of communication activities.</p> <p>For the project LIFE MEDTURTLES Cetacea implemented activities like:</p> <ul style="list-style-type: none"> - Testing and demostration of turtles-free fishing tools (like TED – Turtle Excluder Device) involving fishermen in Veneto, Emilia Romagna e Marche Regions. - Improving scientific awareness of different stakeholders like turists, schools, and fishermen using questionnaires, survey, technological tools like app. 	
What is the role (contribution and main activities) of your organisation in the project?	

Motivation			
<p>Fondazione Cetacea will contribute in the coordination of communication work package, helping the LP to define communication activities, creating a Communication Plan, involving in project event stakeholders and target groups like students, NGOs, local regional and national institutions, Research Institutes, general public, scuba diving, pleasure boats, fishermen and SMEs. In order to improve the collection of scientific data for the project CF will involve audience in citizen science activities. CF also contribute in the definition of the pilot site and will participate in the monitoring of the site in front of Riccione.</p> <p>Fondazione Cetacea involves Emilia Romagna Region like Associated Partner and will contribute in the implementation of webtool PORTODIMARE (developed by the Region during the Cluster Adrion) with the project VITA data collection.</p>			
Co-financing			
Source	Amount	Percentage	
ERDF	160.320,00	80,00%	
Partner contribution	40.080,00	20,00%	
Partner total eligible budget	200.400,00	100,00%	
Origin of partner contribution			
Source of contribution	Legal status of contribution	Amount	% of total partner budget
CF	Private	0,00	0,00%
Italy Ministry of Economy and Finance - Fondo I.G.R.U.E. 2021-27 - Ex Law n. 183/1987 and CIPESS Decree n. 78/2021	Automatic Public	40.080,00	20,00%
Total			
Sub-total public contribution	0,00	0,00%	
Sub-total automatic public contribution	40.080,00	20,00%	
Sub-total private contribution	0,00	0,00%	
Total	40.080,00	20,00%	
State Aid			
State aid criteria self-check			
<p>Criterion I: Is the partner involved in economic activities through the project?</p>			

State aid criteria self-check	
Criterion I: Is the partner involved in economic activities through the project?	
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No N.A.
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No N.A.
Criterion II: Does the partner receive an undue advantage in the framework of the project?	
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No N.A.
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No N.A.
Result of State aid criteria self-check:	No risk of state aid
State aid relevant activities	
GBER scheme / de minimis	

B.1 Project Partner 7	
Partner number	7
Partner role	PP
Name of the organisation in original language	Istarska razvojna agencija - IDA d.o.o.
Name of the organisation in english	Istrian development agency - IDA Ltd.
Organisation abbreviation	IDA
Department / unit / division	N.A.
Partner main address	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Istarska županija (HR036)
Street, House number, Postal code, City	Marka Marulića 5 52100 Pula
Homepage	https://ida.hr/hr/
Address of department / unit / division (if applicable)	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Istarska županija (HR036)
Street, House number, Postal code, City	Marka Marulića 5 52100 Pula
Legal and financial information	
Type of partner	Sectoral agency
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	S.94.11
VAT number (if applicable)	90084809413
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes

Legal and financial information	
Tax number	90084809413
PEC address	tamara.kirsic@ida.hr
PIC (from EC Participant Register)	950584190
Contact	
Legal representative	Mr Boris Sabatti
Contact person	Mrs Jelena Nikolić Ražem
Email	jelena.nikolic@ida.hr
Telephone no.	+385 52 381 900
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	
<p>Istrian Development Agency - IDA Ltd. was founded by the Region of Istria and its 10 towns in 1999, as an operational body entrusted with the implementation of development programmes in the Region of Istria. It is a self-sustainable regional development agency, funded mostly by EU projects.</p> <p>IDA's primary role lies in the stimulation of the development of small and medium-sized entrepreneurship in the Region of Istria through securing financial support for SMEs, developing entrepreneurial infrastructure (business incubators and business zones, coworking spaces, cluster initiatives), providing training courses for SMEs and public institutions, providing information and consultations services to entrepreneurs, offering services to prospective foreign and domestic investors and implementing different interregional and international projects aimed at creating favourable entrepreneurial conditions in the region. IDA has implemented more than 55 projects so far, mostly financed by the EU funds. Moreover, IDA deals with strategic planning as the basis of development; consultation on the preparation and evaluation of development strategies, branding of Istria through the IQ program (Istrian Quality label implementation and promotion), investing in research, innovation and development through the IstraLab network and the Center for the Popularization of Science and Innovation of Region of Istria.</p> <p>Even though founded as limited company, IDA is not a classical market player. It acts mostly as business support institution, offering business support services to SMEs free of charge.</p> <p>As far as project topic is concerned IDA has relevant project experience dealing with sectors of blue economy and the related environmental protection as follows: CLASS 4.0 (https://www.italy-croatia.eu/web/class4.0), INVESTINFISH (https://www.italy-croatia.eu/web/investinfish), BEAT (https://www.italy-croatia.eu/web/beat), BLUE TECH (IPA Adriatic CBC).</p> <p>Implementation of EU projects is a crucial field of work for the Istrian Development Agency. Over the years IDA has achieved very good cooperation with various institutions and development agencies in the country and abroad, resulting in 55 significant projects of overall value of 75 million EUR, 7 million EUR of which has been approved for IDA. The largest projects of IDA, realized with the help of EU funds, are the establishment of Coworking Centre Pula, then the Research Centre for materials in the Region of Istria - METRIS, a project for the construction of the wholesale fish market in Poreč and the project for the establishment of the Technological Incubator Pula. Projects were being implemented within the Italy-Croatia cross-border programmes Mediterranean and Adrion, as well as ESI funds. Planning for several strategic projects is underway within the scope of cross-border cooperation programmes.</p>	

Motivation			
What is the role (contribution and main activities) of your organisation in the project?			
<p>The Istrian Development Agency has gradually developed over the years in order to implement preparation of EU projects, education for the private and public sector, innovation and development through the IstraLab network and the Center for the Popularization of Science, and Innovation of Istria County.</p> <p>IDA will contribute to the VITA project in many tasks. In WP1, IDA will contribute to the collection of available historical data from the selected sites, to be implemented in the VITA database. Thanks to their expertise, IDA will contribute in WP2 for the implementation of protection guidelines for priority areas in the Adriatic Sea and possible future protected areas of ecological relevance. Furthermore, IDA's main contribution to the project will be carried in WP4. Indeed, IDA is able and competent in the organization of educations and trainings and in the implementation of citizen science projects. IDA's goals in the VITA project will be the organization of a series of lectures for experts in the education sector, that will provide them with new competences in the protection and restoration topics. This will result in the spreading, through educated experts, of the awareness on the importance of protection and restoration of biodiversity in Adriatic Sea. IDA will also have the opportunity to involve school kids in the project, for example by organizing educational guided tour visits to the local aquarium. In several places, frequently visited by tourists, IDA will be able to install interactive tables with VITA project's information and results, in order to contribute to the sensibilization and education of the general public.</p>			
Co-financing			
Source		Amount	Percentage
ERDF		169.164,00	80,00%
Partner contribution		42.291,00	20,00%
Partner total eligible budget		211.455,00	100,00%
Origin of partner contribution			
Source of contribution	Legal status of contribution	Amount	% of total partner budget
IDA	Public	42.291,00	20,00%
Total			
Sub-total public contribution		42.291,00	20,00%
Sub-total automatic public contribution		0,00	0,00%
Sub-total private contribution		0,00	0,00%
Total		42.291,00	20,00%
State Aid			

State aid criteria self-check	
Criterion I: Is the partner involved in economic activities through the project?	
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No N.A.
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No N.A.
Criterion II: Does the partner receive an undue advantage in the framework of the project?	
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No N.A.
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No N.A.
Result of State aid criteria self-check:	No risk of state aid
State aid relevant activities	
GBER scheme / de minimis	

B.1 Project Partner 8	
Partner number	8
Partner role	PP
Name of the organisation in original language	Plavi svijet Institut za istraživanje i zaštitu mora
Name of the organisation in english	Blue World Institute of Marine Research and Conservation
Organisation abbreviation	BWI
Department / unit / division	N.A.
Partner main address	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Primorsko-goranska županija (HR031)
Street, House number, Postal code, City	Kaštel 24 51551 Veli Lošinj
Homepage	www.blue-world.org
Address of department / unit / division (if applicable)	
Country	Hrvatska (HR)
NUTS 2	Jadranska Hrvatska (HR03)
NUTS 3	Primorsko-goranska županija (HR031)
Street, House number, Postal code, City	Kaštel 24 51551 Veli Lošinj
Legal and financial information	
Type of partner	Interest groups including NGOs
Subtype of partner	
Legal status	Private non-profit
Sector of activity at NACE group level	M.72.11
VAT number (if applicable)	25888957858
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Legal and financial information	
Tax number	25888957858
PEC address	jelena.basta@blue-world.org
PIC (from EC Participant Register)	960094458
Contact	
Legal representative	Mr Peter Charles Mackelworth
Contact person	Mr Grgur Pleslić
Email	grgur.pleslic@blue-world.org
Telephone no.	+385 98 976 0271
Motivation	
Do you possess the necessary competencies and experience needed to participate in the project?	

Motivation

The BWI was set up with the intention to carry out objective science, conservation and education about the marine, coastal and island environments. The BWI research program is focused on the ecology of cetaceans and sea turtles, including the status of the habitats which they use. Research activities include boat-based surveys for collection of data for photo-identification, behaviour and interactions, aerial surveys, acoustic monitoring, satellite tagging of sea turtles, and collection of samples from stranded cetaceans and sea turtles. From these, population dynamics, social and genetic structure, spatial ecology and habitat use are analysed.

The conservation program translates the research into management and policy recommendations for the relevant national, regional, and international authorities. The BWI has actively contributed to the establishment of six Natura 2000 sites aimed at conserving common bottlenose dolphin populations in the Croatian Adriatic, and worked closely with Croatian authorities and institutions from other countries bordering the Adriatic basin to develop species conservation plans for cetacean and sea turtle populations.

The BWI has teams of researchers and three research boats available to sample sites within the coastal or island areas of the Croatian Adriatic. The BWI has capacity and full autonomy to collect samples from dolphins and sea turtles. In addition, the BWI can access water, sediment, and other biological samples in the field. Storage of samples can be arranged according to the needs of the project until analysis can be carried out. Working with partners in other projects the BWI has provided logistical support for sampling programs and carried out environmental and ecological surveys.

As part of the VITA project the BWI will provide access to an impacted site and reference site within the Cres-Lošinj archipelago, where the organization is based and has the relevant research permits.

The BWI has successfully undertaken 22 EU co-financed projects from CARDS, PHARE, IPA, INTERREG, LIFE and EMFF programmes. Below are the ongoing and recently completed projects relevant for the VITA project.

Interreg Italy-Croatia Cluster Call - Project: HATCH, 2022 – ongoing

Project HATCH capitalizes on former Interreg IT-HR projects integrating results from monitoring of microbiological, chemical, physical and acoustic pollution, nutrients, and their effects on habitats and species within the framework of MSP.

Interreg Italy-Croatia - Project: ECOSS, 2019 – 2021

Project ECOSS established the ECOAdS, a Marine Observatory that is based on conceptual framework which integrates and harmonizes Natura 2000 conservation goals with ecological variables, key oceanographic processes and connectivity between sites.

What is the role (contribution and main activities) of your organisation in the project?

Motivation

Under WP1 the BWI will collect samples at the impacted site in the Bay of Augusta, Mali Lošinj (44.54169, 14.46095) located adjacent to the Cres-Lošinj N2K site (HR3000161). A relevant reference site will be identified in proximity to the impact site but within the Cres Lošinj N2K site (HR3000161). The BWI will provide historical data to provide context for the impacted site including water and sediment samples. Work will be undertaken in cooperation with UniZadar, including visual census of biotic and abiotic indicators, later in the project the BWI will assume responsibility for measuring these indicators according to the agreed protocols.

Under WP3 the BWI will advise local and national government to promote guidelines from the VITA project within the appropriate policy frameworks.

Under WP4 the BWI will use its facilities to develop new training and educational materials which will be distributed to groups and individuals entering the centre (c20,000 per year). Specialist materials will be developed to engage with local stakeholders, including fishers, tourist workers and the shipyard. As the partner with the experience in implementing citizen science activities, the BWI will actively promote engagement and citizen science activities to encourage citizens to take part and contribute to monitoring the VITA impacted sites. The BWI will set up a project promotion campaign through organization of public events with diving clubs, information panels on the coast and undertaken marine litter sampling and removal actions, promoting all through social networks and media.

The BWI has close connections to the local municipality and national policy makers, it will engage with both through the provision of regular updates of the project. In addition, at the TSG3 EUSAIR meeting the VITA project will be presented at the annual event.

Co-financing

Source	Amount	Percentage
ERDF	159.624,00	80,00%
Partner contribution	39.906,00	20,00%
Partner total eligible budget	199.530,00	100,00%

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
BWI	Private	39.906,00	20,00%

Total

Sub-total public contribution	0,00	0,00%
Sub-total automatic public contribution	0,00	0,00%
Sub-total private contribution	39.906,00	20,00%
Total	39.906,00	20,00%

State Aid

State aid criteria self-check	
Criterion I: Is the partner involved in economic activities through the project?	
1. Will the project applicant implement activities and/or offer goods/services for which a market exists?	No N.A.
2. Are there activities/goods/services that could have been undertaken by an operator with the view to making profit (even if this is not the applicant's intention)?	No N.A.
Criterion II: Does the partner receive an undue advantage in the framework of the project?	
1. Does the project applicant plan to carry out the economic activities on its own i.e. not to select an external service provider via public procurement procedures for example?	No N.A.
2. Will the project applicant, any other operator not included in the project as a project partner or the target audience gain any benefits from its project economic activities, not received in the normal course of business (i.e. not received in the absence of funding granted through the project)?	No N.A.
Result of State aid criteria self-check:	No risk of state aid
State aid relevant activities	
GBER scheme / de minimis	

Associated organisations

No associated organisations

C - Project description

C.1 Project overall objective

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

2.2: Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution

Project overall objective

Now think about your main objective – what do you aim to achieve by the end of your project? Remember your project needs to contribute to the programme’s objective.

Your objective should:

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

The VITA project will set up the first integrated approach for marine biodiversity protection and recovery in the Adriatic Sea. This approach will implement the best available science, developing an innovative deep-learning ICT platform for the assessment of the degree of biodiversity loss in a given Adriatic site, the main anthropogenic drivers and the loss of key ecosystem services. Concrete solutions for biodiversity protection and recovery will also be implemented.

C.2 Project relevance and context

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

The applicant should demonstrate the real need for the project in respect to the identified challenges taking into consideration the challenges reported in the IP 2021-2027 (chapter 2. Priorities and in the Programme Intervention Logic document). In case a SO has more than one identified challenge it is not obligatory to target all of them. The focus should be on the quality and the effectiveness of the intended impact of project activities on the challenge/s.

The Adriatic Sea is one of the most economically exploited basins of the Mediterranean Sea, due to its high productivity and rich biodiversity (ca. half of the recorded species in the Mediterranean), associated with a high number of endemic species. Besides representing an important and attractive economic opportunity, the Adriatic's biodiversity is also fundamental for keeping the whole ecosystem health. Indeed, numerous ecological services strictly depend on the Adriatic Sea biodiversity, including nutrient cycling, primary production, habitat provision, pollution control, carbon storage, and erosion prevention, which contribute to the maintenance of a productive, resilient, and healthy marine ecosystem. However, many adriatic species, habitats and ecosystems are suffering from relevant declines, because of several and combined uncontrolled anthropogenic activities, establishing a vicious circle that is even worsened to the current climate change scenario (e.g., water temperature rising, heat waves, and extreme weather events). In the last decades, the Adriatic has been increasingly threatened by several anthropogenic impacts (e.g., over-fishing, chemical pollution, plastic contamination, acoustic pollution, maritime traffic, alien species invasion, aquaculture, and tourism) and climate change, which are straining the integrity of marine ecosystems and food-web functioning. Coherently, the Adriatic Sea has been recently identified as one of the Mediterranean Sea areas most worthy of protection, although many vulnerable zones to be conserved remain to be identified. Even if the ecological importance of the Adriatic Sea and its biodiversity is now perceived by social and political parties, further practical efforts are urgently needed to stop human-driven threats and ecosystem degradation to alleviate the impact of current and future climate change. Thus, in the current scenario, with an increasing perception of the human dependences on marine resources – but with marine life still declining under human pressures – the implementation of concrete actions for the conservation of marine ecosystems to support human well-being is a primary and urgent need, as clearly stated by the UN SDG14 “Life below water”, and this is now of particular importance in the densely populated (and over-exploited) Adriatic basin.

In this scenario, the VITA project aims to create and validate the first integrated approach to support biodiversity, specifically conceived for the protection and the restoration of the Adriatic autochthonous diversity. Our support system will be implemented on 6 Adriatic impacted sites, historically suffering for different-even combined-anthropogenic threats, being distributed along the Italian and Croatian coasts. Our idea is to implement a modular and flexible protection system, to be customized on the site specificities, allowing the removal of the local stressors for facilitating the protection (or restoration) of biodiversity and the dependent ecosystem services. Thus, the VITA idea is to defend (and possibly recover) the Adriatic Sea autochthonous diversity, as a precious common good for the whole Adriatic basin and for the living populations, providing a modular, flexible, and adaptable system to deal with the local problems and risks, for the protection of the whole and interconnected biological diversity of the Adriatic basin. Coherently with this “all for one, one for all” view, the VITA biodiversity support system will concretely be implemented, through the set-up of joint – and cross-border – monitoring actions on the 6 Vita Impacted sites, which foresee the close co-working between citizens and scientists for the implementation of biodiversity protection actions in the Adriatic sea. The project results also contribute to the implementation of the EUSAUR Action Plan, and especially of the Pillar 3 topic 1a “Threats to coastal and marine biodiversity”, by providing a concrete set of action and tools to protect and restore the coastal and marine biodiversity.

C.2.2 What is the new CB solution proposed by the project?

In this section applicant should describe which are the new cross-border solutions outlined by the proposal and explain why the solutions go beyond the existing practice in the sector/Programme area /participating Countries.

To achieve our goals, an innovative “learning from nature”-based approach will be implemented in 6 impacted Adriatic sites. The selected sites represent archetypes of 5 main anthropogenic impacts, such as: (i) industrial pollution; (ii) sewages discharges; (iii) agricultural discharges (iv) tourism and (v) trawling. Selected impacted sites and the correspondent impacts are: 1. “Fuori Riccione Misano”, Riccione, Italy trawling; 2. Marecchia, Rimini, Italy, agricultural discharges; 3. Falconara Marittima SNI, Ancona, Italy, industrial pollution; 4. Lojena (Levrnaka), NP Kornati, Croatia, tourism; 5. Vrulje, NP Kornati, Croatia, sewage discharges; 6. Lošinj – Bay of Augusta, Mali Lošinj, Croatia, tourism. For each impacted site a corresponding impacted reference is identified. For sites 1, 2 and 3 reference area will be identified outside the impacted site perimeter, for sites 4-6 corresponding references near the impacted ones, on the same depth and sediment type within the NP Kornati. In the first scientific observation phase, the biodiversity at the impacted sites and the references will be assessed for a wide panel of biotic and abiotic indicators. To this aim, historical series will be complemented with a new biomonitoring campaign. Straightly, for the new biomonitoring campaign, the main indicators from the Marine Strategy Framework Directive will be implemented with a new set of molecular indicators, principally targeting micro-size biota, which has been demonstrated to provide several advantages, such as the capacity to respond rapidly to specific local impacts. In particular, within the micro-size biota we will also consider the marine microbiome, whose diversity is crucial for keeping a healthy ecosystem and for its functioning. Highly responsive to environmental changes, microbiomes also represent sentinels of ecosystem deterioration, allowing to connect their structure and function with different important ecological services. Results from VITA scientific observation will be uploaded in the VITA database, as a comprehensive repository of the Adriatic Sea biodiversity. Running machine learning models on the generated dataset we will drive main drivers, indicators and ecological and points characterizing the different dynamics involved in diversity loss at the archetypes impacted sites. This knowledge will be instrumental for the creation of a VITA holistic model of biodiversity loss, to be made publicly available as an ICT tool, as first digital solution for the protection of the Adriatic Sea diversity. Based on a selected set of indicators, the ICT tool will allow to score the corresponding risk and/or degree of biodiversity loss, the main anthropogenic drivers and the following short- and long-term ecological impacts, in terms of lost ecological services. Joining digital technologies (ICT tool) for screening the biodiversity loss and corresponding threats with protection and restoration actions we aim at providing the first flexible biodiversity protection system for the Adriatic Sea. As a strategic point of innovation, the VITA ICT tool will also provide a range of biodiversity protection solutions, to be applied depending on the model output in term of risks scores and threats. While guidelines, also tailoring urban areas, will be provided at low risks scenarios, under high risks, advanced eco-technological solutions for sites revitalization VITA will be applied. These actions will rely on an integrative toolbox of modular remediation and (following) revitalization strategies, foreseeing pilot interventions with animal-based biologicals, such as pollutant-resistant macrobenthos-based remediation. As a strategic project aspect, the VITA biodiversity protection system will be validated in the project frame. To this aim we will communicate, train, and launch joint monitoring actions on the VITA archetypes impacted sites where citizens and scientists will cooperate for the assessment of the VITA indicators, to be uploaded on the VITA ICT tool. Based on the obtained results in terms of risk/degree of diversity loss, the correspondent VITA protection and revitalization actions will be concretely implemented (and validated) on sites. Thus, as a point of innovation of our project, citizens, workers, and stakeholders will become integral players in the VITA biodiversity monitoring, protection, and revitalization strategies. Indeed, we strongly believe that the cooperation with local, regional, and national communities and stakeholders represent the only opportunity for a concrete success of biodiversity protections strategies, through their alignment with societal values and widespread social benefits.

C.2.3 What added value does cross-border cooperation bring to your project?

The applicant should demonstrate: a) why cooperation between Italy and Croatia is important for the topic addressed; b) the result cannot (or only to some extent) be achieved without cooperation between Italy and Croatia; c) the effective CB nature of each activity proposed; d) the benefit deriving from cooperation for all PPs and for both side of the border.

By definition, the biodiversity of the Adriatic Sea can be considered as common good, providing tangible benefits – e.g. ecosystem productivity, environmental health and human health – for all the populations inhabiting the Adriatic coasts. While being a common good, with cross-border importance, the Adriatic Sea biodiversity is threatened by local impacts (eg. local pollution, wastewaters, tourisms, overfishing, alien species invasions, among other), experiencing site-specific declinations. Thus, it is the integration of local solutions at the system level that provides an effective solution to protect the biodiversity of the Adriatic Sea, as an holistic approach for the protection of the Adriatic diversity as a common good. This is exactly the idea of the project VITA, where we will integrate local solutions in a cross-border system, for the protection of the Adriatic sea biodiversity as a whole. Cross-border actions in term of biomonitoring, public engagement, public mobilization, stakeholder and policymakers engagement, guidelines preparation and deployment of concrete restoration actions, will be implemented.

VITA project relies on transboundary cooperation, for the biomonitoring of the Adriatic Sea diversity, for the dissection of the main drivers of diversity loss and for understanding the correspondent impacts, in term of compromised ecological services. Indeed, the biomonitoring actions will be implemented on impacted (and reference) sites distributed along the Italian coast, with sites in Emilia-Romagna (two sites in Province of Rimini, managing by PoR) and Marche, and along the Croatian coast, with sites distributed from Lošinj to the whole extension of the Kornati National Park. For doing that, Universities (UNIBO, UNIVPM and UNIZD), regional and provincial entities (PoR, RER, IDA) and NGO (CF, BWI, Argonauta) and the NP-Kornati (National Park) will strongly cooperate at regional and interregional levels, collecting new data - and providing the available ones – under the frame of the VITA project, that will also guarantee the usage of common operative procedures for measuring biotic and abiotic factors and the FAIR principles (Findable – Accessible – Interoperable and Reusable) for data production and storage. More specifically, while NGO, regional entities and the National Park will provide supports in the biomonitoring actions locally, allowing the access to the respective Impacted and control sites and corresponding historical datasets, the Universities will cooperate - with strong complementarities - in the provision of new scientific data. The design of the VITA biodiversity protection solutions, as guidelines and revitalization actions, will be involve a cross-border cooperation, where IDA and POR will cooperate with research institutions – as UNVPM and UNIZD – in a cross-border and cooperative environment, where complementarities will be valorized in jointed actions for the benefit of the Adriatic Sea. The vita biodiversity support system will be implemented locally, with jointed monitoring actions and protection solutions specifically designed for the specific impacted sites, at both side of the Adriatic sea. However, the local implementation will result in global (inter regional and cross-border) benefits, not only in term of the recovery of the Adriatic marine ecosystem, but also in term of citizen engagement and public mobilization, as well as in the engagement of stakeholders and policymakers, creating a cross-border cultural heritage from the VITA project, with an increased perception of the importance to cooperate to monitor, control and protect the autochthonous Adriatic biodiversity. Thus the VITA biodiversity protection strategies and guidelines will be defined and implemented cross-border, to be translated in concrete and collaborative jointed actions to better protect the Adriatic sea biodiversity, according to the UN Sustainable Developmental Goals (protecting at least 30% of the oceans and seas with 10% of strictly protected areas) and the objectives of the EU Biodiversity Strategy and Marine Strategy Framework Directive. In parallel, revitalization actions will be conceived as combined system with following restoration/rehabilitation actions, re-creating marine functioning communities and food webs in compliance with the UN Decade of Ecosystem Restoration.

C.2.4 Who will benefit from your project outputs?

Choose from the dropdown menu the target groups addressed by the proposal. In “specification” column applicant should: a) identify TG needs b) Indicate with details how the selected TG will benefit from a specific project activity c) quantify the target values (e.g. 50 schools, 20 NGOs). Take care to include young people with suitable activities as an explicit TG. For TG “General public”, individual people are counted while for other TGs the individual organisations are counted. Please avoid double counting: one organisation can be counted only once.

Target Group	Specification
General public	<p>Aimed at the protection of the Adriatic Sea biodiversity, as a common good, the VITA project is of course conceived to benefit - firstly - the general public. Creating a first integrative support system for the protection of the Adriatic Sea diversity, we aim at the protection the local (in short term) and general (in long term) autochthonous biodiversity in the Adriatic Sea. Besides representing an important and attractive economic opportunity, the Adriatic’s biodiversity is also fundamental for keeping the whole ecosystem health not only in terms of the provision of essential ecological services but also for what concerns human health and well-being, in coherence with the “One Health” concept, with important cascade benefit on the general public.</p>
National public authority	<p>The VITA project will provide several outputs which can benefit National public authorities. As first guidelines for the biodiversity monitoring and protection will be provided, allowing to establish science-based, participated and even sustainable practices - and policies - for the autochthonous biodiversity protection in the Adriatic Sea. Further, the VITA biodiversity database will represent the basement for a systematic and integrative biodiversity census in the Adriatic Sea, allowing to keep under control the state of the Adriatic Sea diversity, in short and even in long term, by National public authorities.</p>
Higher education and research organisations	<p>The VITA integrative and innovative biodiversity monitoring campaign, including for the first time micro and macro-size biota and modelling their respective connections, will represent an important opportunity for research organisations to increase the scientific knowledge on the ecology and health of the Adriatic Sea also in term of the major anthropogenic tests. Further, the model of the Adriatic Sea diversity will allow to highlight connections between anthropogenic treats, micro and macro diversity losses and compromised ecosystem services, this model can help the research organization to better understand the dynamics involved in the biodiversity loss in the Adriatic Sea</p>
Interest groups including NGOs	<p>The NGO can benefit of several project outputs, starting from all the dissemination and communication activities to training activities and citizen science joint monitoring actions that will be organised in the project frame. Indeed that same activities can be replicated by NGO, even out of the project frame, consolidating the public awareness on the importance of the Adriatic Sea biodiversity, as a public good with a central importance for the ecosystem and human health, this can favour the NGO in the management of participative actions and co-created solutions for the cross-border protection of the Adriatic Sea diversity.</p>

Target Group	Specification
Education/training center and school	The VITA education activities will be implemented at schools, from elementary schools to medium and high schools, either in Italy and Croatia. These VITA educational actions, campaigns and approaches, specifically conceived for raising the awareness of the importance to control and protect the marine biodiversity, can be cloned and implemented out of the project boundaries, by Educational training center and schools, to favour the consolidation of a new generation of collaborative education plan, involving different actors (scientists, NGO and regional and national entities) and tailoring future generations, as schoolchildren.

C.2.5 How does the project contribute to wider strategies and policies?

a) Describe the contribution to specified EUSAIR macro-regional strategy pillar objectives and flagships (describe how you intend to involve the Pillar Coordinators & National Coordinators in a systematic way (e.g. meetings, info)). b) If applicable, describe the contribution to wider strategies on all three policy levels (EU / national / regional).

Strategy	Contribution
EU Strategy for the Adriatic and Ionian Region	The VITA project will provide tangible and concrete contributions to the four thematic areas of the EUSAIR strategy. More specifically, in VITA the biodiversity support system will allow to implement blue technologies and services for the sustainment of the Blue Growth, directly and indirectly, by supporting the recovery of a fully productive and biodiverse trophic chain. Furthermore, the protection and the restoration of the autochthonous diversity will result in a better environmental quality, to be achieved – in the VITA project frame – through the adoption of common tools and solutions which put at the connection different Adriatic Regions. Finally, the VITA guidelines for the protection of biodiversity will enhance sustainable tourism, by favoring practices to protect the fragile Adriatic ecosystem and to increase the attractiveness of the Region.
European Green Deal	The VITA project fully meets the European Green Deal objectives, not only in terms of promotion and protection of the marine biodiversity, and of the sustainable and responsible usage of the marine bioresource, but also in terms of pollution reduction and reduction of green-house gases emission, through the implementation of concrete remediation and restoration actions.
Other	Mission Ocean: Connections between the VITA project and the Mission Ocean are quite obvious. Indeed, VITA will provide concrete outputs – as data, principles, approaches, tools and systems – for the protection and restoration of marine ecosystems, also allowing for a more sustainable and inclusive usage of the marine resources in a fully cooperative scenario between science, citizens, policy makers, and stakeholders.

C.2.6 Which synergies and complementarities with past or current EU and other projects or initiatives will the project make use of?

Project or Initiative	Synergy
Coralzo, Reefres, Mercedes, Afrimed, Bioblutech and Biodiversa	VITA will capitalize on all these projects concerning the restoration of temperate and tropical areas, for the implementation of the restoration actions.
INOVA DA, EU- CONEXUS, I-MORE and MICROFIGHTER	These project will provide VITA with important synergies in term of approaches and solutions for the biodiversity sustainable management of the urban areas.
Circles and TRIBIOME	They can provide VITA with the access to validated technologies and approaches for studying the marine microbiomes, as well as with validated solutions for the sustainable management of the agricultural inland.
PORTODIMARE	This Interreg ADRION project created the Geoportal of Adriatic Ionian Region (GAIR) that will integrate the results of VITA, providing cross connections with the VITA project and, particularly, with the VITA database and website.
BIVALVI and Life MUSCLES	They will provide VITA with validated solutions and tools to improve bivalve physiology, to be exploited in the implementation of the VITA revitalization actions.
MARLESS Interreg Italy-Croatia	The project will provide VITA with experienced actions for monitoring, management, prevention and removal of the marine litter in the Adriatic Sea
RESISTANCE, Interreg Italy-Croatia	Resistance guidelines will be exploited, amalgamated, and implemented with the VITA guidelines and solutions for biodiversity protection.
Life Medturtles, TartaLife, SOUNDSCAPE Interreg Italy Croatia and UNDERSEA Interreg Italy Croatia	These projects can provide VITA with a portfolio of implemented solutions for the protection of the Adriatic Sea biodiversity, acting synergically with the VITA biodiversity protection system.
SASPAS, Interreg Italy-Croatia	The project SASPAS will made available to VITA data from previous monitoring campaigns in the Adriatic Sea, experiences from pilot transplantations of seagrasses will be also capitalized.
Bluetech	Developing green industrial technologies, the project will made available to VITA solutions for the biodiversity sustainable management of the urban environment.

C.2.7 How does the project build on available knowledge?

Applicant should explain whether and how the project proposal is based on previous results already achieved and/or available knowledge, by specifying and describing exactly which outputs and available knowledge the proposal is based on. The latter need not necessarily derive from previous or other INTERREG projects but can also be related to external initiatives or other types of programmes/projects.

The project VITA relay on a highly multidisciplinary consortium, experienced by the participation to > 25 EU projects, and capitalizing a wide panel of complementary experiences, knowledges and experiences from different fields. For what concerns the biodiversity monitoring activities, UNIVPM and UNIZD have a long- lasting expertise in the biomonitoring of the marine ecosystem. Experiences from previous project will be capitalized in the VITA frame (eg. Coralzoo, Refres, Mercedes, Afrimed, Bioblutech and Biodiversa). As a further point of innovation, the VITA project will implement microbiome-based biomonitoring activities, providing a first systematic assessment of the marine microbiome diversity in the Adriatic Sea. This innovation is made possible by the long-lasting experience in microbiome assessment of the Unit of Microbiome Science and Biotechnology at UNIBO. Indeed, this unit can capitalize all the experiences and data from previous and running EU project, all devoted to the study of natural microbiomes diversity and functions, such as: Circles, TRIBIOME; Nymphe; Symbiorem; NewTechAcqua. Competences in term of data analysis, deep learning, modelling and provision of digital solutions are provided by the Biocomputing Group at UNIBO. Being a member of the ELIXIR ESFRI infrastructure, the group will also capitalize previous implementations, standards, and models developed by the tools, data, and interoperability platforms. In this frame, the VITA project will also take advantage of the experience of PORTODIMARE – Interreg Adrion – provided by Emilia-Romagna Region as associate partner, sharing databases and tools, and complementing the Geoportal of Adriatic Ionian Region (GAIR) created by PORTODIMARE with the VITA biodiversity data, as a unique opportunity to joint complementary biomonitoring actions. For the design, implementation and deployment of the VITA revitalization action, VITA will count on the extraordinary experience in the field shown by several consortium partners, as UNVPM, UNIZD, UNIBO and Argonauta. These partners concurs in the establishment of the best cross-border research environment for the implementation of revitalization actions, capitalizing knowledge and experiences accumulated in several EU research project in the field, Coralzoo, Reefres, Mercedes, Afrimed, Bioblutech and Biodiversa. In this direction, Argonauta will also capitalize SASPAS, Muscles and Bivalvi, for the implementation of VITA restoration actions. On the other hand, POR, RER, BWI, and IDA, will take advantages previous project such as NetCet, Life Euroturtle, Adria safe, for the implementation of the VITA guidelines for the protection of the Adriatic Sea diversity. As a point of strength of the VITA consortium, we have strong experienced partners in in citizen engagement and public mobilization, allowing the co-creation and co-implementation of the VITA solutions for the protection of the Adriatic Sea diversity. Specifically, for what concerns training activities, Argonauta will capitalize past training and educational activities to be implemented in primary schools, high schools, universities, and local stakeholders.

CF has experience in training activities with specific target groups, deriving from the participation to Interreg Marless FC, TartaLIFE and LIFE Medturtles. In VITA, training activities will be also finalized to Citizen science. In this perspective, we will take advantage of the FC experience, matured in Clean Sea Life, Tartalife, LIFE Medturtles, also using technological tools like apps (E-turtles app in LIFE Medturtles). The engagement of stakeholders is instrumental for VITA to achieve the desired impacts. In order to do so, we can capitalize the FC capacity, matured during the MARLESS project and Clean Sea Life, were FC promoted the creation of a committee of stakeholders. This committee can be capitalized in the VITA project, been composed of public administration representatives, fishermen associations, beach operators, NGOs, Port Authority, scuba divers, and sailing clubs. Moreover, FC can provide VITA with access to collaboration with local administrations, for communication and dissemination activities and also in the definition of local good practice capitalizing the work done for Clean Sea Life. Finally, the VITA communication and dissemination activities will be facilitated by FC, maturing a strong communication and dissemination activities

capacity in several EU project. For instance, FC coordinated communication activities in SOUNDSCAPE, maturing skills for the creation of effective communication materials, in the managing of websites and social media, in the creation of new creative ways of science communication like artistic performances, in the organization of events involving partners and stakeholders.

C.3 Project partnership

Describe the structure of your partnership and explain why these partners are needed to implement the project and to achieve project objectives. What is the contribution of each partner to the project?

The VITA consortium is highly multidisciplinary and cross-border, involving research institutions with strong complementarities (UNIBO, UNVPM and UNIZD), 3 NGO (CF, Argonauta and BWI), one National Park (Kornati NP), two regional institutions (IDA and RER) and a provincial public body as leading partner (PoR). The implementation partners complementarities in a cross-border cooperative environment it is the basement for the concrete realization of the VITA project. Since the beginning of the project, the consortium partners will allow to have access to the 6 Impacted sites and the respective controls. More specifically, POR, CF and RER will provide the access to the trawling “Fuori Riccione Misano” and agricultural “Marecchia” sites. UNVPM, will provide the access to the heavy polluted “Falconara Marittima SNI”. UNIZD will provide, with associated partner Kornati NP the access to sewage impacted site at the Kornati NP Vrulje, and touristic impacted site Lojena bay (Levrnaka), BWI will provide the access to the industrial polluted site at Mali Lošinj. As a strategic aspect, each partner will also provide the access to all the available historical data for each of the selected sites, including biotic and abiotic indicators, allowing to complement the newly produced data, in the VITA frame. As strategic aspect for VITA innovation, UNBO, UNVPM, UNIZD, will allow to implement unprecedented synergic and cross-border action of biomonitoring, data analysis and implementation of guidelines and revitalization actions. Indeed, UNIVPM, with decadal experience in the field of marine biology and ecology, will be in charge of the coordination of the VITA monitoring actions for the VITA sites distributed along the Italian coast, also coordinating CF in field samples collection. Analogously, UNIZD will manage the VITA monitoring actions on the Croatian coast, also coordinating BWI. UNIBO, providing advanced capacity in microbiome analysis and modelling, will centralize all microbiome data production for the whole project, and, with consolidated and long-lasting expertise in system biology and machine learning (possibly including deep-learning), will provide an innovative dimension for the marine biodiversity data treatment and modelling, allowing to derive innovative indicators to be implemented in the ICT tool. Competences in term of communication and dissemination, public mobilization, stakeholder engagement, training, citizen science – being strategic for the implementation of the VITA jointed monitoring and protection actions – are provided by CF, Argonauta and BWI, principally, which will coordinate to louche local but synergic cross-border public mobilization actions, with shared approaches and objectives. Specifically, CF, will implement these activities in Italy, also being the communication manager. CF is able in the creation of effective communication materials and in the organization of events involving partners and stakeholders. CF can also set up of citizen engagement and citizen science projects. Further, POR has experience on environmental educational and will support CF in communication activities. On the Croatian coast public mobilization activities will be shared by Argonauta and BWI. Argonauts can provide education tailored to different groups, organizing events that involve stakeholders and participants from different areas. While, BWI can communicate and disseminate project activities, using social media but also by organizing local public events with stakeholders such as tourist workers, divers, fishermen, locals, tourists, local authorities. BWI can develop workshops or lectures on the field. BWI has also experience in the development of citizen science application for mobile phones. Guideline implementation and dissemination will be coordinated by IDA, with long lasting expertise on these aspects, with the assistance of CF, POR, UNVPM, UNIZD and Argonauta. Finally, implementation of revitalization action will foresee competences from UNIVPM and UNIZD, deploying revitalization actions in Italy and Croatia, respectively, but collaborating cross-border for the actions design. These partners have documented expertise, competencies, and experience to implement restoration actions. Finally, UNIBO will also contribute to this activity, providing flat oyster spat to be used as source of animals for the establishment of a pilot oyster reef.

C.4 Project work plan

Number	Work package name
1	Scientific biodiversity census and database construction
2	Modelling, machine learning and ICT development
3	Guidelines for recovery actions integrated to biodiversity protection solutions in the Adriatic Sea
4	Citizen engagement, real-time monitoring actions, implementation guidelines, revitalization actions

Work package 1

Work package title

Scientific biodiversity census and database construction

Objectives

Your objectives should be:

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

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

In this WP we will run an extensive integrative scientific biodiversity monitoring campaign, collecting data from the VITA impacted sites and from the correspondent reference controls. Data will be harmonized with available dataset to create the VITA biodiversity database

In relation to the work package specific objective, identify one or more communication objectives that will contribute to its achievement. Communication objectives aim at changes in a target audience's behaviour, knowledge, or belief. A communication objective should include a description of what you aim to communicate, why, and to whom.

Biodiversity monitoring SOPs and results of the VITA biodiversity census from this WP will be communicated to the scientific community, by congress participation and dedicated publications. The existence and importance of VITA database will be communicated to the general public, stakeholder and institutions in the WP4.

Activities

Activity 1.1	
Title	Sample collection from the 6 VITA impacted sites and from the reference controls
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12

Activity 1.1	
Description	At M1 UNIVPM and UNIBO will share with the consortium Standard Operative Procedures (SOPs) for sample collection. From M2, from each of the impacted sites and corresponding control, water and sediment samples will be collected at 2 time pints (before and after the touristic season) and in 3 replicates, for each time point. More specifically, CF will collect samples from sites 1 and 2, UNIVPM will collect samples from sites 3. UNIZD will collect samples from sites 4 and 5 and BWI from site 6.
Partner(s) involved	PoR, UniBO, UNIVPM, UNIZD, CF, BWI

Deliverables 1.1			
Running number	Deliverable title	Description	Delivery period
D.1.1.1	VITA SOPs for samples collection and biodiversity assessment	We will provide an extensive report validated VITA guidelines for the marine biodiversity assessment, including approaches and technologies for samples collection and measuring	Period 2 , 7 - 12

Activity 1.2	
Title	Analyses of the macro- and megabenthos assemblages from the 6 VITA impacted sites and reference controls
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	At M1 UNIVPM and UNIBO will share with the consortium Standard Operative Procedures (SOPs) for sample collection. From M2, from each of the impacted sites and corresponding control, water and sediment samples will be collected at 2 time pints (before and after the touristic season) and in 3 replicates, for each time point. More specifically, CF will collect samples from sites 1 and 2, UNIVPM will collect samples from site 3. UNIZD will collect samples from sites 4 and 5 and BWI from site 6 and send to the other partners for analyses. .
Partner(s) involved	UNIVPM, UNIZD, CF, BWI

Deliverables 1.2			
Running number	Deliverable title	Description	Delivery period
D.1.2.1	Report on the macro- and megabenthos assemblages	We will provide a detailed report of the macro and magabenthos assemblages in the 6 VITA impacted sites and controls	Period 2 , 7 - 12

Activity 1.3	
Title	Assessment of the meiofauna, protists and micro-algae diversity from the 6 VITA impacted sites and reference controls
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	<p>From the samples collected in A1.1 UNIVPM and UNIZD will assess the diversity of meiofauna, protists and micro-algae. More specifically UNVPM will analyze samples from sites 1-3 and controls and UNIZD from sites 4-6 and control for meiofauna and other samples will be analyzed by ITA partners. For the analyses of meiofauna, sediment samples will be sieved through 500 and 30-μm mesh after ultrasounds treatment. The decantation method will be adopted for gravel and sand; Higgins and Thiel, 1988), whereas density gradient extraction method (using Ludox HS40, diluted to a final density of 1.31 g cm⁻³) will be adopted for all other sediment samples (Danovaro, 2010). After extraction, all samples will be fixed in 4% formalin, and stained with Rose Bengal. The sorted organisms will be counted and identified under a stereomicroscope (Zeiss, \times 16–40 magnification) or optical microscope (Zeiss, \times 40–100 magnification), when necessary (Heip et al., 1985; Danovaro, 2010).</p>
Partner(s) involved	UNIVPM, UNIZD

Deliverables 1.3			
Running number	Deliverable title	Description	Delivery period
D.1.3.1	Report on the assessment of the meiofauna, protists and micro-algae diversity	We will provide a detailed report of the meiofauna, protists and micro-algae diversity in the 6 VITA impacted sites and controls.	Period 2 , 7 - 12

Activity 1.4	
Title	Assessment of marine microbiomes (including micro-eukaryotes) diversity and structure from the 6 VITA impacted sites and reference controls
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	<p>By applying next generation sequencing on Illumina Miseq and Nextseq platforms, UNIBO will analyze microbiomes from all the samples collected in task A.1.1. More specifically, the total DNA will be extracted from water and sediment samples and analyzed first by 16S and 18S marker gene approach and that by shotgun metagenomics, providing at least > 5 M reads per sample, to cover the whole biological diversity.</p> <p>The Province of Rimini performs a second cycle of communication to the local community.</p>
Partner(s) involved	PoR, UniBO

Deliverables 1.4			
Running number	Deliverable title	Description	Delivery period
D.1.4.1	Report on the marine microbiomes assessment	We will provide a detailed report marine microbiomes assessment in the 6 VITA impacted sites and controls	Period 2 , 7 - 12

Activity 1.5

Activity 1.5	
Title	Assessment of the indicators of benthic ecosystem functioning and trophic status from the 6 VITA impacted sites and reference controls
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	Following SOPs provided by UNIVPM at M2, benthic ecosystem functioning and trophic status will be assessed from all the samples collected in A1.1. UNIVPM will analyze samples from sites 1-3 and controls and UNIZD will analyze samples of meiofauna from sites 4-6, and corresponding control. Trophic status will be analyzed by partners involved by assessing the biochemical composition of sedimentary organic matter (proteins, carbohydrates, and lipids) and phytopigment concentrations. Ecosystem functioning will be assessed by determining benthic biomass, organic C cycling rates (through the determination of degradation rates of organic matter due to enzymatic activities) and isotopic analyses (to assess food-web functioning).
Partner(s) involved	UNIVPM, UNIZD

Deliverables 1.5			
Running number	Deliverable title	Description	Delivery period
D.1.5.1	Assessment of benthic ecosystem functioning and trophic status	We will provide a detailed report benthic ecosystem functioning and trophic status in the 6 VITA impacted sites and controls	Period 2 , 7 - 12

Activity 1.6	
Title	Assessment of chemo physical parameters and chemical pollutants from the 6 VITA impacted sites and reference controls
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12

Activity 1.6	
Description	<p>Following SOPs provided by UNIVPM at M2, abiotic indicators will be assessed from all the samples collected in A1.1. UNIVPM will analyze samples from sites 1-3 and controls and UNIZD from sites 4-6 and control.</p> <p>Chemical, physical variables and pollutants (eg. PHA, metals and PCB) in seawater and sediments will be assessed by conventional approaches by other partners also. More specifically, metals will be assessed by atomic absorption spectroscopy, while GC mass spectrometry will be used for organic pollutants. Further, UNIBO will analyze emerging contaminants from sites 1-6, including pharmaceuticals and pesticides, by mass spectrometry in MRM mode</p>
Partner(s) involved	UNIVPM, UNIZD

Deliverables 1.6			
Running number	Deliverable title	Description	Delivery period
D.1.6.1	Assessment of abiotic indicators and pollutants	We will provide a detailed report of physio chemical parameters and pollutants concentration, also including emergent pollutants, in the 6 VITA impacted sites and controls	Period 2 , 7 - 12

Activity 1.7	
Title	Collection of available historical data from the 6 VITA impacted sites and reference controls and biodiversity census guidelines preparation
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	Each partner will provide UNIBO with access to the available historical data from impacted sites 1-6, and controls. Data will be harmonized and included in the VITA database A1.7. By UNIVPM, SOPs and protocols from A1.1-A1.5 will be capitalized in the assembly of VITA guidelines for new approaches and technologies for an integrative marine biodiversity assessment

Activity 1.7			
Partner(s) involved		UniBO, UNIVPM, UNIZD, ARGONAUTA, IDA, BWI	
Deliverables 1.7			
Running number	Deliverable title	Description	Delivery period
D.1.7.1	Report of micro and macro size biodiversity in the archetype impacted and reference /control sites	The report will provide the comprehensive results of the VITA census of the Adriatic Sea diversity in the archetype impacted sites and reference/ control sites, the major threats and the degradation level of the ecosystems	Period 2 , 7 - 12

Activity 1.8	
Title	Set up of the VITA database of the census of the Adriatic biological diversity
Start period	Period 1, 1 - 6
End period	Period 5, 25 - 30
Description	Available data and the primary data from produced by the project (A1.2 – A1.6) will be homogenized and integrated in a dedicated project VITA database, were data will be formatted and annotated with corresponding metadata. The database will collect data form WP2 and WP3 in the following project phases. The Province of Rimini performs a second cycle of communication to the local community.
Partner(s) involved	PoR, UniBO

Deliverables 1.8			
Running number	Deliverable title	Description	Delivery period
D.1.8.1	First release of the VITA biodiversity database	VITA will provide a homogeneous, fully accessible, and implementable database of the biological diversity in the investigated Adriatic sites, including new and available historical data	Period 5 , 25 - 30

Outputs

Output 1.1	
Output Title	Validated approaches and technologies for the micro to macro/mega-size biota biodiversity assessment
Programme Output Indicator	RCO116_2.2: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 2, 7 - 12
Output Description	VITA will provide a new set of validated guidelines for the integrated biodiversity assessment in the Adriatic Sea from micro to macro-mega size biota
Output 1.2	
Output Title	VITA biodiversity database
Programme Output Indicator	RCO116_2.2: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 5, 25 - 30
Output Description	The VITA project will provide an extensive, harmonized and public database of the biodiversity of the Adriatic Sea, including newly produced data on the micro and macro/mega-size biota, the major threats and already available data

Investments

Work package 2

Work package title

Modelling, machine learning and ICT development

Objectives

Your objectives should be:

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

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

This WP will oversee system biology, machine learning, modelling and multidimensional statistic on the collected data to provide: (i) a multidimensional platform of indicators and drivers; (ii) the VITA multi-layer model for biodiversity risks scores; (iii) the VITA ICT.

In relation to the work package specific objective, identify one or more communication objectives that will contribute to its achievement. Communication objectives aim at changes in a target audience's behaviour, knowledge, or belief. A communication objective should include a description of what you aim to communicate, why, and to whom.

While results for the system biology approach will be communicated to research institutions (eg congress participation and scientific publications), the developed VITA ICT will be communicated broadly, to the general public, institutes and stakeholders, following the communication plan and as described in WP4

Activities

Activity 2.1	
Title	Modelling of marine microbiome at the connection with provided ecological services
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18

Activity 2.1	
Description	By using data from A1.4, it will be run an advanced microbiome modelling phase, allowing to determine meaningful association between microbiome components, functionalities, networks topological features (as, modularity, hubs and keystone species) and important ecological functions, as nutrient providing and cycling and xenobiotic degradation. For this purpose, metagenomic assembled.
Partner(s) involved	UniBO

Deliverables 2.1			
Running number	Deliverable title	Description	Delivery period
D.2.1.1	Report of the marine microbiomes network and models	The report will provide models of the marine microbiomes topology at the connection with provided ecological services, for the 6 VITA impacted sites and controls.	Period 3 , 13 - 18

Activity 2.2	
Title	Machine learning and system biology of the Adriatic Sea biodiversity
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18
Description	By applying machine-learning based approaches of the data available in the VITA database (A1.7) new indicators for scoring – and possibly predicting – the degree and the risk for biodiversity loss will be provided. Also, for scoring the risks/degree of diversity loss probabilistic models, exploiting the relations and weights defined in the comprehensive model will be adopted, to define the multidimensional risk index by integrating different indicators TinyML tools for preprocessing the acquired signals on the drone computational platform will be evaluated.
Partner(s) involved	UniBO

Deliverables 2.2			
Running number	Deliverable title	Description	Delivery period
D.2.2.1	Report on the VITA indicators to assess the risk/degree of biodiversity loss in Adriatic Sea	The deliverable will consist of a minimal set of exclusive indicators for the biodiversity assessment, possibly including micro and macro/mega size biota and ecosystem health indicators	Period 3 , 13 - 18

Activity 2.3	
Title	Development of the VITA multilayer model for the Adriatic Sea biodiversity
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18
Description	Model will consist of connected nodes (indicators) and layers (ecosystem services). Different nodes will be connected within and among layers, in a network allowing to link indicators in term of diversity loss and correspondent drivers and lost ecological service. This will allow to determine connections, dependences and associations between the VITA multidimensional dataset A1.7, defining drivers for the loss of biodiversity and ecological impacts in term of compromised ecological services.
Partner(s) involved	UniBO

Deliverables 2.3			
Running number	Deliverable title	Description	Delivery period
D.2.3.1	Report on VITA multilayer model to score biodiversity loss in Adriatic Sea	Based on the measured values for the indicators in D2.1, the VITA multilayer model will allow to define the degree of diversity loss, the correspondent anthropogenic threats and the deriving ecological impacts in term of loss of ecological Services	Period 3 , 13 - 18

Activity 2.4	
Title	Creation of the ICT usable version of the VITA multilayer model of the Adriatic Sea biodiversity
Start period	Period 3, 13 - 18
End period	Period 3, 13 - 18
Description	Results from A2.1-2.3 will be used by UNIBO to create digital tools (a website and possibly an app) useful for the protection of the Adriatic Sea diversity. The construction of the site and the app will be supported by a co-design with stakeholders (fishermen, sport fishing associations, tourism, diving groups, marinas) with the collaboration of the Province of Rimini. Based on a selected set of indicators A2.2, the ICT tool will allow identifying the corresponding risk and/or degree of biodiversity loss, the main anthropogenic drivers, the following short- and long- term ecological impacts, and also the solutions to tackle impact sources and recover or protect the ecosystems, as indicated by UNIVPM.
Partner(s) involved	PoR, UniBO, UNIVPM

Deliverables 2.4			
Running number	Deliverable title	Description	Delivery period
D.2.4.1	Functioning VITA ICT tools scoring the risk/degree of biodiversity loss, in Adriatic Sea	The VITA ICT tools, an App, and the corresponding website will allow scientists and citizens to use the model from D2.2 for assessing the biodiversity loss, moreover, the ICT will also provide solutions to be deployed for the protection of the diversity loss.	Period 3 , 13 - 18

Outputs

Output 2.1	
Output Title	A minimal set of new indicators for the biodiversity monitoring in the Adriatic Sea
Programme Output Indicator	RC0116_2.2: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00

Output 2.1	
Delivery period	Period 3, 13 - 18
Output Description	VITA will provide, as a report, minimal set of new, validated and integrative indicators, including macro and micro size biota, to be used for the marine biodiversity assessment. For each indicator the report will also provide SOPs for data collection.
Output 2.2	
Output Title	A multilayer model allowing to connect the Adriatic Sea biodiversity, the major threats, the diversity response and the following impact in term of loss ecosystem services
Programme Output Indicator	RCO116_2.2: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 3, 13 - 18
Output Description	As a system biology application, the multilayer model will allow to represent interactions, connection and dependencies between anthropogenic impacts, loss of micro and macro biodiversity and the consequence in term of lost ecosystem services, with major drawback for the human and environmental health.
Output 2.3	
Output Title	A publicly accessible VITA website and App, as implemented VITA in the integrative biodiversity-support system
Programme Output Indicator	RCO116_2.2: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 3, 13 - 18

Output 2.3

Output Description

The output will be a publicly accessible VITA website (and a corresponding App) where users can visualise the current state of the biodiversity census in the Adriatic Sea. These ICT will allow users also to participate to the joint monitoring actions, contributing in the real time biodiversity monitoring by collecting data for the VITA biodiversity indicators, for a given site.

Investments

Work package 3

Work package title

Guidelines for recovery actions integrated to biodiversity protection solutions in the Adriatic Sea

Objectives

Your objectives should be:

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

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

Based on the collected data (WP1) in the VITA Archetypes Impacted sites in collaboration with WP4 and outputs from WP2, WP3 we will develop guidelines for the protection of marine biodiversity

In relation to the work package specific objective, identify one or more communication objectives that will contribute to its achievement. Communication objectives aim at changes in a target audience's behaviour, knowledge, or belief. A communication objective should include a description of what you aim to communicate, why, and to whom.

As a strategic aspect in the communication regarding WP3, the VITA biodiversity protection guidelines and revitalisation actions will be communicated as a possible concrete solution for the defence and recovery of the Adriatic Sea diversity. Target for this communication will be the general public, institutions and local stakeholders, beside the research institutions, as described in the communication plan

Activities

Activity 3.1	
Title	Design and implementation of biodiversity protection guidelines for the Adriatic Sea
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18

Activity 3.1	
Description	<p>The VITA guidelines for biodiversity protection will be based on the scientific knowledge provided by WP1 and WP2 and will be provided to A 2.4 to be integrated in the VITA tool. Further, UNIVPM and UNIZD will identify priority areas for conservation in the Adriatic and criteria for the designation of future protected areas. In particular, areas with high ecological relevance (e.g., hosting endemic and locally endangered species and rare habitats, and refuge habitats), and subject to current and foreseeable intense anthropogenic impacts, will be prioritized for conservation.</p> <p>The Province of Rimini, with the aim of raising awareness among public administrators on the issues underway in the Adriatic Sea, will organize a dedicated workshop in order to stimulate the creation of public policies based on the data collected.</p>
Partner(s) involved	PoR, UNIVPM, UNIZD, CF, IDA

Deliverables 3.1			
Running number	Deliverable title	Description	Delivery period
D.3.1.1	Report on the VITA guidelines for the protection of the Adriatic Sea diversity	The report will include the VITA guidelines for the protection of the Adriatic Sea biodiversity, with specific declinations according to the impacted archetypes sites	Period 3 , 13 - 18

Activity 3.2	
Title	Design of integrated restoration actions for the recovery of the Adriatic Sea diversity
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18

Activity 3.2	
Description	Actions will include restoration actions based on the selection and translocation or transplantation of known pollutant-resistant (tolerant) macro-fauna and macroalgae from the reference sites (without contaminations and impacts) to the identified impacted sites. Macrobenthos will include habitat-forming species such as Sabellaria reefs, oyster and mussel banks and macroalgal forests (e.g., <i>Cystoseira compressa</i> and <i>Gongolaria barbata</i>).
Partner(s) involved	UNIVPM, UNIZD

Deliverables 3.2			
Running number	Deliverable title	Description	Delivery period
D.3.2.1	Report on the VITA toolbox of integrative revitalization actions	The report will include the VITA toolbox of integrative remediation and restoration actions, for the recovery of the Adriatic Sea biodiversity	Period 3 , 13 - 18

Activity 3.3	
Title	Implementation of the VITA restoration action on archetypes impacted sites
Start period	Period 4, 19 - 24
End period	Period 5, 25 - 30
Description	<p>Actions implementation will be mainly performed by the Italian partners within their sites in collaboration with WP4. The implementation of restoration actions will foresee pilot interventions with habitat-forming species including benthic fauna and macroalgal forests (A3.2) on at least 4 archetypes impacted sites scored at high risk by the project ICT in WP4.</p> <p>The Province of Rimini verifies the possibility of involving maritime associations, diving groups, fishermen's cooperatives in restoration actions.</p>
Partner(s) involved	PoR, UniBO, UNIVPM, UNIZD, ARGONAUTA, CF, IDA

Deliverables 3.3			
Running number	Deliverable title	Description	Delivery period
D.3.3.1	Report on the VITA revitalization actions	The report will describe the implementation on site of the integrative remediation and restoration actions, in the impacted archetypes sites	Period 5 , 25 - 30

Activity 3.4	
Title	Validation of the VITA revitalization action
Start period	Period 5, 25 - 30
End period	Period 5, 25 - 30
Description	Validation of revitalization actions to be performed in collaboration with WP4, in a citizen-scientists full collaboration and co-working. The performance of contaminant degradation of the selected macrobenthos will be assessed through the analyses of the concentrations of key organic and inorganic contaminants in the sediments before-during-and after the translocation/transplanting of the organisms within the pilot areas concerned. The concentrations of inorganic and organic contaminants in the sediments and within macrofauna will be determined according to European standardised procedures. For biodiversity recovery the VITA ICT tool will be used, in jointed monitoring actions in WP4
Partner(s) involved	PoR, UniBO, UNIVPM, UNIZD

Deliverables 3.4			
Running number	Deliverable title	Description	Delivery period
D.3.4.1	Report on validation on sites of the VITA revitalization actions	The report will include results in term of efficacy with respected to the expected endpoints of the VITA integrative remediation and restoration actions, implemented in the impacted archetypes sites	Period 5 , 25 - 30

Outputs

Output 3.1	
Output Title	Biodiversity protection guidelines
Programme Output Indicator	RCO116_2.2: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 3, 13 - 18
Output Description	VITA will provide a set of biodiversity protection guidelines, tailored to the VITA archetypes of impacted sites
Output 3.2	
Output Title	Validated revitalization actions
Programme Output Indicator	RCO84_2.2: Pilot actions developed jointly and implemented in projects
Measurement Unit	pilot actions
Target Value	1,00
Delivery period	Period 5, 25 - 30
Output Description	VITA will provide a set of validated integrative revitalization actions, implemented as pilot on the VITA archetypes sites

Investments

Work package 4

Work package title

Citizen engagement, real-time monitoring actions, implementation guidelines, revitalization actions

Objectives

Your objectives should be:

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

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

The WP4 will oversee citizen science engagement activities for training and usage of VITA integrative biodiversity support system, in term of jointed monitoring actions, ICT usage, deployment and validation of VITA biodiversity protection solutions

In relation to the work package specific objective, identify one or more communication objectives that will contribute to its achievement. Communication objectives aim at changes in a target audience's behaviour, knowledge, or belief. A communication objective should include a description of what you aim to communicate, why, and to whom.

Communication objectives of this WP will be: (i) raising awareness among a broad audience about the importance to monitor and protect biodiversity of the Adriatic sea. (ii) raising awareness about the most important anthropogenic threats that impact Adriatic sea biodiversity. (iii) promote and involve citizens and stakeholders in the implementation, validation and usage of the co-created affordable VITA solutions for monitoring and protecting sites biodiversity in the Adriatic sea. Target groups will be: (i) public sector. (ii) environmental NGOs. (iii) scuba divers, recreational fishermen, tourists. (iv) researchers. (v) fishermen and aquaculture workers. (vi) environmentally aware SMEs and coopeartives.

Activities

Activity 4.1	
Title	Set up of communication, dissemination and educational activities to raise awareness about the importance of the Adriatic Sea biodiversity
Start period	Period 1, 1 - 6
End period	Period 5, 25 - 30

Activity 4.1	
Description	<p>CF as communication manager will be manage website, and social media channels. Through the use of a van set up as a mobile laboratory, educational and dissemination activities on the biodiversity of the Adriatic ecosystem will be organized for students and the general public along the coasts of Emilia Romagna and the Marche region. POR support CF in activities for schools. Creation of "biodiversity diaries", where students note the marine species observed and describe the natural environments. Awareness through art: information and awareness actions, towards the identified target groups, on the problems of climate change, marine pollution and waste at sea in order to promote a collective awareness of citizens, visitors and tourists. This activity will also be carried out through: public readings and theatrical performances, which will have as their main protagonist the sea, the problem of marine pollution and overfishing and the need to protect and safeguard its health. It is planned to involve the artistic institutes of the area for the creation of artistic products themed with elements of the sea. The students involved who will participate in the construction of the artistic product (visual, sound, tactile) will be the protagonists of a final exhibition in which they will illustrate their works and the reasoning that led them to the completion of the artistic creation. The works will be exhibited in the locations of the partners, to document to the importance of preventing and protecting the "sea" asset.</p> <p>A festival will be organized in Rimini dedicated to the knowledge of Adriatic biodiversity and conservation activities. According with the programme rules, two international event will be organized on occasion of Mid Term (in Croatia, organized by....) and Final event (in Italy organized by POR). A long-video and shorts ones, showing project's achievements will be produced. PP4 Argonauta will organize summer educational program for pre-children on topic of biodiversity of Adriatic sea – 8 events. Blue eco-patrol educational program for primary schools with educational trips to Kornati NP (Associated Partner) – 8 events.</p>
Partner(s) involved	PoR, ARGONAUTA, CF, IDA, BWI

Deliverables 4.1			
Running number	Deliverable title	Description	Delivery period
D.4.1.1	Report on the VITA communication, dissemination, and educational events /activities	The report will describe the VITA communication and dissemination plan and the correspondent performance indicators.	Period 5 , 25 - 30

Activity 4.2	
Title	Educational and training campaign for policy makers, stakeholders, workers, and citizens for the utilization of the VITA integrative biodiversity support system
Start period	Period 4, 19 - 24
End period	Period 5, 25 - 30
Description	LP POR helped by CF will organize in Emilia Romagna and Marche Regions information meetings on the project activities and training for the utilization of the VITA integrative biodiversity support system . These informative events will be addressed to fishermen's cooperatives, sport and tourist fishing associations, diving groups, scuba divers, Coast Guard, the licensees of the bathing establishments (by CF), and representatives of the local public institutions (by PoR). The Croatian partner will organize them in their country. PP4 Argonauta will organize educational and training campaign for stakeholders in Šibenik-Knin County for the dissemination of VITA IBSS (2 days trainings for 20 participants).
Partner(s) involved	PoR, ARGONAUTA, CF, IDA, BWI

Deliverables 4.2			
Running number	Deliverable title	Description	Delivery period

Deliverables 4.2			
Running number	Deliverable title	Description	Delivery period
D.4.2.1	Report on the VITA educational and training campaign	The report will describe the VITA training campaign and the correspondent performance indicators.	Period 5 , 25 - 30

Activity 4.3	
Title	Citizen engagement and citizen science activities for the real-time marine biodiversity monitoring actions by means of the VITA ICT
Start period	Period 4, 19 - 24
End period	Period 5, 25 - 30
Description	PoR, CF, IDA, BWI, Argonauta will launch jointed monitoring actions on the respective VITA impacted sites, POR sites 1-3, Argonauta on sites 4-6. Citizens and scientists will cooperate for the assessment of the VITA indicators, to be uploaded on the VITA ICT tool (A2.4). Based on the obtained results in terms of risk/degree of diversity loss, the correspondent VITA protection and revitalization actions will be concretely implemented (and validated) on sites (A3.3 and A3.4). For the validation of the VITA actions, same joint monitoring approach will be implemented as well as reposted above. For these activities, "Citizen science days" will be organized on site with the involvement of the diving associations and groups of citizens using the same tools for monitoring in each sites. PP4 Argonauta will develop 1 Service Learning Program based on usage of VITA ITC tool and pilot the program during the project with 20 university students per site.
Partner(s) involved	PoR, ARGONAUTA, CF, IDA, BWI

Deliverables 4.3			
Running number	Deliverable title	Description	Delivery period
D.4.3.1	Report on the VITA citizen engagement and citizen science activities	The report will describe the VITA citizen engagement and citizen-science activities and the results of the joint monitoring actions.	Period 5 , 25 - 30

Outputs

Output 4.1	
Output Title	Educational events, festival, kick off event, mid term event and final event
Programme Output Indicator	RCO115_2.2: Public events across borders jointly organised
Measurement Unit	events
Target Value	20,00
Delivery period	Period 5, 25 - 30
Output Description	More than 20 educational events and 1 festival. One kick off, one mid term and one final event. One video of the activities.
Output 4.2	
Output Title	Training campaigns
Programme Output Indicator	RCO85_2.2: Participations in joint training schemes
Measurement Unit	participations
Target Value	100,00
Delivery period	Period 5, 25 - 30
Output Description	More than 10 meetings of training campaigns, each with at least 10 people
Output 4.3	
Output Title	Citizen and stakeholders meetings in the impacted sites
Programme Output Indicator	RCO84_2.2: Pilot actions developed jointly and implemented in projects
Measurement Unit	pilot actions
Target Value	1,00
Delivery period	Period 5, 25 - 30
Output Description	Seven meetings – at least one per impacted site - of citizen and stakeholders involved in the VITA biodiversity monitoring activities and deploy of protection solutions.

Investments

C.5 Project Results

What do you expect to change because of the activities you plan to implement and the outputs you plan to deliver? Please take a look at the programme result indicators and select those that you will contribute to.

Result 1	
Programme result indicator	RCR104_2.2: Solutions taken up or up-scaled by organisations
Measurement unit	solutions
Baseline	0,00
Target value	4,00
Delivery period	Period 5, 25 - 30
Result description	<p>VITA will develop n° 4 solutions:</p> <ol style="list-style-type: none"> 1. Standard Operative Procedures and guidelines for the Adriatic Sea biodiversity assessment, including macro and micro-size biota; 2. a VITA biodiversity database of the Adriatic Sea; 3. the VITA ICT tools for the biodiversity assessment and protection in the Adriatic Sea; 4. guidelines for the protection of the Adriatic Sea diversity and for the implementation of integrative revitalisation actions.

Result 2	
Programme result indicator	RCR81_2.2: Completion of joint training schemes
Measurement unit	participants
Baseline	0,00
Target value	60,00
Delivery period	Period 5, 25 - 30

Result 2**Result description**

For each of the 6 VITA impacted sites, we will combine specific citizen training and citizen science activities (at least 10 participants per site). These coordinated activities will be tailored to fishermen's cooperatives, sport and tourist fishing associations, diving groups, scuba divers, Coast Guard and representative of the local public institutions. While training will be finalised to instruct citizens to use the VITA ICT tools for the biodiversity monitoring and protection, in the citizen science activities will foresee the collaboration of citizens and scientist the real time joint monitoring actions of the sites biodiversity, were the the VITA ICT tools will be concretely utilised.

C.6 Project Time Plan

	Period 1	Period 2	Period 3	Period 4	Period 5	After End
WP1 Scientific biodiversity census and datab...						
A1.1 Sample collection from the 6 VITA i...		D1.1.1				
A1.2 Analyses of the macro- and megabent...		D1.2.1				
A1.3 Assessment of the meiofauna, protis...		D1.3.1				
A1.4 Assessment of marine microbiomes (l...		D1.4.1				
A1.5 Assessment of the indicators of ben...		D1.5.1				
A1.6 Assessment of chemo physical parame...		D1.6.1				
A1.7 Collection of available historical ...		D1.7.1				
A1.8 Set up of the VITA database of the ...					D1.8.1	
RCO116_2.2		O1.1			O1.2	
WP2 Modelling, machine learning and ICT deve...						
A2.1 Modelling of marine microbiome at t...			D2.1.1			
A2.2 Machine learning and system biology...			D2.2.1			
A2.3 Development of the VITA multilayer ...			D2.3.1			
A2.4 Creation of the ICT usable version ...			D2.4.1			
RCO116_2.2			O2.1			
			O2.2			
			O2.3			
WP3 Guidelines for recovery actions integrat...						
A3.1 Design and implementation of biodiv...			D3.1.1			
A3.2 Design of integrated restoration ac...			D3.2.1			
A3.3 Implementation of the VITA restorat...					D3.3.1	

A3.4 Validation of the VITA revitalizati...					D3.4.1
RCO116_2.2			O3.1		
RCO84_2.2					O3.2
WP4 Citizen engagement, real-time monitoring...					
A4.1 Set up of communication, disseminat...					D4.1.1
A4.2 Educational and training campaign f...					D4.2.1
A4.3 Citizen engagement and citizen scie...					D4.3.1
RCO115_2.2					O4.1
RCO84_2.2					O4.3
RCO85_2.2					O4.2
Result indicator					
RCR104_2.2					R1
RCR81_2.2					R2

C.7 Project management

In addition to the thematic work you will do in your project, you will need time and resources for coordination and internal communication. Please describe below how you plan to organise yourself to ensure the project work runs smoothly.

C.7.1 How will you coordinate your project?

a) Describe the management procedures, structures and internal coordination. b) Describe the financial management of the project and reporting procedures. c) Demonstrate to possess the capacity to coordinate, manage and monitor the project implementation, including financial management. d) Describe how you are going to ensure effective coordination of the project internal communication and external communication.

Project management will be designed gradually and systematically to ensure a smooth project implementation and a timely achievement of all projects objectives, results and outputs, including the investment management and related durability of project results.

In the first period (M1-M6), START UP ACTIVITIES will include the signature of the Subsidy Contract, drafting and signing the Partnership Agreement, staff assignment, actualization of the gantt after the closure of the conditions clearing, setting up Project Management Group (PMG), and Steering Committee (SC) and preparation of Financial and Management Guide and Excel Tool. Based on pre-defined functions, responsibilities and tasks, each partner will appoint a Project Manager, Financial Manager and Communication Manager. Italian PPs with decentralized control system will select FCL through procurement. Start-up activities will conclude with 1-day kickoff meeting organized by LP online (to minimize expenditures at the beginning of the project for the partners still having to anticipate the internal funds), to discuss main implementation tasks, project structure and procedures, and management guidelines to be agreed on by all PPs. Steering Committee will consist of one representative and one substitute and will act as decision making body of the project. SC will be responsible for strategic decisions, while PMG will be responsible for project implementation. PMG will consist of Project Manager, Financial Manager, Communication Manager, WP Leaders and WP assistant leaders. SC will meet once per year, while PMG will meet at least every 3 months (virtually) and every half year (physically). If covid situation will persist, all meetings will be implemented virtually. WP Leaders will be responsible for implementation of their WPs and will be heavily assisted by assistants. Common internal on-line project repository and communication space will be set-up and managed to share all important programme and project documents, tools and templates.

During the IMPLEMENTATION PHASE (M2-M30) project Management & Coordination will include regular correspondence by the LP with and among partners to continuously follow up, monitor and facilitate project progress, regular online coordination meetings with joint participation of all PPs concerned by the activity or task. The LP will prepare 6 monthly Progress Reports based on PPs' inputs, presenting project progress, deliverables, and outputs in the relevant project period. The LP will prepare and submit a Final Report to JS, summarizing project outputs and outcomes, based on inputs and contribution from all partners in line with Programme expectations.

During the project, a mid term meeting will be organized (together with a physical SC meeting to review project progress, quality of outputs and results and to take any necessary decisions.

Financial Management will be implemented as a continuous activity, acting as a first level helpdesk for partners, monitoring expenditures and taking countermeasures to avoid underspending and under-performing. Every 6 months PPs will prepare and deliver 6 monthly partner level Progress Reports, submit to and have validated by National Controllers in line with Programme regulations. These will serve as basis for the project level Progress Reports. LP will prepare financial parts of the 6 monthly Progress Reports and submit to JS, presenting financial progress based on PPs' inputs

and costs confirmed by NCs. An internal mid-term budget revision process based on findings of the system could lead to internal budget reallocation and will be discussed with PPs at 3th SC meeting. During the PROJECT'S CLOSURE, the outputs will be reassessed from the perspective of durability and transferability. Special attention will be given to the function of the ICT tool developed by the project. Joint Strategies and action plans will be carefully monitored. Final content and financial report will be prepared by LP based on inputs from PPs including transfer. Direct and indirect State Aid will be monitored together with JS, even if we already know that no State Aid is foreseen in this project.

To ensure continuous risk management, monitoring deviations and preparation of needed mitigation measures, project core team will prepare a risk assessment plan at the beginning of the project. Plan will include risk analysis of factors that could affect the successful delivery of the project and risk response, a mitigation strategy, to identify and anticipate potential difficulties that the project might face. Potential risk issues will be discussed on regular meetings and mitigation measures will be implemented, when needed.

Specific roles:

Coordinator

WP1 Leader UNIZD, assistant leader UNIVPM WP2 Leader UNIBO

WP3 Leader UNIVPM, assistant leader UNIZD

WP4 Leader CETACEA FOUNDATION, assistant leader Argonauta

C.7.2 Which measures will you take to ensure quality in your project?

Describe the set-up and functioning of management structures that guarantee the proper implementation of the project (such as Steering Committee, PMU), but also the provision of a risks (including risks associated with investments) management plan including mitigation measures to address possible project's modifications, and an evaluation plan taking into account project's monitoring and assessment to determine its success and effectiveness.

A Quality Assurance Plan will be elaborated by the coordinator at the beginning of the project. Quality Assurance will be achieved using several indicators: planning, timetable of activities, deliverables and regular reports. All deliverables will be discussed during the Project Management Group meetings with the aim of maximising their quality at release time.

Internal quality manager, as part of the core management team, will be appointed. The quality manager will be a person with experience in Italy Croatia management as coordinator. Quality manager will be responsible for monitoring that the process of preparation of project deliverables will be in line with following six operational steps: operational discussion on the webinar about planned deliverable, setting-up the working group, preparation of the content concept, preparation of the content draft version, commenting phase, finalization and re-design for public use. Process of implementation of individual activity will be coordinated by appointed activity leader, supported by management team.

In the discussion phase of each planned activity, the focus will be on identifying how implemented task will contribute to project goals, which stakeholders and target groups should be involved in preparation and implementation, potential challenges that might occur during implementation, communication, further use, and sustainability of activity results. Quality manager will be responsible also for preparation and presentation of the mid term internal quality report and of the final one. The purpose of reports is to provide a summary of project progress, identification of potential challenges, to discuss needed mitigation actions with project management team and Steering Committee.

Intellectual property will be owned collectively by all partners and will be shared publicly by open innovation principles.

C.7.3 What will be the general approach you will follow to communicate about your project?

Describe how communication will contribute to transfer your project results and to reach wider strategies, policies, and synergies. According to the identified communication objectives and activities mentioned in each WP, describe what communication approach you plan to adopt to reach the project target groups and specify what communication channels you are going to use. Include what feedback mechanisms and evaluation measures are envisaged for the communication activities. Please note that all communication activities should be included in the work packages, as an integral part of your project. There is no need to repeat this information here.

Primary communication objectives will be:

- Raising awareness among a broad audience about the importance to monitor and protect biodiversity of the Adriatic sea,
- Raising awareness about the most relevant anthropogenic threats that impact Adriatic sea biodiversity,
- promote and involve citizens and stakeholders in the implementation, validation a usage of the co-created affordable VITA solutions for monitoring and protecting sites biodiversity in the Adriatic Sea.

Communication activities will be coordinated by CF, who will create a Communication Plan (CP) and it will be presented and approved at the SC during the kick off meeting. The plan will include details, tasks of PPs, resources, working methodologies, content criteria, implementation schedule, visibility guidelines and templates (Power Point, deliverable, Roll-up, poster), using templates and visibility rules provided by IT-HR Programme. CF will be responsible for update of project web site and social media based on collection of inputs about local communication activities by partners.

The target groups that the VITA communication will be: (i) public sector, including decision makers; (ii) environmental NGOs; (iii) scuba divers, recreational fishermen, tourists; (iv) researchers; (v) fisherman and aquaculture workers; (vi) environmentally aware SMEs and cooperatives. The following communication measures will be adopted: (i) daily update of the project web site (in the official Interreg website) and partners' web sites; (ii) updating of social media with posts on project activities and results achieved, events; (iii) press conferences and press release, on occasion of projects events, starting of relevant activities or project achievements, CF - in coordination with other partners - will produce communication for media, press, television or online magazine and bulletins (iv) project promotional material will be produced according with the visibility rules of the Program;

(v) citizen science activities: citizen science will be also conceived as co-creation and co-participation actions, for the design, utilization and deployment of the VITA tolls and solutions. Target groups linked to aquatic sports will be tailored and involved in the VITA joint monitoring actions and in the deployment of biodiversity defense solutions in the 6 vita impacted sites; (vii) educational activities addressed to schools as educational modules addressed to children of schools from all degrees, also a mobile lab that will move along the coast at the sites will be used; (viii) educational / recreative activities for tourist during the summer; (ix) international communication event on occasion of Mid Term Event and Final Event will involve a big number of public; (x) communication events involving experts, fishermen, cooperatives, decision makers (like administrations), FLAG representatives in order to increase the awareness on the anthropogenic threats of the Adriatic Sea. The VITA communication partners will be responsible for local communication in their language, for the updating of partner web sites and communication through local channels, distributing the information to the associated partners and providing locally project promotional material. In Croatia the main communication actor will be PP4 ARGONAUTA, which will organize the summer school with collaboration of AP Kornati Park and the educational and training campaigns for stakeholders in Šibenik-Knin County for the dissemination of VITA IBSS. POR will implement communication activities aimed at schools of all levels.

As general rule daily communication activities will be mainly online, to save unnecessary printing. Communication will be also focused on the behavioral change and investment planning, therefore

special care will be dedicated to the communication to the actors playing in Adriatic system, such as environmentally aware SMEs and cooperatives (also working on the inland), public sector including decision makers, environmental NGOs, fisherman and aquaculture workers, among other. To be understandable, majority of communication will be in local languages and using easy to understand non-scientific language.

Regional authorities will be the connection between project and large group of stakeholders for uptake of project solutions. They will be approached individually, with mailing or phone calls and invited to the specific project events, trainings, demonstration in real environment and seminars. Other stakeholders, including SMEs, environmental NGOs, interested general public and researchers will be reached through social media, publications, web sites and bulletins. All partners will be involved in the communication actions, communication coordinator will keep the communication initiative by monthly reminders and templates for reporting local communication activities.

C.7.4 Do the actions proposed aim to achieve the environmental sustainability objectives of the area?

Before filling this text-box consult the detailed guidelines of the document "SEA extract for beneficiaries" in the programme website which will provide you with a numbers of suggestions related to the cultural and environmental sphere divided into types of interventions.

The VITA project fully aligns with the environmental sustainability objectives defined in the SEA extract for the Interreg Italy–Croatia Programme 2021–2027, particularly under the frameworks for marine and environmental protection, climate change adaptation, and biodiversity and ecosystem restoration. By developing an integrated biodiversity support system based on innovative monitoring technologies, site-specific remediation strategies, and community-engaged restoration efforts, VITA addresses key SEA priorities such as improving marine ecosystem services, enhancing the conservation of coastal habitats, and supporting the transboundary ecological coherence of the Adriatic basin. The project directly contributes to the Do No Significant Harm (DNSH) principle by promoting nature-based solutions, reducing pollution, and reversing habitat degradation through pilot interventions in historically impacted coastal areas. Furthermore, VITA incorporates many SEA-recommended actions, including biodiversity mapping and monitoring, public awareness and engagement, ecological corridor requalification, and application of low-impact technologies. Its cross-border governance and alignment with EU environmental frameworks (e.g., the Marine Strategy Framework Directive) strengthen its systemic and long-term impact, responding directly to SEA calls for integrated, science-based, and cooperative solutions to complex environmental challenges. Through its adaptive, replicable toolbox and ICT-based risk assessment platform, VITA not only advances SEA sustainability goals but also serves as a model for regional marine biodiversity protection in the Adriatic.

C.7.5 Cooperation criteria

Please select all cooperation criteria that apply to your project and describe how you will fulfil them.

Cooperation criteria		Description
Joint development	Yes	Project partners have jointly developed the project proposal. After initial drafting project concept all partners have been invited to provide comments and add activities. They have filled in partner form as well as synergies other projects and initiatives. Inputs were received to develop final budget in dedicated one to one meeting. Every new version of the offline application form has been sent to the whole partnership for comments and suggestions, until the final version.
Joint implementation	Yes	Project activities will be implemented jointly in cooperative cross-border way. Each WP will have coordinator and each Activity will also have responsible partner. Responsibilities will be balanced and distributed fairly across the two sides, considering partner specific expertise and territorial location.
Joint staffing	Yes	Project functions will be clearly defined. Project will have appointed lead partner, WP leaders and activity leaders as well as responsible persons for communication and financial reporting, avoiding duplications
Joint financing	Yes	Project budget will be joint, fairly distributed and in line with partners responsibilities. Lead partner will take over administration and reporting obligations towards JS as well as distribute funds to partners according to the provided first level certificates. Partners will provide contribution to financial reporting and answer to clarifications in due time.

C.7.6 Horizontal principles

Please indicate which type of contribution to horizontal principles applies to the project, and justify your choice.

Horizontal principles	Type of contribution	Description of contribution
Sustainable development	positive effects	Project will contribute through the implementation of Concrete solutions for biodiversity protection and recovery of damage sites.
Equal opportunities and non-discrimination	neutral	Project will have neutral effect on the equal opportunities and nondiscrimination. Partners will work with key stakeholders from different social groups and will not discriminate any of participants.
Equality between men and women	neutral	Project will have neutral effect on this. Project will strive to reach gender equality of stakeholders included.

C.8 Long-term plans

As a programme, we would like to support projects that have a long-lasting effect in the territory and those who will benefit from them. Please describe below what you will do to ensure this.

C.8.1 Ownership

Please describe who will ensure the financial and institutional support for the outputs/deliverables developed by the project (e.g., tools), and explain how these outputs/deliverables will be integrated in the work of the institutions.

VITA will provide several projects outputs to be exploited in long term. In the scientific field, VITA will provide validated SOPs and approaches for an innovative - and more holistic – biodiversity monitoring approaches, integrating microbiomes with more traditional indicators from the marine strategy. This innovation will be disseminated across the scientific community, participating to congress and conferences and by publishing research papers, allowing a step forward in the ecological understanding of the dynamics involved in biodiversity loss in the Adriatic sea, and informing the set-up of innovative solutions, beyond the project boundary. Another scientific innovation will be the release of a public VITA database of the Adriatic marine diversity, to be used (and updated) by the scientific communities working on the Adriatic Sea. Rather, the VITA ICT tool will be utilized out of the project boundaries, as fully validated biodiversity monitoring tool. Several VITA partners, including POR, CF, RER, IDA and Argonauta have the capacities to promote the usage of the VITA tool as a new biodiversity cross-border biodiversity monitoring platform, to be used and consolidated by different organizations and institutions in future actions. As biodiversity defense systems VITA, will provide several solutions - as guidelines and pilot revitalization actions – these solutions can be consolidated in long term, favoring their adoption across the Adriatic basin. This will be possible by a cross-border web of connection between different institutions and stakeholders that will be established by the VITA consortium, with a primary role exerted by CF, RER, IDA and Argonauta.

C.8.2 Durability

Some outputs/deliverables should be used by relevant groups (project partners or others) after the project's lifetime, in order to have a lasting effect on the territory and the population. For example, new practices in urban transport need to be used by local authorities to have cleaner air in the city, and the whole population will benefit from this. Please describe how your outputs/deliverables will be used after the project ends and by whom.

Concrete output of the VITA biodiversity protection system (eg. biodiversity monitoring SOPs, the biodiversity database, the VITA ICT tool, guidelines and revitalization actions) if implemented on a larger scale – in long term – can contribute a concrete protection of the Adriatic autochthonous marine biodiversity, as a precious common good for the territories and populations living on the Adriatic coast. Used beyond the project lifetime and on a larger scale, the VITA biodiversity protection system will allow to mitigate the risk of biodiversity loss in the Adriatic sea, even though the establishment of new marine protected areas. More specifically, thanks to the cross-border communication, dissemination and exploitation plans foreseen in the VITA project, the adoption of the VITA ICT tool, solutions and outputs by local communities, stakeholders and policy makers will be facilitated in short term, to provide concrete results in term of biodiversity protection and restoring, in long term.

For instance, in short and long term, the VITA ICT tools can be adopted by trained divers and tourists, for a continuous biodiversity census in the Adriatic sea, informing about sites at risk of diversity loss and the corresponding treats. Results from this in-real time biodiversity collaborative monitoring activity will be continuously provided to the local institutions, through the VITA ICT, which, depending on the assessed diversity risk, can implement protection guidelines and/or cost effective revitalization strategies, as indicated by the VITA validated solutions.

C.8.3 Transferability

Describe whether and through which concrete actions the project intends to contribute to the effective transferability of results and promote the re-use of the produced outputs towards new and additional target groups/territories, including, if applicable, through the involvement of Associated Partners (who can facilitate this process, for example, by serving as potential re-users during or after the project).

The whole VITA WP4 is entirely devoted to create the heritage for the transferability of the VITA project outputs and results beyond the project boundaries, tailoring local communities, citizens, stakeholder, and policy makers. To this aim, cross-border communication and dissemination actions will be implemented during the project, to be coordinated with curated educational activities, tailored to different classes. Further, training activities and citizen-science campaigns - concretely carried out as joint monitoring actions - will be implemented in all the VITA sites, involving divers, citizens, workers and tourists at different ages. In parallel, in the VITA WP4 we will establish a close dialogue with the institutions, favoring the adoption of the VITA approaches and solutions in short and long term.

We strongly believe that the only way to translate our VITA integrative approach in concrete results in term of biodiversity protection and recovery for whole Adriatic sea, is its adoption in a large-scale, under fully collaborative cross-border scenario, joining citizens, tourists, stakeholder and policy makers. Because of this strong belief, the transferability of the project results has been curated, in the project frame, in a dedicated WP 4, which lays the foundations for the concrete transferability of the project outputs in short and long term.