

D 5.1.2 - DRAFT ACTION PLANS ON THE VALORISATION OF UNDERWATER ARCHAEOLOGICAL SITES AND THE INCREASED ACCESSIBILITY OF SUCH HERITAGE

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5.1.2. Draft action plans on the valorisation of underwater archaeological sites, and the increased accessibility of such heritage are developed by PP4 with the participation of all other partners.

Action plans are developed based on joint methodology and the tools developed in WP3

1. Puglia Region Action Plans

We must premise that the cultural heritage of the seas of Puglia is under the supervision and jurisdiction of the 3 territorial Superintencies Archaeology, Fine Arts and Landscape of the provinces of Brindisi and Lecce, Barletta-Andria-Trani and Foggia, Metropolitan City of Bari. Furthermore, the most relevant interlocutor in Italy for policies and strategies regarding UCH is the **National Superintendency for Underwater Cultural Heritage**, established in 2019. It has its headquarters right in Taranto and operational centers in Naples and Venice. It is responsible for carrying out the activities of protection, management and enhancement of the underwater cultural heritage referred to in Article 94 of the Code of Cultural Heritage and Landscape, as well as the Law no. 157/2009, concerning the ratification and implementation of the UNESCO Convention.

Over half a century of uninterrupted underwater research is the **record** which Puglia can boast of over other regions. Thanks to its continuous and passionate commitment which has culminated in **national and international projects** conducted by the Region's universities, vast stretches of coastline and the seabed have been systematically investigated. The methodology adopted is the holistic, contextual, diachronic, multi and trans-disciplinary approach to the global archaeology of coastal and underwater landscapes or, more precisely, **seascapes**.

Puglia was one of the first regions to develop a regional cultural heritage information system (SIRPaC, now known as **CartApulia**), an indispensable tool for the protection, planning and development of the region's cultural heritage, and it has catalogued thousands of sites of cultural interest, including **coastal and underwater sites**.

The Puglia Region – Department of Tourism, Economy of Culture and **Community Enhancement** – has collected this precious legacy and in recent years has organised and promoted actions aimed at the knowledge, enhancement and accessibility of the underwater heritage, through the creation of the **Euro-Mediterranean Seascapes Archaeology Center – ESAC**, linked to Libraries and Museums Hubs of Apulia Region. Its areas of interest are research and cataloguing, conservation and restoration, training, dissemination and communication, international planning, promotion and use and, in general, the use of incentives in order to promote cultural policies for the underwater heritage and the blue economy. The

governance of the Centre is the fruit of an **agreement** between the Regional Department, the three Universities and the National Superintendency for the Underwater Cultural Heritage on a participatory process of knowledge and heritage enhancement through specific projects and concrete measures.

1.1 Draft action plans on the valorisation and the increased accessibility of Torre S. Sabina underwater heritage

The involved parties should put in place a **participatory process** through a series of Thematic Tables and Services Conferences; during the process, they share the various roles and duties and establish a roadmap according to the following steps.

1. Signing of a Programmatic Agreement

The involved Institutions should sign a **Programmatic Agreement** aiming at:

- developing a relationship of broad collaboration on issues of mutual interest in the field of research and enhancement of cultural heritage in compliance with the specific skills;
- promoting and encouraging research, enhancement and integrated management of local cultural heritage and in particular of the Dentice di Frasso Castle Museum and the archaeological evidence present in Torre Santa Sabina both on land and under water;
- establishing Torre S. Sabina Managing Authority and its duties, the entity which seems to better respond to this role is the ESAC, for its own institutional mandate. The Euro-Mediterranean Center has, between its own finalities, *"the creation and setting up of parks and/or ecomuseums underwater aimed at the "Blue growth", even with remote use through direct shooting systems, to respond to the challenges that the places of culture have to face to become alive and inclusive places, of learning, mediation, welcoming, in the name of heritage as a common good"*.
- establishing the management framework guidelines.

Each part appoints its internal representative for the **Management Committee**, supporting the Managing Authority and approving the Site Regulations and future Management Plan.

a. Roles and responsibilities of all involved parties

- **Superintendency ABAP Brindisi Lecce** and **National Superintendency for the UCH**, both on behalf of Ministry of Culture, are responsible for the protection of UCH, the permission for the set-up of "blue archaeological trails", the permission of guided diving and snorkeling tours.
- **Carovigno Municipality** undertakes to collaborate with the other parties for the upgrade of Dentice di Frasso Castle Museum and archaeological sites of the territory at uniform levels of quality for the enhancement of museums and places of culture of public belonging, adopted with D.M. of 21 February 2018, for the recognition/accreditation in the National Museum System of museums of regional relevance. Furthermore, it undertakes to make available a light

and removable structure as logistic base on the beach for the tourists, briefing and de-briefing and diving equipment, as well as reserved parkings for the visitors' cars.

- **Libraries&Museums Hubs – Apulia Region** is the entity in charge for the establishment and development of Regional Museum and Place of Culture System and for the regional policies of integrated valorization. It undertakes to put concrete measures and human and financial resources, according to the Regional Planning, at disposal for the Operational and Managing Framework.
- **University of Salento – Department of Cultural Heritage** undertakes to give its scientific consulting for
 - the scientific plan of site enhancement;
 - the scientific direction of the Museum;
 - the scientific direction of communication and editorial projects on the site (catalogs, guides, brochures, etc.), as well as of scientific works;
 - the archaeological scientific supervision of the project to enhance the waterfront of Torre S. Sabina, as regards sustainability and compatibility with the archaeological evidence on land, submerged and semi-submerged ones.
 - scientific research activities in the municipal area of Carovigno, to continue the already started path of systematic knowledge and enhancement of the heritage historical-archaeological of the territory itself.
- **Coast Guard/Brindisi Harbour Master's Office** undertakes to guarantee the granting of general provisions for navigation in the Bay and the subsequent surveillance activities; it must also authorize the presence of a light and removable structure on the beach as a logistics base for the tours. The nautical activities must be limited, except those necessary for scientific research and underwater visits, expressly authorized by the Superintendency, and reported in the regulations (see below).
- **Pugliapromozione**, non-economic public body which works for the implementation of the policies of the Puglia Region in the field of tourism promotion, could give its consulting to the Managing Authority for the design of the Marketing Plan and the dissemination of the UCH through the info-points that coordinates.
- Relevant **stakeholders** – cultural/environmental heritage associations, diving clubs, territorial bodies such as Torre Guaceto MPA, etc.

b. Management Framework guidelines

Following the principles of the UNESCO's Convention on the Protection of the Underwater Cultural Heritage (Paris 2001), and the Framework Convention on the Value of Cultural Heritage for Society (Faro 2005), as well as the European Union guidelines promoting Blue Growth, the management framework of

Torre S. Sabina UCH must be aimed at ensuring the development of the site in accordance with the following guidelines:

- re-appropriation of a common good, capable to raise the quality of the life of the local community (cultural, social and economic);
- raising awareness;
- dissemination of the knowledge through concrete measures and communication to visitors the specific and unique characteristics of the area;
- responsible and sustainable tourism as well as experience tourism, capable to satisfy a wide range of personal needs, from pleasure to a search for meaning, and to boost the network of the community resources, exploiting the existing assets and creating new opportunities in the reference area of Torre S. Sabina (Brindisi, Carovigno, Regional Reserve and MPA T. Guaceto, San Vito dei Normanni) for the local economy;
- proactive and inclusive protection for the UCH, acted by all the chain of actors involved in management of the site and assured by shared regulations, to counteract also reckless and high-impact tourism;
- monitoring of tourist flows, directing them towards a reduction in negative impacts.

c. Staff duties of the site's Managing Authority

Managing Authority assures the development of the site in accordance with the Management framework Guidelines and deals with the “heritage chain”, from preservation to enhancement, communication and tourist enjoyment.

Notably, its staff must contribute to the scientific plan of the site enhancement (2nd step), to the participatory design of blue trails (3rd step) and to the participatory writing of the site regulations (4th step); furthermore, it is in charge of the implementation of the blue trails with diversified solutions, including traditional and innovative tools for experiencing the underwater and coastal trails (signage, archaeological materials replicas, booklets, underwater devices/tablets, monitoring buoys provided of sensors, etc.; see below).

The staff must provide the maintenance of the trails equipment, the archaeological testimonies' surveillance and monitoring, through the archaeological guides, the interaction with involved actors constant over time.

It must implement an integrated communication plan, including visual identity, website, social networks (Facebook and Instagram), reservation portal for booking guided visits (see below) and special tours/events.

Furthermore, it should hopefully also deal with the permanent exhibition in Carovigno Castle Museum, enriching it and providing it with contents, laboratories and services aimed at emphasizing the strict connection with the Blue Trails experience.

Finally, it can train and accredit underwater archaeologists and biologists as diving guides for the site, who will be able to support diving clubs and centers regarding the naturalistic-archaeological aspects, including the respect of the rules in diving.

2. Implementation of the scientific plan of the site enhancement

The scientific plan should be curated by University of Salento, due to its multi-year under water and on land research activities in the territory and to the numerous regional, national and international projects carried out on Torre S. Sabina and Torre Guaceto sites (included the Museum project and the feasibility study on the new waterfront), with the consulting of ESAC, and approved by the Superintendencies.

The scientific plan should provide:

- selection of the points of interest/archaeological-naturalistic spots;
- evaluation of the archaeological risk;
- evaluation of the different degradation processes and the environmental conditions: geomorphologic changes (shoreline erosion, regression, advancement, etc.), physical phenomena (currents, waves, etc.), chemical conditions (in water and sediment) and biological factors;
- trails planning: study of the underwater itineraries and their equipment;
- study and development of digital storytelling with the communicative and narrative use of VR/AR and other digital means. The basic output should be the DEM/3D map of the whole Torre S. Sabina sea-bottom and intertidal stretch, and part of coastal stretch, with all the archaeological assets, likewise represented by 3D models.

3. Participatory design of blue trails

It is fundamental that the underwater itineraries with floral and faunal, geomorphological, geoarchaeological (the paleoshore) and archaeological points of interest could be conceived with the contribution of all possible involved local actors in a participatory process. The design of the Blue Trails should be conducted by the stakeholders and the local community with the presence of a facilitating and expert agents such as ESAC and the Managing Committee, as happens, for example, in the participatory process of the **community maps** created in the framework of **ecomuseums** or for the purposes of regional landscape plans.

4. Participatory writing of the site regulations

The writing of Site Regulations should be acted also in a participatory way, through Working Tables, under the guidance of ESAC and then submitted to the Managing Committee for the approval.

The **regulations** should foresee the type of authorization, granted by the Superintendency, the subjects recipients of the diving authorization, the opening period, opening hour, number of visitors, free and/or guided visits, access modalities, guided tours for people with disabilities; snorkeling and diving can be equally practicable; in the first case, a self-declaration of good health - which exempts the organization from responsibility - is sufficient, in the second case it is also necessary the diving license.

Regulations also report the general provisions for navigation in the Bay as defined by the **Coast Guard/Brindisi Harbour Master's Office**, in charge of surveillance activities managing; the nautical activities must be limited, except those necessary for scientific research and underwater visits, expressly authorized by the Superintendency. The boats for diving guides must be equipped with passenger traffic license for guided tours, rental or enabled for navigation for private use or in own account.

However, the underwater guided tours are supposed to start mostly from the beach, where is available a logistic base for visitors meeting, briefing and de-briefing and diving equipment, or for glass-bottomed/transparent canoes/kayaks/sups (stand-up paddles). Actually, local diving infrastructure is also crucial factor to consider when establishing a diver trail and there isn't either in Carovigno and in Torre S. Sabina. So, it's important to guarantee to the nearby Tourist and Diving Centers a facility on the site.

The regulation must individuate the recipients of diving authorization, among which:

- a) no profit diving clubs and associations, whose purposes provide for teaching activity according to national structures standards;
- b) diving and commercial enterprises, whose company object includes entrepreneurial activity of underwater tourism.

The autonomous visitors with diver license, not related to diving or clubs don't need any permission.

The diving or tourist centers which intend to carry out guided tours will have submit instance to the Superintendency, specifying the type of visit (scuba diving or snorkeling or kayaking, for example); the instance must be accompanied by certificate of the Chamber of Commerce requested by current legislation, documents of the physical subjects, statute and constitutive act for legal entities, documents relating to the used boats and the engaged crew, name and Dive master license of diving guides, all information about personnel involved in visits, on the used materials and facilities.

The subjects authorized to carry out visits should pay an annual fee to Managing Authority by the regional authorized diving centers as contribution to the expenses of management and maintenance. The regulations will establish the maximum prices for services and the corresponding fee to the Managing Authority (for example, scuba diving visits € 40, fee € 5); the costs and the fees may be reduced by 50% for particular categories: people with disabilities, students, minors under the age of 18, teachers or operators in the cultural field.

The Tourist, Clubs and Diving Centers must book the dive on the specific reservation platform on the website of Managing Authority (see above), and report, for each dive or guided tour: the date, the place of the dive, the details of the participants and of the related licenses, the names of diving responsables.

Besides the underwater tours, the diving clubs and centers can organize also diving training courses and special visits: night underwater tours, sea-watching snorkeling for kids, guided visits for people with disabilities, headed by dive masters with specific license, etc.

The diving clubs and centers will be flanked and supported in diving by underwater archaeologists or biologists, accredited and trained by ESAC, as naturalistic-archaeological guides. They won't be responsible for immersion safety, but respond to violations concerning the rules, issued by the Superintendency, on the protection of the archaeological assets; the guides will however have to provide all the information available regarding aspects biological-naturalistic, landscape and archaeological of the seabed, and prepare a pre-immersion briefing indicating the biological, geomorphological and archaeological peculiarities of the itinerary as well as the behavioral rules to follow in immersion.

The visits can be carried out by respecting a guide-sub ratio, to be defined also in the regulations (not more than 1:8).

The regulations should also include the enjoyment of the Carovigno Castle Museum: only one ticket including underwater tours and Museum guided visits; the Museum must offer specific enjoyment experiences linked to underwater environment: immersive/VR/AR application usable with Oculus devices or dedicated screens, specific laboratories and activities particularly dedicated to the kids, etc.

5. Implementation of the blue trails

The Managing Authority, once designed the Blue Trails participatory project, provides its setting-up. The implementation of Blue Trails in Torre S. Sabina is a **real challenge**, more than other underwater sites, because it's a pluristratified site, with very different evidence, some of them really fragile and vulnerable and hardly readable; in primis, some **wooden remains** of various shipwrecks, first of all the TSS 1 beached wreck; these wooden remains obviously can't be left without protection, exposed to the environmental elements. Secondly, the dense **stratigraphical sequence**, constituted by the overlapping of various cargos of the ships crushed against the reef and sunken, alternating with natural sediments and materials dumped as part of normal everyday activity of the landing place. Therefore, since basic options of *in situ* preservation (metallic cages or simple exposition) cannot be exploited, different solutions must be put in place and applied in a complementary way.

a. Trails equipment

The trails start from a 'point zero' and link Point of Interest represented by replicas of scattered cargos' materials (amphoras, pottery, etc.) and decontextualized finds, quarries' blocks, Bronze Age settlement' postholes or other traces. Given the necessity to communicate the pluri-stratified character of the site, in the Carovigno Castle Museum the permanent exhibition shows a replica of the stratigraphical section of the Torre S. Sabina sea-bottom with all the distinguished layers and the included archaeological original materials representing the sunken and overlapped cargos. The same **diorama** can be place, of course in non-invasive way, also under water, on the sea-bottom at the foot of the reef, with specific materials.

Nevertheless, trails can include also *in situ* stratigraphic deposits' materials to be exposed during the visits under particular conditions of surveillance, today allowed by technological innovations, such as, for example, the NOUS Undersea Vision Surveillance System (successfully implemented in the Greek Underwater Museum of Peristera shipwreck): submarine units fully equipped with cameras and windshield wipers fitted to the camera lenses. The underwater operation is controlled by multitasking computing units. The network of underwater cameras is powered by a cable reaching to the nearby shore, connected to a purpose-built solar power station.

For the well-preserved Torre S. Sabina 1 wreck and the other wooden remains in the bay the best solution could be 3D models to enjoy with underwater tablets *in situ* and visors/Oculus in the land Museum. In parallel, the recovery and the restoration of the ship could be studied and planned, as well as the ship's physical replica construction (see feasibility study).

Trails may or may not be materialized/marked out with guide cables or 'Ariadne's threads' of fluorescent color. The Poi can be signaled on the sea-bottom by labels or tag. The use of environmentally friendly material for the underwater signage is required.

The trails can be enjoyed with both simple/plain but efficient means and technologically advanced tools, depending on the budget.

Option A: an underwater information booklet and some "diver stations/Point of Interest" established along the trail to aid diver navigation. The diver stations can be numbered with a small ball float. As visitors reach each diver station, they are encouraged to read the text on the appropriate page of the underwater booklet.

Option B: underwater visualization in augmented reality (like in the Archaeological Submerged Park of Baia or in the Underwater cultural trails of the Sea Superintendence of Sicily – UCH Fruition Interactive System UG3K): an innovative underwater localization system which allows divers to view their position on the map of the archaeological site via an underwater tablet, to receive contextualized information with respect to their position and to enjoy the 3D reconstruction that shows the visitor how the archaeological remains have looked in their heyday.

The tablets could be provided free of charge by Managing Authority to diving clubs and centers that will request them, by specific agreements.

b. Operating period

The land Museum can be opened all year long; the blue trails can be exploited seasonally, from late spring to autumn.

c. Offered services

Guided underwater tours, guided snorkeling tours, guided kayaking/SUP tours, specific tours for kids, night underwater and coastal tours, virtual/dry dives with Oculus on the various archaeological

testimonies, land Museum permanent exhibition, land Museum temporary exhibitions, educational workshops for school, families, etc., reenacting activities, etc.

7. Economic plan

The initial pricing policy should take into consideration an annual fee as contribution for the setting up and maintenance of the site, fee per each diver in percentage on the whole amount of the visit, and revenues from laboratories and events in Carovigno Castle Museum and on the coast. Meanwhile, the annual budget needed for the operation of the site should include staff, equipment, maintenance and operational costs, as well as a budget for marketing/promotion activities.

2. Friuli Venezia Giulia Region action plans

After the intense season of excavations and studies on the Grado 1 wreck (1987–1999), ended with the whole recovery of the load and hull (but we are still waiting for the musealization of the wreck himself), the underwater archaeological research in Friuli Venezia Giulia Region stopped. During this institution's stalemate, the University of Trieste promoted a lot of scientific projects targeted at the knowledge and valorization of the underwater cultural heritage: the project Interreg Italia – Slovenia IIIA **AltoAdriatico**. *The coastal sites of the upper Adriatic: topographical surveys on land and at sea* (2004–2007), during which Preroman and Roman structures, partially or totally submerged between the mouths of Timavo and Pirano, were studied, to re-draw the coastal settlement and the landscape profile in ancient times. The following similar Project **Stories from the Sea** concerned the Marano Lagoon (Ud), in Italy, and the wide inlet of the port of Salvore/Savudrija (Umago/Umag), along the Istrian coast, but some surveys have included also the inland waters, especially the **river harbour of Aquileia** and the **Stella River**, with the Project **Anaxum**. *Archaeology and History Project of a river landscape*.

The Regional Information System of the Cultural Heritage – SIRPaC FVG (www.ipac.regione.fvg.it; Catalogo dei Beni Culturali; Carta dei Beni Culturali), managed by ERPAC and connected to the general **WebGIS** of the Region FVG, the **EAGLE FVG** (sistemiwebgis.regione.fvg.it/eagle/), is an open access webGIS which includes the submerged and semi-submerged archaeological assets of Friuli Venezia Giulia, which are constantly updated. The database is available for citizens and stakeholders operating in the territory, an archive good for knowledge, social-cultural-economic development, territorial planning and safeguard.

The submerged archaeological heritage is only minimally recorded in the **Raptor portal** as well, an instrument of the Superintendency Archaeology, Fine Arts and Landscape of Friuli Venezia Giulia, aimed essentially at protection, not open access (<http://www.sabap.fvg.beniculturali.it/attivita-2/tutela/software-raptor-ricerca-archivi-e-pratiche-per-la-tutela-operativa-regionale>).

Touristic or cultural websites or social networks, dedicated to the underwater cultural heritage, are unknown.

ERPAC FVG, according to the Regional Law 2/2016, is appointed to promote the development of projects of significant regional interest for the enhancement of cultural heritage and to participate in initiatives carried out in collaboration with bodies and sector organizations operating at European and international level, also for the purposes of accessing Community funding on the subject.

On 2021, ERPAC signed a **Programmatic Agreement** with Regional Secretariat and Superintendency Archaeology, Fine Arts and Landscape of Ministry of Culture, aiming at establishing a collaboration for the *in situ* and remote exploitation of the Roman Grado 2 shipwreck as well as at the enhancement and dissemination of the regional underwater heritage.

In particular, pursuant the art. 6 – *Enhancement of the underwater cultural heritage: stakeholder involvement activities*, the parties collaborate in identifying good practices and designing protocols or guidelines aimed at the protection, but also the management of the submerged site, also through the involvement of the community and local actors (in particular diving centers, diving and cultural associations, etc.) who can conduct guided tours and carry out site monitoring and maintenance activities.

The aforementioned "heritage education"/diving training project (p. 5.4.1) has been carried out on the basis of this Agreement, aimed at making diving members and other possible stakeholders to know both the Grado 2 site and other submerged sites in the Region and to formulate a possible enjoyment of them through the same clubs.

2.1. Draft action plans on the valorisation and the increased accessibility of Grado 2 underwater heritage

The involved parties should put in place a **participatory process** through a series of Thematic Tables and Services Conferences; during the process, they share the various roles and duties and establish a roadmap according to the following steps.

1. Signing of a Programmatic Agreement

For the implementation of the **Site Operational Framework**, a second **Programmatic Agreement** should be signed between the involved actors:

- **ERPAC**, which assumes the role of Managing Authority, by reason of its institutional mandate and the enhancement activity carried out on the site;
- **Superintendency ABAP FVG** and **National Superintendency for the Underwater Cultural Heritage**, both on behalf of Ministry of Culture, responsible for the protection of UCH;
- **PromoTurismoFVG**, which is the regional body dealing with the strategy, operational management and promotion of tourism in Friuli-Venezia Giulia, planning and organizing the offer through specific tourism products and welcoming guests as "temporary citizens". It will

undertake to implement tourist offers with the involvement of diving centers, including the Grado 2 and other regional submerged sites.

- **Coast Guard/Grado Harbour Master's Office**, responsible for general provisions for navigation in the area and the subsequent surveillance activities.
- **Regional Museums Direction**, in charge of the management of National Museum of Underwater Archaeology of Grado, where a computer station for "virtual" diving on the wreck will be available.
- Relevant **stakeholders** – local heritage/environmental associations, diving clubs, etc.

Each part appoints its internal representative for the **Management Committee**, supporting the Managing Authority and approving the Site Regulations and future Management Plan.

The Programmatic Agreement will be aimed at the following:

- developing a ~~relationship~~ of broad collaboration on issues of mutual interest in the field of research and enhancement of UCH in compliance with the specific skills;
- promoting and encouraging enhancement and integrated management of regional underwater heritage;
- defining roles and duties of the parties;
- establishing modalities of involvement of the local community through participatory processes.

a. Duties of the site's Managing Authority

Managing Authority assures the development of the site in accordance with the Management framework Guidelines and deals with the "heritage chain", from preservation to enhancement, communication and tourist enjoyment.

Notably, it takes care of the following:

- site maintenance: monitoring and cleaning of the metallic grids and the signage;
- site protection: set-up of surveillance system through technological innovative tools, such as, for example, the NOUS Undersea Vision Surveillance System (see above);
- site dissemination: it must implement an integrated communication plan, including visual identity, website, social networks (Facebook and Instagram), reservation portal for booking guided visits (see above) and special tours/events.

Furthermore, it should hopefully also collaborate with the National Museum of Underwater Archaeology of Grado, curating the digital devices and the scientific contents dedicated to experiencing the virtual diving on the wreck by all visitors and non-divers.

Finally, it can train and accredit underwater archaeologists as diving guides for the site, who will be able to support diving clubs and centers regarding the naturalistic-archaeological aspects, including the respect of the rules in diving.

2. Participatory writing of the site regulations

The writing of Site Regulations should be acted also in a participatory way, inside Working Tables, under the guidance of ERPAC and then submitted to the Managing Committee for the approval.

The **regulations** must foresee the type of authorization, granted by the Superintendency, the recipients of the diving authorization, the opening period, opening hours, number of visitors, free and/or guided visits, access modalities, guided tours for people with disabilities.

Regulations also report the general provisions for navigation in the area as defined by the **Coast Guard/Grado Harbour Master's Office**, in charge of surveillance activities managing; the nautical activities must be limited, except those due to scientific research and underwater visits. The boats for diving guides must be equipped with passenger traffic license for guided tours, rental or enabled for navigation for private use or in own account.

The regulation must individuate the recipients of diving authorization:

- a) no profit diving clubs and associations, whose social object provides for teaching activity according to national structures standards;
- b) diving and commercial enterprises, whose social object includes entrepreneurial activity of underwater tourism;
- c) autonomous visitors with diver license.

The diving centers which intend to carry out guided tours will have to submit instance or simply communicate the diving.

The subjects authorized to carry out visits should pay an annual fee to Managing Authority by the regional authorized diving centers as contribution to the expenses of management and maintenance. The regulations will establish the maximum prices for services and the corresponding fee to the Managing Authority; the costs and the fees may be reduced by 50% for particular categories: people with disabilities, students, minors under the age of 18, teachers or operators in the cultural field.

The Clubs and Diving Centers must book the dive on the specific reservation platform on the website of Managing Authority (see above), and report, for each dive: the date, the place of the dive, the details of the participants and of the related licenses, the names of diving responsables.

The diving clubs and centers will be flanked and supported in diving by underwater archaeologists or biologists, accredited by ERPAC, as naturalistic-archaeological guides. They won't be responsible for immersion safety, but respond to violations concerning the rules, issued by the Superintendency, on the protection of the archaeological assets; the guides will however have to provide all the information available regarding aspects biological-naturalistic, landscape and archaeological of the seabed, and prepare a pre-immersion briefing indicating the biological, geomorphological and archaeological peculiarities of the itinerary as well as the behavioral rules to follow in immersion.

The visits should have to respect a guide-sub ratio, to be defined also in the regulations (not more than 1:8).

The regulations could include also the enjoyment of the land Grado Museum: only one ticket including underwater tour and Museum guided visit; the Museum could offer specific enjoyment experiences linked to underwater environment: immersive/VR/AR application usable with Oculus devices or dedicated screens, specific laboratories and activities particularly dedicated to the kids, etc.

3. Split County and Resnik action plans

The research on the underwater archaeological sites in the area of Split-Dalmatia County (SDC) dates back to the second half of the 18th century when the first findings were mentioned in Sućuraj on the island of Hvar. From then until after second World War, the archaeologists and museums had little interest in underwater sites, resulting in the loss of topographic data of certain archaeological sites which had since been completely plundered. Moreover, there was no law on the protection of cultural goods. However, after WWII and with the development of more advanced scuba diving equipment, the interest in underwater archaeological sites arose. Consequently, the Act on the Protection and Preservation of Cultural Property was enacted and since the 1960s continuous research has been performed throughout the entire SDC's territorial sea area. To this day, there are over 200 underwater sites found in the area of SDC, whereas only 48 are protected by the Act on protection and preservation of cultural property (NN 69/99, 151/03, 157/03, 100/04, 87/09, 88/10, 61/11, 25/12, 136/12, 157/13, 152/14, 98/15, 44/17, 90/18, 32/20, 62/20, 117/21). Regarding Kaštela Bay, the exploration of the Resnik area began in 1988, when the remains of Hellenistic and Roman ports were found and further research pointed out that there are numerous underwater sites. Nevertheless, not all of them are under protection or are properly managed and preserved. This is the issue on both local and regional level. Moreover, there are not enough financial or technical resources to assure the necessary, quality and proper exploration or preservation of the sites. In light of the aforementioned, the Action plan (AP) is not limited to the project area alone, but the objectives and measures are relevant to the area of SDC. The same are the basis for future projects and actions in the area of underwater heritage exploration, preservation and lastly tourist valorisation. Key to achieving the set goals in the AP are the funding opportunities from the new programming period 2021–2027 and the participatory approach of all relevant stakeholders, beginning with the responsible Ministry of Culture and Media, SDC, involved municipalities, scientific institutions, diving clubs and other relevant stakeholders. Additionally, the AP is the basis for the following operational and management proposal that concerns the underwater sites in the area of Kaštela Bay.

3.1. Draft action plans on the valorisation and the increased accessibility of Resnik underwater heritage

As in Italy, in Croatia all activities regarding the research, preservation and valorisation of the cultural property must also be submitted and approved by the Ministry of Culture and Media. The Croatian Conservation Institute with its branch offices and licenced private companies is in charge for performing the conservation and restoration activities. At the regional and local level, relevant administrative departments of regional and local public authorities, together with the aforementioned national bodies jointly perform underwater investigations, surveillance and determination of the condition of underwater archeological sites as well as reconnaissance of new areas with the aim of finding new and preserving the existing underwater archaeological heritage. For this purpose, it is also relevant to mention the International Center for Underwater Archeology in Zadar that represent UNESCO's 2nd category centre focused on the protection, study and preservation of underwater cultural heritage in Croatia, the development of international scientific cooperation and education in the field of underwater archaeology, presentation and promotion of underwater heritage to the general public and dissemination of UNESCO Convention on Underwater Cultural Heritage.

In the Kaštela Bay area, as mentioned before, there are numerous sites with different protection statuses. Some are protected, some are only preventatively protected and some are only recorded. Also, there is the question of ownership, where according to the Croatian law the cultural goods can be private property. For example, the project area Resnik, which covers both continental and maritime territory, is partially privately owned. Therefore, it is difficult to perform any kind of activities if the owner refuses to be involved. Moreover, diving on certain sites is not regulated at all. Thus, the relevant regional and local stakeholders, SDC and municipality of the Bay area (City of Split, City of Trogir, City of Solin and City of Kaštela) should advocate with the Ministry to buy out all privately owned goods and to legally protect all sites in order to assure prompt and appropriate management, preservation and valorisation of the same.

For the Kaštela Bay area, the Managing Authority should be established. The Body should be a form of an advisory body consisting of one representative of each relevant stakeholder listed below.

- Ministry of Culture and Media as the main responsible public authority for the issue of preservation and protection of cultural heritage in Croatia;
- Croatian Conservation Institute – Split Department for Conservation (branch department) conducts protection and supervision of underwater heritage;
- SDC – Administrative Department for Education, Culture, Technical Culture and Sports that performs administrative and professional tasks in the field of education, culture, technical

- culture and sports and prepares reports, proposals and draft documents within the scope of the administrative body in order to develop these activities in the SDC;
- Local municipalities – City of Split, City of Trogir, City of Solin and City of Kaštela which perform activities of local importance including culture;
 - Scientific and research institutions – Center for Underwater Archeology and the University of Split that prepare research plans, site enhancement plans, conduct scientific research and perform scientific activities;
 - Museums and other institutions – Museum of the City of Kaštela, Archaeological museum in Split, Museum of Croatian archaeological monuments, Croatian Maritime Museum in Split, Trogir City Museum, Public institution in culture *Zvonimir Solin*;
 - Coast Guard/SDC Harbour Master’s Office – responsible for general provisions for navigation in the area and the subsequent surveillance activities/responsible for the construction, maintenance, management, protection and improvement of maritime assets that represent the port area, etc.;
 - Other relevant stakeholders – local heritage associations, local tourist communities and diving clubs.

The role of the Managing Authority should be versatile. It should be a central body for the preparation and implementation of future projects for the further protection and valorisation of the underwater cultural heritage. Also, it should represent a key body for communication between regional and local stakeholders and the Ministry. Thus, ensuring easier management of the underwater cultural heritage and easier performance of all research and protection activities. Together with the relevant stakeholders, the Body should devise the best ways for the tourist valorisation and development of the sites. Moreover, for any kind of future activities on maritime assets which include cultural heritage, the advisory Body should be inquired whether the activities can or can not be performed and/or what protective activities must be performed. Also, the public authorities should be consulted with the Body regarding new spatial and development plans and strategies.

Besides the Managing Authority, the vision is to establish the Museum of the City of Kaštela as the regional Centre for underwater cultural heritage. As such the Museum can organize and perform diving training and education courses, and certify future divers in collaboration with diving clubs. Moreover, as a Center, it will be responsible for arranging blue trails in diving sites and it could perform tourist diving tours to those sites during the tourist season. For that purpose, the Museum would acquire a boat for tourist transportation and necessary diving equipment and/or glass-bottom boats for monitoring the seabed from above. The sites where diving is not allowed will be represented in the Museum using AR/VR technologies (virtual dives, on-land exhibitions). The activities will be versatile (day diving tours, snorkeling for children, night diving experience, etc.) and adapted to a wide range of visitors (students,

children, people with disabilities, etc.) with adjustable prices/fees. To perform aforementioned activities, new employees should be employed, i.e., diving instructors, skippers (or another person who steers the boat), and diving tour guides. Correspondingly, the staff will be responsible for the following:

- organizing education and performing diving training courses;
- issuing diving certificates;
- diving with the tourists *in situ* as a guide through the site, i.e. navigating the tourist through the set blue trails;
- maintenance of the diving equipment and the blue trails;
- guiding tourists through the VR/AR experience.

Thus, the Museum will be a leading institution in the implementation of the projects on the topic of the underwater cultural heritage of Kaštela Bay and the SDC region prepared and advocated by the Managing Authority.

Diving centres/clubs also play an important role, given that they are often the first to discover new sites and report to the higher institutions. Currently, the clubs must have concession over cultural goods for commercialization purposes or license for diving in such sites for their own purposes. Once the Museum is established as the regional centre, the diving clubs would have to sign diving agreement contracts with an annual fee that will enable them the diving permit for the sites. Additionally, all diving activities would have to be reported to the Museum so that the number of dives, attendance at the site, diving schedules and likewise activities can be monitored in real-time and consequently maintenance activities planned. Also, it would be mandatory to take Museum's diving tour guide. This way, better control and management will be established upon underwater cultural sites that will enhance their preservation and enable the development of their full tourist potential.

Correspondingly, for increased visibility and promotion of the Kaštela Bay underwater heritage and Museum as an established regional centre, it is important to develop a marketing plan. Such a plan should include market analysis, target groups, development of marketing goals, and promotion through different media channels, especially social networks. Also, a public campaign should be launched in cooperation with local and regional tourist communities, tourist agencies, sailing charters and other possible actors.