

WRECKS4ALL 2.0

Capitalization by transferring to new territories the WRECKS4ALL model for the protection of underwater heritage through its digitalization and valorization as a novel touristic offer

Activity 1.3

Adaptation of WRECKS4ALL Action Plan to the needs of South Adriatic territories

WRECKS4ALL 2.0: “Action Plan”

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Wrecks4All 2.0



**UNIVERSITÀ
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The WRECKS4ALL 2.0 initiative is not merely an exercise in heritage protection; it is a critical project centered on the capitalization and strategic transfer of a proven model for protecting and valorizing Underwater Cultural Heritage (UCH) and its associated digitalization into new territories. Its core objective is to significantly enhance destination management practices and to foster a smart, resilient, and sustainable tourism offering across the South Adriatic, centered around the captivating yet vulnerable resource of Underwater Cultural Heritage. The Action Plans contained within this volume represent the culmination of a regional adaptation process, where the foundational WRECKS4ALL framework was meticulously adjusted to resonate with the distinct legal, operational, and socio-economic realities of each participating state. This regional adaptation was structured around six pivotal analytical and strategic steps: the selection criteria and analysis of UCH sites for a viable cross-border cultural route; a comprehensive sustainable tourism assessment focusing on dive tourism and ancillary services; an in-depth analysis of the cooperation framework among local communities and key stakeholders; the definition of an optimal destination management model; the integration of an innovation framework leveraging novel digital technologies for UCH promotion, including the establishment of VR show rooms; and finally, the formulation of a concrete dive destination development plan encompassing location, planning, and promotional strategies. These steps collectively informed the development of each national Action Plan, ensuring they are strategic documents designed to systematically improve dive destination management and promote attractive UCH through the application of novel immersive technologies and digital solutions.

1. Underwater Cultural Heritage (UCH) Sites Selection;

Selection Criteria and Analysis, Legislative Framework;

The initial and most critical phase of this regional adaptation process, revolves entirely around UCH Sites Selection and the necessary Legislative Framework that must underpin it. The ultimate goal of this focused analysis is to establish the criteria and conduct the thorough analysis required to select six underwater heritage sites per partner territory which will form the backbone of a new cross-border cultural route, promoted through advanced digital products.

The comparative analysis of the three national contexts reveals a fundamental divergence in the challenges facing UCH Sites Selection, even as the ultimate criteria for site inclusion, natural and historical significance, condition, accessibility, attractiveness for dive tourism, and contribution to regional tourism development, remain universally applicable. The analysis of the Montenegrin context reveals that the key impediment to UCH Sites Selection and subsequent valorization lies in the dysfunctional and conflicting Legislative Framework governing access and operation. While Montenegro possesses historically significant underwater sites that meet criteria like natural and historical significance, the current national legal instruments create a systemic 'gray zone' that actively suppresses the professional recreational diving sector, thereby undermining the criterion of 'attractiveness for dive tourism' and 'potential for contribution to regional tourism development'. The Montenegrin study identifies two critical legislative failures: first, the Law on the Sea, which, while regulating archaeological research, lacks the necessary clear and practical definitions required for effective collaboration between cultural protection bodies and private dive operators; and second, the regulation of recreational diving itself. Governed by an outdated bylaw of the Law on Tourism and Services, this regulation imposes unrealistic operational requirements, most notoriously the

mandate for dive operators to possess a hyperbaric chamber. This requirement is financially prohibitive, severely misaligned with established European and international standards for responsible recreational dive tourism, and acts as a profound regulatory barrier to the growth and professionalization of the sector. Furthermore, the legislative ambiguity is compounded by a direct conflict with the Law on Sports, which confusingly allows sport dive clubs to provide commercial tourism services, blurring the lines of accountability, professional safety standards, and hindering effective regulatory enforcement. Consequently, the Selection Criteria and Analysis for UCH sites in Montenegro, as detailed in its Action Plan, must be conducted with the explicit parallel goal of using the selected sites as case studies to initiate joint strategic advocacy for legislative reform. The selection process here is inextricably linked to the need to rationalize operational requirements, resolve the ambiguity in archaeological research regulations, and align national laws with the robust EU models of best practices essential for a safely regulated and economically viable dive tourism industry. Without this legislative resolution, the long-term protection and sustainable tourism potential of the selected sites will remain critically vulnerable.

In Albania, the primary difficulty identified is not a lack of UCH sites, but rather the complexity of legislatively and operationally integrating cultural heritage valorization with stringent natural resource protection. The regional study highlights that Albania is endowed with a natural heritage equal to its cultural richness, with the country's future sustainability dependent on the wise use of these integrated natural resources. The Marine Protected Area (MPA) of Sazan-Kazan and the Karaburun Peninsula, which are central elements for nature conservation and the city of Vlora's development, present a unique set of circumstances. Any UCH site selection within or adjacent to this zone immediately requires the Selection Criteria and Analysis to place paramount emphasis on ecological integrity. The selection process must ensure that the sites' integration into the cross-border cultural route does not compromise the highly diversified marine ecosystems and species of ecological and economic importance found there. The legislative framework, therefore, demands meticulous alignment, navigating the complexities of existing national laws for cultural heritage protection while strictly adhering to the dictates of nature conservation acts. This challenge is unique in the South Adriatic comparative context, necessitating site management protocols that prioritize low-impact, high-value dive tourism. The Action Plan for Albania thus details a specific methodology where the selection of UCH sites is conditional upon the successful harmonization of dual legislative regimes and the creation of bespoke management plans that adhere to the highest international environmental standards, thereby ensuring the protection and sustainable use of UCH sites in accordance with UNESCO 2001 Convention guidelines, even under the intense regulatory scrutiny of an MPA designation.

The Italian component, specifically drawing from the original WRECKS4ALL model and the experienced institutional framework of Puglia and the University of Salento, provides the essential reference point for both the Selection Criteria and Analysis and the Legislative Framework. Unlike the other two partners, the Italian experience provides a mature, operable model for UCH management and valorization, serving as the benchmark for incorporating and advising on examples from successful dive destinations and EU models of best practices to guide development and enhance site management. The Italian Action Plan confirms the viability of the selection criteria by providing a proven context where factors like the condition of the site, its attractiveness for dive tourism, and its accessibility are effectively measured and managed within an established system of public-private partnership and legislative clarity. The Italian study confirms

that the goal of selecting six UCH sites for the cross-border route is entirely achievable when governance structures are robust and the legislative framework is clear and aligned with the UNESCO 2001 Convention, which Italy strongly adheres to. The Italian experience demonstrates that successful UCH valorization demands not just the digitization of assets for promotion through digital products, but also a robust, enforceable legal framework that enables controlled access, sustainable fee collection, and equitable distribution of economic benefits. The Italian Action Plan, therefore, focuses heavily on the transferability of this legislative clarity and operational efficiency, providing the blueprint for the Optimal Destination Management Model that the other two partners are striving to achieve. This comparative lens, spanning environmental harmonization in Albania, legislative reform necessity in Montenegro, and proven best practice in Italy, underpins the entire joint strategic roadmap. The commitment is to move beyond disparate national challenges and to create a unified, high-value cross-border cultural product by ensuring that all selected UCH sites meet criteria that are not only archaeological and aesthetic but also environmentally sound, legally secure, and economically sustainable for the long term. This foundation is paramount to turning the South Adriatic's shared cultural history into a successful, shared economic opportunity, fulfilling the mandate to enhance culture and sustainable tourism as drivers for economic and social progress in the region.

2. Sustainable Tourism Assessment;

Tourism Assessment, Dive Tourism and Services Assessment, Legislative and Operational Framework;

The comprehensive development of sustainable dive tourism across the South Adriatic region necessitates a comparative analysis of existing conditions, recognizing that Montenegro, Albania and Italy represent three fundamentally different stages of tourism maturity. This assessment serves as the foundation for the subsequent strategic Action Plans, establishing a benchmark, Italy, Puglia, against which the emerging Albania and transitional Montenegro markets can measure their deficiencies and opportunities. The disparities identified are not merely in scale but in the fundamental underpinnings of legal compliance, safety culture, market integration, and the preservation of irreplaceable underwater assets.

The general tourism landscape sets the context for the specialized dive sector. In the European Union, Puglia (Italy) operates as a mature, developed market. Its tourism infrastructure is comprehensive, benefiting from high international connectivity via multiple airports and an established service ecosystem. The sector is anchored by a robust legislative and regulatory framework, exemplified by its seamless integration into national and EU development strategies. This stability allows Puglia to focus on continuous quality refinement rather than foundational establishment, offering a high-standard destination experience.

In contrast, Montenegro views tourism as its paramount economic driver, strategically positioning the country for a high-class, five-star visitor segment. While its strategic vision is ambitious and focused on growth, the implementation is often hindered by infrastructural weaknesses. Despite being a globally recognized destination, the current assessment indicates persistent challenges in critical supporting areas such as traffic flow management, waste disposal, and utility supply, which can compromise the quality experience expected by the targeted luxury market. The existing Law on Tourism and Hospitality provides a broad legal basis but is insufficient in its current form to govern specialized, high-risk activities, indicating a disconnect between national strategic priority and regulatory precision.

Vlora (Albania) represents the emerging frontier. The city, promoted as “The Queen of the Albanian Riviera,” possesses extraordinary assets, a favorable climate, rich natural environments, and historical depth. The government correctly identifies tourism as a critical engine for sustainable economic and social development. However, the current framework relies heavily on goodwill (Albanian hospitality) and natural resources, rather than formal, high-quality standards. The overall infrastructure needs significant investment to support formal international standards, and the legislative environment is openly acknowledged as requiring the creation of new laws and operational structures, a task far more fundamental than the refinement needed in Montenegro.

The assessment of the Dive Tourism and Services sector exposes the most acute contrasts. Puglia’s sector is assumed to be professional and numerically significant, boasting approximately 70 certified dive centers. These operations are deeply integrated within the broader destination management network (DMO), ensuring effective promotion and reliable customer experience. The Italian framework enforces compliance with international quality and safety standards, providing the critical trust element essential for high-value dive tourism. The primary structural weakness noted in Puglia is related to geographical logistics, such as the distance of the hyperbaric chamber from certain key dive sites, a logistical issue rather than a failure of governance or quality control.

Montenegro’s dive sector, by stark contrast, is categorized as a “transitional gray zone.” This term highlights the ambiguity and fragmentation resulting from a lack of specific legislative classification. With only around 5 official dive centers, the sector remains underdeveloped despite possessing considerable advantages, including experienced, licensed staff and highly attractive sites such as accessible historical wrecks and caves. The major vulnerability is a critical legislative gap. This fact alone presents an unmanageable risk for dive centers operating in the gray zone, severely limiting the marketability. Compounding this, the dive centers operate outside formalized governmental quality control, often failing to adhere to crucial international standards such as ISO 24803:2017, which specifies requirements for recreational dive service providers. Furthermore, the sector suffers from a lack of DMO branding and multilingual marketing, resulting in poor international visibility and difficulty in creating integrated tourism packages that link diving with other high-value cultural or adventure activities.

The situation in Vlora is one of nascent crisis. The dive sector is not merely underdeveloped; it is unregulated. The assessment found a few formal, certified dive centers. Most critically, the primary unregulated activity is the discovery and exploitation of underwater cultural heritage (UCH). This absence of formal structure means dive tourism is completely disconnected from the destination management network, offering no regulated, high-quality product to international visitors. The challenge here is not transition, but creation, building the entire apparatus of professional operation, safety standards, and market structure.

This leads directly to the core issues within the Legislative and Operational Frameworks. Italy, as the benchmark, enjoys a state of being Fully Regulated, with comprehensive laws ensuring quality, safety, and the effective protection of its underwater resources. Specific, enforced legislation is in place for the protection and responsible utilization of UCH, reinforcing the principle that development must not come at the expense of heritage.

Montenegro's framework is deemed ambiguous and incomplete. The recreational diving sector is poorly classified, often lumped in with generic sports activities rather than specialized tourism services. This regulatory imprecision prevents effective governance and specialized quality control. The absence of a formal UCH protection system, guided by international conventions like UNESCO 2001, is a significant oversight that risks the irreversible loss of historical assets. The adjustments identified are systemic: the Law on Tourism and Hospitality must be amended to correctly classify diving, ISO 24803:2017 bylaws must be adopted for quality assurance, and a clear set of dive conditions must be defined, particularly within protected marine areas.

Finally, in Albania, the legal vacuum is the root cause of the crisis of looting and the safety issues. Without specific legal controls, no operational permits can be issued, no safety inspections can be enforced, and no quality standards can be guaranteed. The legal solution is a top-down intervention: the creation of a new legal and operational framework. This framework must adopt EU models and ISO principles wholesale and immediately implement UCH protection measures to halt the ongoing degradation of heritage assets.

3. Cooperation Framework;

Stakeholder Mapping; Local Community and Stakeholder Engagement; Cross-Border Integration; Funding sources.

The valorisation of Underwater Cultural Heritage (UCH) as an impetus for sustainable dive tourism in the South Adriatic is fundamentally contingent upon the establishment of multi-scalar cooperation frameworks. A comparative study of Italy, specifically the Puglia Region, Montenegro, and Albania reveals significant disparities in institutional maturity, regulatory environments, and mechanisms for stakeholder engagement and cross-border integration. These differences necessitate a targeted analysis of the cooperation prerequisites to ensure the long-term financial and environmental sustainability of UCH tourism across the region.

The primary element of this cooperation framework involves systematic Stakeholder Mapping and Categorization. Puglia exemplifies a highly institutionalized and vertically integrated model, where regulatory authority is clearly distributed across several key public entities. The identification of stakeholders, as documented, begins with the Superintendence of Archaeology, Fine Arts, and Landscape, which provides the critical legislative oversight for protection and permitting, working in parallel with the Porto Cesareo Marine Protected Area (AMP) for conservation management. This institutional density extends to regional bodies like the Region of Puglia and the Bibliomuseum Poles, which function as crucial coordinators, facilitating collaboration between cultural entities and local administrations. Non-governmental actors, including dive operators, cultural associations, and research institutions like the University of Salento, are systematically integrated into planning processes. This structure establishes a clear hierarchy of influence and interest, enabling sophisticated management strategies for effective engagement. In contrast, the frameworks in Montenegro and Albania, as indicated by analysis, suffer from substantial structural weaknesses. Montenegro's approach is characterized by regulatory ambiguity, where the recreational diving sector lacks precise classification, often falling outside specialized tourism governance. Key stakeholders, such as the Center of Archaeology within the University of Montenegro, represent scientific capacity but operate within a fragmented institutional landscape where legislative clarity regarding UCH protection, guided by

international instruments such as the UNESCO 2001 Convention, remains deficient. This necessitates CoA UoM and related bodies to assume dual roles, scientific exploration and advocacy for institutional change. For Albania, the challenge is more acute, defined by an overarching legal vacuum that historically fostered illicit activities and safety risks. While institutional commitment exists at the ministerial level, evidenced by the participation of representatives from the Ministry of Economy, Culture, and Innovation in international projects, the operational stakeholders, particularly dive operators, have yet to be fully legitimized or regulated, thus inhibiting effective collaboration with government agencies or international partners. The comparative result is a stable, high-trust ecosystem in Puglia contrasting with systems in Montenegro and Albania requiring fundamental institutional build-out to ensure regulatory compliance and operational security for dive tourism.

Extending beyond institutional mapping, effective Local Community and Stakeholder Engagement is paramount to achieving equitable socio-economic outcomes. The Puglia model prioritizes integrated territorial development, linking UCH valorization directly to urban regeneration and economic support for local recovery initiatives, as outlined in strategic documents. The proposed Communication Plan within this context focuses on leveraging established institutional connections, utilizing the Bibliomuseum Poles to disseminate knowledge and integrate cultural activities at the local level. The strategy is proactive, seeking to share the benefits of UCH tourism through targeted, integrated investments designed to promote new economic activities and innovative services for local communities. The challenge for Montenegro and Albania is to transition from project-based awareness to sustainable, continuous engagement. In both Balkan states, a Communication Plan must first address the foundational objective of enhancing public trust in the cultural sector and promoting legal clarity regarding dive access. The strategy must be anchored in the principle of benefit-sharing, ensuring that possible revenues generated from digital access tools, such as Virtual Reality (VR) showrooms, a key output of the WRECKS4ALL initiative, are reinvested directly into coastal communities and heritage preservation efforts. Proposed collaboration should focus on capacity building for local service providers, fostering B2B meetings that connect dive operators, tourism entities, and emerging ICT/VR companies, thereby aligning the commercial interests of private stakeholders with the preservation mandates of cultural institutions. This community-centric approach is critical for the Western Balkan partners to demonstrate that the economic uplift from UCH tourism is distributed widely, mitigating potential local resistance to heritage protection mandates.

The success of the South Adriatic as a unified dive destination depends intrinsically on Cross-Border Integration. The Interreg IPA CBC Italy-Albania-Montenegro Programme serves as the principal mechanism facilitating this integration, providing a framework for developing joint marketing and shared management practices. Puglia, acting as the Managing Authority for the Interreg programme, possesses deep expertise in European Territorial Cooperation (ETC) mechanisms, positioning it as the experienced partner best equipped to drive complex, multi-national projects. Key stakeholders for cooperation are thus anchored within the programme structure, encompassing the Puglia Region, the University of Salento, the Municipality of Vlorë (Albania), and the University of Montenegro (specifically the CoA). The overarching goal is the creation of a unified, cross-border cultural tourism product based on the WRECKS4ALL model's Action Plan. For joint marketing initiatives, the focus must shift from national promotion to a coherent regional brand that leverages the shared history of the Adriatic, particularly the military and commercial wrecks that narrate a

continuous historical connection. Shared management practices must involve the mutual recognition of UCH assets, the harmonization of dive safety standards (such as the adoption of ISO 24803:2017 bylaws, required in Montenegro), and the establishment of a regional GIS database of shipwrecks accessible to all partners. The collaboration must also address the asymmetry in regulatory preparedness: Italy can offer best practices in conservation management that are essential for Montenegro to define clear dive conditions within its own marine areas, and for Albania to successfully institute its necessary legal and operational framework. Only through this reciprocal transfer of regulatory and technical expertise can a trustworthy and appealing integrated destination be assured.

The final comparative domain, Funding Sources and Financial Sustainability, highlights the contrasting opportunities and dependencies across the three partner territories. Italy (Puglia) demonstrates significant capacity to access and strategically combine national and European funding streams. Nationally, the utilization of the National Recovery and Resilience Plan (PNRR) for urban regeneration and cultural enhancement provides a substantial, dedicated source of investment. At the European level, Puglia is well-placed to utilize its experience in ETC programmes, including the highly relevant Euro-MED Programme 2021–2027, which explicitly targets the mission of "Enhancing Sustainable Tourism" integrated into the circular economy and conservation of cultural heritage. For Puglia, the financial strategy involves leveraging these macro-funds to support regional development, with UCH dive tourism serving as a specific case study for proposal development. Conversely, Montenegro and Albania exhibit a higher structural dependency on Instrument for Pre-Accession Assistance (IPA III) funds, particularly through the Interreg IPA CBC Italy-Albania-Montenegro Programme. This mechanism, designed to promote good neighborly relations and foster EU integration, directly allocates funding to thematic priorities such as "Tourism and Cultural and Natural Heritage." Specific projects in Albania and Montenegro are often directly supported by these IPA funds, which focus on improving and diversifying the tourism offer, increasing the capacity of service providers, and upgrading small-scale infrastructure, including the digitalization of heritage sites. While this funding is essential for foundational development, the long-term financial sustainability for the Balkan partners requires transitioning from a dependency on pre-accession grants to developing national mechanisms and encouraging private-sector investment. This involves implementing viable business models for UCH sites, ensuring local dive operators are licensed and profitable, and establishing fee-based access schemes for UCH sites and associated digital content. Ultimately, the comparative analysis reveals a continuum of cooperation readiness, with Puglia leading the integrated institutional model, and Montenegro and Albania requiring accelerated institutional and regulatory alignment to fully capitalize on the shared European framework for sustainable UCH tourism development.

4. Optimal Destination Management Model;

Dive Destination Management Model Development;

The sustainability of the Dive Destination Management Model is directly linked to its economic viability. All three regions share the threat of over-reliance on the singular "sun and sea" tourism model, necessitating product diversification and seasonal adjustment. For Puglia, viability involves marketing the UCH route as a year-round, high-value experience that justifies a premium price point. For the Balkan partners, the challenge is structural: achieving market-driven revenues by successfully transitioning from the

temporary relief of IPA funding to long-term commercial and sustainable models. This requires implementing clear financial structures, such as charging differentiated fees for physical dives versus digital experiences, and ensuring that DMOs and local operators are empowered to act as commercial managers, not solely as passive beneficiaries of government initiatives. Integral to sustainable management is the mandatory creation of Protected Areas (PAs) around UCH sites. Research suggests that well-managed PAs not only improve conservation awareness but also significantly enhance the quality of the recreational dive experience by increasing fish biomass and species diversity. This biological recovery directly generates higher revenue and willingness-to-pay from divers, offering a powerful, self-funding mechanism for conservation, a critical step that must be accelerated in both Montenegro and Albania, where current PA coverage is limited.

Finally, the Promotion and EU alignment pillar demands a unified narrative, a shared cultural route identity across the South Adriatic. While Montenegro's existing digitalization capabilities are high, and Puglia's market access is broad, the DDMM mandates that promotion must be cross-border and consistent. The regional compatibility of the model is assured by its foundation in the principles of the UNESCO 2001 and Faro 2005 conventions, ensuring that the valorization of UCH is aligned with broader EU policies on Blue Growth and cultural heritage protection. This is intrinsically tied to a Digital First Strategy, where the continued development and maintenance of digitized UCH content, including three-dimensional models and virtual tours, is mandated in all partner regions. This digital infrastructure serves a dual purpose: it is the primary tool for both conservation data collection and the necessary tourism market expansion. By offering high-quality virtual and augmented experiences, tourism operators can attract a significantly broader market, including non-diving tourists, educational groups, and those with physical limitations, thereby diversifying revenue streams. Crucially, this technology supports responsible dive tourism by minimizing the physical impact on the fragile wrecks and providing unprecedented, democratic access to a heritage category that has historically been confined to an elite few.

The optimal DDMM for the South Adriatic is therefore a dynamic, multi-layered governance system designed to account for the current institutional disparities while strongly driving regional convergence towards a common standard. This system is founded on a commitment to five regional actions: the establishment of a cross-border Steering Committee (DDMM-SC) comprised of DMO/DMC representatives, cultural heritage authorities, and private sector stakeholders from all three territories to ensure operational consistency and shared decision-making; the prioritization of rapid Legislative Acceleration in Montenegro and Albania to enact secondary legislation that formalizes UCH access permits, setting clear rules for tourism activities and sanctions for illicit actions; the mandate to develop and maintain accessible digitized UCH content, which ensures this infrastructure serves as the primary tool for conservation data and tourism market expansion; the formalization of Local Empowerment by integrating coastal communities through legally mandated consultation and partnership structures, ensuring they are active co-managers who drive the essential educational and cultural projects; and finally, to implement viable business plans focused on converting grant-funded digital assets and site documentation into commercial, sustainable products, ensuring a robust transition from reliance on pre-accession assistance to resilient private and public revenue generation. By adopting this phased and comparative approach, the DDMM leverages Puglia's institutional maturity to mentor the development of Montenegro and Albania, ensuring that the WRECKS4ALL cultural

route is not only protected but also functions as a cohesive, sustainable, and internationally competitive tourism product, fully aligned with the economic and environmental aspirations of the European Union.

5. Innovation Framework

The implementation of novel digital technologies presents an opportunity to approach the promotion of Underwater Cultural Heritage (UCH) and dive tourism in an innovative way, offering benefits to the cultural heritage sector, the tourism sector, and the general public. Virtual Reality (VR) and Augmented Reality (AR) products, alongside mobile applications and interactive digital platforms, serve distinct but complementary roles in this framework. The utility of VR lies in its ability to offer complete immersion, acting as a potent tool for experiential education and accessibility, particularly for non-divers or those restricted by physical location. In contrast, AR, delivered via mobile devices, provides on-site enhancements, overlaying digital information, such as 3D models or historical narratives, onto the real-world view of a museum exhibit or a dive centre. Interactive and virtual maps, meanwhile, serve as connective tissue, allowing the general public to explore the entire South Adriatic UCH network digitally, comparing site locations and thematic content, which is a utility fundamentally different from the deep-dive focus of a VR experience.

For the cultural heritage sector, these technologies are invaluable for preservation and interpretation. They allow for the creation of high-fidelity digital twins of UCH sites, ensuring that the integrity of fragile wrecks remains protected while still being widely accessible. VR offers the only safe method for the public to "visit" submerged or environmentally sensitive sites, directly mitigating the comparison between preservation needs and public engagement demands. The tourism sector, by contrast, benefits most from the economic and marketing potential of these tools. Mobile applications and AR can transform dive tourism into a richer, more interactive product, creating added value that distinguishes the South Adriatic region from competing destinations. Where traditional marketing offers static images, a mobile app provides real-time dive planning, safety information, and post-dive data logging, fundamentally improving the service comparison against standard offerings. For the general public, the primary benefit is democratized access. These digital products eliminate the physical barriers of diving, enabling children, the elderly, and individuals with disabilities to explore UCH. This comparative approach ensures maximum reach: VR captures those seeking a dedicated, deep experience, while AR and mobile apps cater to casual users and active tourists seeking immediate, location-aware information.

The comparative utility of digital products is magnified when paired with complementary physical infrastructure that emphasizes environmental stewardship, directly addressing the dual goals of innovation and sustainability. A key distinction in the WRECKS4ALL Innovation Framework, informed by models like the Porto Cesareo initiative, is the mandate to ensure that accessibility extends beyond the digital realm into environmentally responsible physical travel, which is a crucial differentiator from purely digital initiatives. For instance, the use of solar-powered e-bike sharing services for land mobility and small, solar-powered electric boats for sea transport near UCH sites offers a tangible comparison to the carbon footprint of conventional tourism, positioning the South Adriatic UCH route as a leader in green tourism. This not only aligns with European Union directives on energy efficiency but also strengthens the narrative that the cultural heritage sector is an active steward of the marine environment. The inclusion of these low-impact mobility solutions, alongside remote accessibility provided by VR/AR and narrative video formats, creates a complete,

end-to-end sustainable visitor experience that fundamentally contrasts with traditional high-volume, high-emission tourism models.

To capitalize on these comparative advantages, the establishment of the WRECKS4ALL VR Showrooms is proposed to offer an immersive experience of UCH sites to up to 20 visitors simultaneously. The selection criteria prioritize high accessibility and proximity to existing cultural attractions or transport links, thus capitalizing on established tourist flows. The physical location chosen for the primary showroom would be a prominent, ground-level retail space in the historic center. The interior design concept, contrasting with a standard museum setup, is based on a clean, minimalist "underwater exploration pod" aesthetic, utilizing deep blue lighting, curved white walls, and polished concrete floors to simulate depth and modernity. Accessibility is paramount: the facility will be fully compliant with disability standards, including ramp access and dedicated seating areas for the VR experience.

The exhibition path is designed as a phased journey, moving from passive to active engagement. It begins with a pre-show interpretive area featuring interactive maps and brief documentary clips on large screens, setting the historical context. The path then leads into the main VR dome or group viewing room, followed by a post-show engagement area where visitors can interact with 3D models of artifacts using AR kiosks and purchase themed merchandise. The scenario of the VR product is a 15-minute guided, narrative-driven dive experience. It begins with a historical reconstruction of the vessel, followed by a virtual descent to the wreck, offering close-up examinations of key archaeological features and marine life, and culminates in a comparative visual overlay of the wreck as it appeared in its prime versus its current state. The target audience is intentionally broad, encompassing leisure tourists, school groups (educational market), history enthusiasts, and potential dive tourists, with the comparative element of the VR scenario appealing to both history buffs and those new to the subject.

Elaborating on the technological core, the VR content creation process requires a strategic comparison between photogrammetry and computer-generated imagery (CGI). While the initial VR showroom content will rely heavily on high-resolution photogrammetric data gathered during UCH site documentation, providing unparalleled historical accuracy and scientific grounding, CGI will be strategically employed for the historical reconstruction phases and for creating dynamic, interactive elements that enhance the narrative flow. This hybrid approach is superior to pure photogrammetry, which can often result in static, visually muted environments, or pure CGI, which lacks the fidelity of real archaeological data. The technological infrastructure will consist of a central, high-performance server rack capable of rendering and streaming synchronized, high-resolution content to 20 head-mounted displays (HMDs) or, alternatively, specialized cinematic VR seats. Audio will be delivered via individual noise-canceling headphones to maximize immersion. Furthermore, the room will integrate high-definition, multi-touch interactive surfaces in the pre-show area. These surfaces will run the interactive and virtual maps, allowing visitors to digitally zoom, filter, and compare the documented UCH sites across the three participating territories Italy, Puglia, Montenegro, and Albania. This comparative mapping capability serves as a vital cross-border educational tool, highlighting shared maritime history and demonstrating the project's regional scope far more effectively than national exhibits.

The proposed WRECKS4ALL VR Showrooms must demonstrate financial and operational sustainability to justify the initial investment. The revenue model is complex, moving beyond simple ticket sales to compare favorably against conventional non-profit cultural institutions. The multi-tiered revenue strategy includes a primary stream from standard adult and reduced (student/senior) admissions, supplemented by high-margin revenue from premium guided tours, virtual corporate events (using the VR dome for unique meeting backdrops), and exclusive rights for educational packages sold to local school districts. Crucially, the showroom will generate secondary revenue through the post-show engagement area, which will operate as a high-quality retail outlet selling themed merchandise, reproductions of artifacts, and specialized dive equipment linked to local partners, providing a direct economic benefit to the tourism sector. The costs and budget estimate covers three years and is segmented into capital expenditure (CapEx) and operating expenditure (OpEx). CapEx includes \$200,000 for facility build-out and interior design, \$150,000 for technological infrastructure (server, HMDs, dome/seating), and \$100,000 for VR content creation (3D scanning, historical research, rendering). OpEx includes staffing, utilities, rent, and software licenses, estimated at \$150,000 annually. Financial sustainability will be achieved through this multi-tiered revenue model. Comparing this investment to the construction and maintenance of a new physical wing in a traditional museum, the VR showroom offers a vastly superior return on investment (ROI). It requires less physical space, has lower long-term maintenance costs for the "exhibits" (since they are digital), and allows for instantaneous content updates and regional exchange—an inherent advantage over the costly logistics of moving and insuring physical artifacts. Furthermore, the operational model will incorporate a dedicated role for a Partnership and Sponsorship Manager, tasked with securing long-term funding from regional development banks and European heritage funds, ensuring financial resilience that is independent of seasonal tourism fluctuations, thereby offering a crucial comparative stability for the cultural heritage sector.

The promotion and marketing campaign, titled "Dive the Hidden History of the South Adriatic," is entirely centered on leveraging the unique comparative advantage of the VR showroom, focusing on the novelty of the experience compared to traditional museums. The campaign will leverage digital marketing, fundamentally contrasting the static "brochure" style of competitors. This includes the development of a dedicated, multilingual webpage with a seamless online booking system, providing real-time availability and integrated regional travel information. An active social media presence will be maintained, focusing on compelling video trailers, behind-the-scenes content of the UCH documentation process, and crucially, the promotion of user-generated content (UGC) from showroom visitors. UGC is a high-trust marketing asset that is difficult to generate for sensitive UCH sites accessed only by certified divers, giving the showroom a significant promotional edge. Local and regional partnerships are equally vital, ensuring the showroom is fully integrated into existing tourist itineraries. Partnerships with hotels, local Destination Management Companies (DMCs), and schools will facilitate bundled packages and educational outreach, ensuring a broad, diverse audience base. The promotional strategy will be further supported by a high-profile launch event and sustained participation in key international tourism fairs, allowing the South Adriatic to promote its UCH not just to dive enthusiasts, but to the global experiential tourism market. Ultimately, the WRECKS4ALL VR Showroom has the immense potential to revolutionize how the South Adriatic's Underwater Cultural Heritage is perceived and experienced, contrasting sharply with the limitations of previous methods. By democratizing access, it breaks down the physical and financial barriers of scuba diving for the general public, fulfilling a primary social inclusion goal. Through powerful, immersive storytelling it offers a deeply personal

and emotionally resonant connection to history that is unachievable in a traditional gallery setting. This initiative is also a practical model for sustainable tourism, as it helps protect fragile underwater ecosystems and archaeological sites by offering a high-quality, high-capacity virtual alternative, simultaneously creating a new, predictable, and year-round economic driver for the region. Most significantly, the VR showroom will serve as a physical catalyst for cross-border cooperation, visibly showcasing a shared regional heritage. The ability to seamlessly present and compare UCH sites from Puglia, Montenegro, and Albania within a single, unified, state-of-the-art environment actively encourages a new appreciation for the collective underwater treasures of the South Adriatic, solidifying the WRECKS4ALL cultural route as a unified, world-class destination. This comprehensive, integrated innovation framework positions the region at the forefront of global cultural heritage management and tourism development.

6. Dive destination development plan:

Road Map:

This chapter outlines the strategic Road Map necessary to transform the dive tourism of the South Adriatic, specifically focusing on Puglia in Italy, the Vlora region of Albania, and the coastal municipalities of Montenegro, into a cohesive, competitive, and sustainably managed cross-border cultural route. While the previous sections established the foundational need for protecting Underwater Cultural Heritage (UCH) through digitalization and innovation, the immediate challenge is translating this vision into an operational economic engine that benefits local coastal communities. This requires a nuanced comparative understanding of the partner territories, identifying where governance is robust, where capacity is nascent, and where opportunities for integration are ripest. The three participating nations bring vastly different levels of institutional maturity and development to the partnership, which paradoxically forms one of the project's greatest strengths, allowing for a strategic transfer of best practices, particularly in management and legal compliance.

Italy possesses a mature framework for heritage protection and valorization. Its strength lies in its established, formal governance structures, defined operational plans, and the regulatory certainty required for permitting and managing access to UCH sites. The involvement of regional and municipal authorities, as noted in the operational planning, provides a template for multi-stakeholder coordination, ensuring that dive tourism planning is aligned with broader regional cultural policies and funding streams. This institutional depth acts as a stabilizing element for the entire cross-border initiative, offering a benchmark for rigorous site management, conservation protocols, and community engagement. However, the Italian model's weakness may lie in the very bureaucracy that ensures protection; the process of opening new sites or rapidly adapting to market demands can be slow, a trade-off for regulatory thoroughness.

In contrast, Albania's Vlora region, while boasting a spectacular and largely untapped reservoir of UCH, much of which remains unmapped and unexplored, is still in the foundational stages of formal dive destination development. The analysis suggests that Vlora's primary weaknesses are a fragmented institutional landscape, a lack of comprehensive integration of dive tourism into national strategies, and infrastructure gaps related to mapping, accessibility, and emergency response. Yet, these very gaps define immense opportunities: the absence of entrenched structures allows for the swift adoption of modern best practices, particularly in digital interpretation and sustainable management, directly capitalizing on

international demand for adventure and cultural tourism. The clear potential to tap into EU funding instruments, coupled with the ability to build a dive sector from the ground up using digital technologies like Virtual Reality and interactive apps, positions Albania as the project's high-growth nexus, provided the initial governance hurdles are overcome.

Montenegro, holds an intermediate position. Like Albania, it possesses significant, historically rich coastal waters and UCH sites that demand professional surveying and legal institutional protection. The strength of the Montenegrin offering lies in its established, albeit concentrated, tourism sector and its proximity to major Mediterranean markets. The weakness often mirrors Albania's in terms of regulatory clarity and the need for formalized protocols for UCH site access and management. The key opportunity for Montenegro is leveraging its status as a premium destination to brand the UCH cultural route as a high-value, niche offering, driving significant economic impact through specialized dive operators and heritage tours. To fully realize this, it must prioritize system improvements that align its legal and operational frameworks with the proven standards of its Italian partner.

The collective impact of developing this UCH dive tourism is transformational for the economies of the coastal communities across all three nations. Coastal regions, particularly in the South Adriatic, are heavily reliant on highly seasonal, often low-yield sun-and-sea tourism. UCH dive tourism fundamentally shifts this paradigm by introducing a specialized, high-yield, and year-round activity. Unlike mass market tourism, diving attracts enthusiasts who typically possess higher disposable incomes and spend more on specialized services, accommodations, and ancillary cultural experiences, such as museums and VR showrooms. This creates new economic activities that diversify the local labor market beyond seasonal hospitality, fostering growth in areas like professional dive guiding, UCH site monitoring and maintenance, boat charter services, specialized equipment supply, and, crucially, the technology sector required to maintain and update the digital assets. The establishment of world-class UCH interpretation centers and VR experiences, as envisioned by WRECKS4ALL, ensures that the economic benefit is distributed into the shoulder seasons and even year-round, stabilizing local employment and generating steady revenue for community reinvestment. By turning submerged history into a visible, accessible, and protected resource, the coastal communities gain a unique, non-extractive source of long-term prosperity and cultural pride.

Based on this comparative assessment, the strategic Road Map requires coordinated, phased action, focusing on five interlocking pillars.

Pillar One: Formalized Cross-Border Governance. The immediate way forward is the establishment of a high-level, tripartite Management Committee, drawing inspiration from the institutional depth of the Italian model. This committee, serving as the central reference for decision-makers, must formalize operational protocols across all three states, standardizing safety regulations, UCH site access permits, environmental monitoring requirements, and interpretation standards. This harmonization is essential for creating the perception of a single, unified dive destination for international travelers.

Pillar Two: Sustainable Capacity Building. For Albania and Montenegro, this involves aggressive training programs focused on specialized UCH dive guides and the establishment of local capacity for site

mapping and maintenance. The economic sustainability of the route depends on ensuring that local entrepreneurs, and not just international firms, are the primary service providers.

Pillar Three: Prioritization of Digitalization for Protection. To mitigate the physical impact of increasing dive traffic, the Road Map prioritizes the complete 3D digital mapping of all featured UCH sites. The resulting VR and AR assets are not just promotional tools; they are the primary conservation strategy, allowing the fragile sites to be experienced by the majority of tourists in a non-invasive, high-capacity setting, thus managing site access and ensuring long-term preservation.

Pillar Four: Unified Cross-Border Branding. The unified marketing of the "WRECKS4ALL Cultural Route" is paramount. Promotion must emphasize the unique historical narrative that connects the UCH sites of Puglia, Vlora, and the Montenegrin coast, appealing to the global demand for historical and adventure tourism. This requires a shared digital platform providing real-time information on site status, booking, and cross-border logistics.

Pillar Five: Phased Economic Integration. The final and most critical step is integrating the dive sector with the broader tourism ecosystem, including accommodation, local gastronomy, and land-based museums. This ensures that the economic impact extends far beyond the dive centers themselves, maximizing the benefit to the entire coastal community.

The Road Map, therefore, advises decision-makers to focus resources on institutional coordination first, leveraging the Italian regulatory experience to rapidly formalize the Albanian and Montenegrin dive sectors, and employing innovative digital technologies not as an add-on, but as the core strategy for both heritage protection and sustainable economic growth. The path to success is through collective action, standardization, and a shared commitment to positioning the South Adriatic as a premier global destination for underwater cultural heritage.

MONTENEGRO - Wrecks4All Action Plan

University of Montenegro

Through the implementation of the WRECKS4ALL project, Montenegro has commenced to solidify its position in the recognition of underwater cultural heritage (UCH) as a driver of sustainable tourism. As the lead partner of this large-scale initiative co-funded through the Interreg IPA CBC Croatia, Bosnia and Herzegovina, and Montenegro program, the University of Montenegro has been instrumental in guiding a cross-border multilateral effort to combine heritage protection with technological innovation. This leadership not only demonstrates institutional capacity but also a commitment to preserving its rich maritime history for a more sustainable tourism future. The Adriatic Sea, a historical conduit for trade and cultural exchange for millennia, holds an unparalleled underwater heritage of shipwrecks and harbors. These fragile, non-renewable cultural assets are a significant, yet underutilized, resource for specialized tourism. The WRECKS4ALL project, implemented from 2020 to 2022, successfully addressed key challenges by creating a new paradigm for interacting with these submerged cultural sites. The project's key achievements included the development of nine Virtual Reality (VR) and Augmented Reality (AR) tours, the creation of a virtual map of underwater heritage trails, and the establishment of VR showrooms in Kotor, Split, and Mostar. These innovations brought otherwise inaccessible heritage to a wider audience and fostered a new, sustainable form of cultural tourism. By coordinating partner institutions, engaging stakeholders and local communities, the University of Montenegro laid the groundwork for a long-term regional strategy (Kovacevic, 2023).

The WRECKS4ALL 2.0 Action Plan is the next crucial step in adapting the WRECKS4ALL model for the protection of underwater cultural heritage (UCH). Developed under the "WRECKS4ALL 2.0 Capitalization by transferring to new territories the WRECKS4ALL model for the protection of underwater heritage through its digitalization and valorization as a novel touristic offer" project, co-funded through the Interreg IPA South Adriatic Programme, this plan aims to transfer the successful model, initially developed for Croatia, Bosnia and Herzegovina, and Montenegro, to the specific needs of new territories. It translates the project's pilot actions and innovative models into a comprehensive, forward-looking strategy tailored to the specific needs of the South Adriatic. The plan is designed with a three-fold purpose: to ensure the protection of UCH in line with national legislation and international conventions; to position UCH as a driver for sustainable tourism that diversifies the offer and benefits local communities; and to integrate underwater heritage into broader national and regional development strategies. By adopting this comprehensive plan, Montenegro aims to enhance its visibility as an attractive and trustworthy dive destination, ensuring that the economic benefits of its maritime heritage are balanced with its long-term preservation and shared prosperity.

The development of this document, particularly the WRECKS4ALL 2.0 Action Plan, was informed by a multi-faceted methodological approach designed to ensure its comprehensiveness and relevance. The process began with desk-based research, meticulously analyzing the existing legislative framework, strategic documents, and master plans related to underwater cultural heritage, tourism, and maritime affairs. This foundational step provided a critical understanding of the legal and policy landscape. This research was complemented and compared to data gathered during the large-scale WRECKS4ALL project, which provided a wealth of knowledge from its pilot actions and experiences. Further insights were collected through direct engagement with key stakeholders. Meetings and interviews were conducted during WRECKS4ALL 2.0 events, conferences and B2B meetings allowing for direct, qualitative input from experts and practitioners. A crucial component of this methodology was a comprehensive survey by a questionnaire distributed to a wide range of entities. A total of 33 entities from diverse sectors including Tourism, Culture, Cultural Heritage,

Education, Science and Research, Diving Tourism, Private Sector, Security, and Maritime Affairs provided valuable answers to the survey questions [Figure 1]. The survey was designed to gather granular data directly informing the Action Plan's pillars. It helped to establish criteria for UCH site selection and to assess the current state of sustainable tourism and dive services. Furthermore, it sought input on building a stronger cooperation framework, proposing an optimal destination management model, and fostering innovation by gauging interest in digital technologies like VR and AR. This data provides the empirical foundation for a strategic roadmap, ensuring the plan is grounded in real-world needs and feedback.

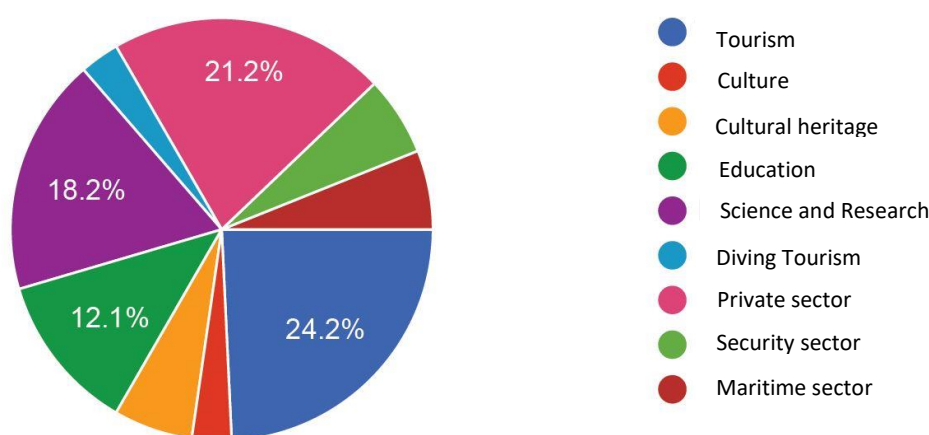


Figure 1. Sectors Represented by 33 Survey Stakeholders (in %).

Based on a comprehensive methodological approach the WRECKS4ALL 2.0 Action Plan was developed as a strategic document aiming to transfer a successful model of preserving underwater cultural heritage through digitalization to foster sustainable tourism. It provides a forward-looking roadmap to balance economic benefits with long-term preservation of Montenegro's maritime history and its integration within the cross-border context.

1. Underwater Cultural Heritage (UCH) Sites Selection:

1.1 Selection Criteria and Analysis:

The selection of underwater cultural heritage (UCH) sites for integration into the WRECKS4ALL cross-border cultural route requires a carefully defined methodology that ensures both the protection of heritage resources and their sustainable use as tourism attractions. The purpose of this process is to establish methods and guidelines for identifying sites that are attractive to both divers and the general public, and that are suitable for presentation through underwater museums, or diving parks, as well as through land-based exhibition concepts of Virtual Reality Showrooms integrated with similar sites from Albania and Italy. These concepts, combining physical interpretation with state-of-the-art immersive technologies including virtual

reality (VR), augmented reality (AR), and dry-dive experiences, offer innovative ways to enhance accessibility and awareness while safeguarding fragile resources.

Based on an online survey conducted with 33 respondents representing nine different sectors, stakeholders identified shipwrecks and archaeological sites as the underwater cultural heritage assets with the greatest tourism potential, viewing them as the most attractive categories for visitors. In addition, several participants pointed out that combining cultural heritage with natural underwater landscapes could further enhance the appeal, creating integrated experiences that would be particularly compelling for tourists [Figure 2].

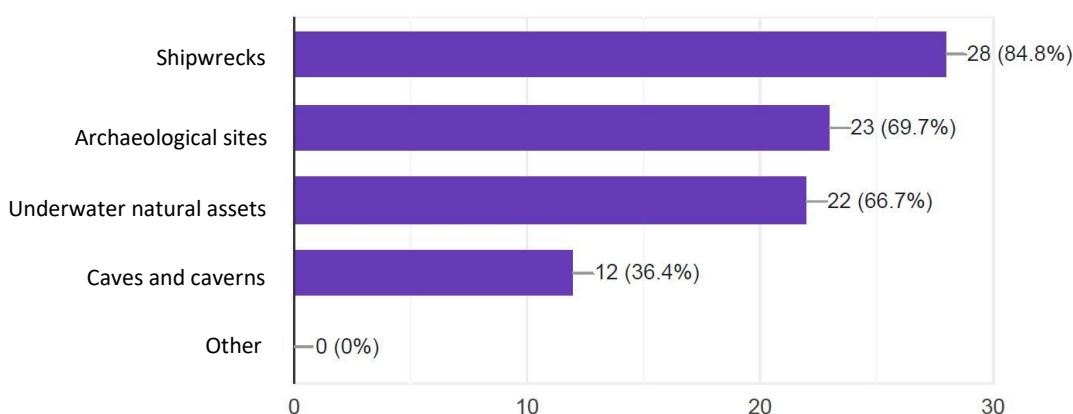


Figure 2. Underwater Cultural Heritage Sites with the Greatest Tourism Potential (Survey Results).

The methodology proposed here draws inspiration from established models in academic literature, notably the Conservation Prioritization Model (CPM), as well as from successful practices tested in international initiatives such as the BlueMed project, Underwater Museum at Malta, etc. In adapting the Wrecks4All Action Plan to the Montenegrin context, the first challenge lies in defining criteria for selecting sites that could be subsequently developed as part of a cross-border cultural route. This process demands a balance between scientific, cultural, and tourism-driven considerations, ensuring that the chosen sites embody historical and natural value, remain sufficiently preserved, and can be responsibly accessed and interpreted (Fa, Finlayson & Finlayson, 2011).

The proposed methodology is based on a multi-stage process combining desk research, field assessment, stakeholder consultation, and comparative analysis. Desk-based research, including review of heritage inventories, hydrographic surveys, and existing documentation, establishes a baseline of known UCH assets and their legal status. This is followed by rapid condition assessments, in which the structural integrity, preservation state, and environmental setting of candidate sites are evaluated. These assessments also address the degree of exposure to human threats, such as looting, unregulated anchoring, or fishing, as well as natural threats, including sedimentation, storms, and biological degradation. The findings allow for a first appraisal of each site's viability for inclusion in a WRECKS4ALL digital product (Fa, Finlayson & Finlayson, 2011).

Equally important is the consideration of accessibility and safety. Sites must be evaluated with regard to their depth, visibility, currents, seasonal conditions, proximity to ports and emergency facilities, and suitability for different categories of divers. These factors determine whether the site can be responsibly opened for physical diving tourism or whether it is more appropriate to be interpreted through digital technologies and dry-dive solutions. Attractiveness for visitors is also a decisive element, encompassing both the intrinsic value of the site and its capacity to tell compelling stories within the broader Adriatic maritime narrative. Sites that are thematically linked to trade routes, military history, or intercultural exchanges are particularly valuable for integration into cross-border tourism products (Fa, Finlayson & Finlayson, 2011).

Beyond the physical and historical characteristics, attention must also be paid to the feasibility of infrastructure development and long-term management. This includes estimating the costs of installing mooring buoys for marked underwater trails, as well as the operational expenditures related to monitoring, maintenance, and visitor management. At the same time, the capacity for digitisation is a crucial selection factor. Sites must lend themselves to photogrammetry, 3D reconstruction, and immersive storytelling so that high-quality AR/VR experiences can be produced. These digital products not only increase accessibility for non-divers but also reduce physical pressure on the sites themselves, thereby reinforcing conservation objectives (Fa, Finlayson & Finlayson, 2011).

To ensure a robust and transparent process, a multi-criteria analysis is applied, scoring candidate sites against a range of weighted criteria. These criteria include historical and natural significance, integrity and condition, legal protection status, exposure to threats, accessibility and safety, attractiveness for tourism, feasibility of infrastructure, suitability for digitisation, interpretive potential, cross-border thematic coherence, contribution to regional development, community support, and environmental sensitivity. Sites that achieve the highest scores across these dimensions are prioritised for immediate development, while others may be earmarked for phased integration in the future or retained for monitoring (Fa, Finlayson & Finlayson, 2011).

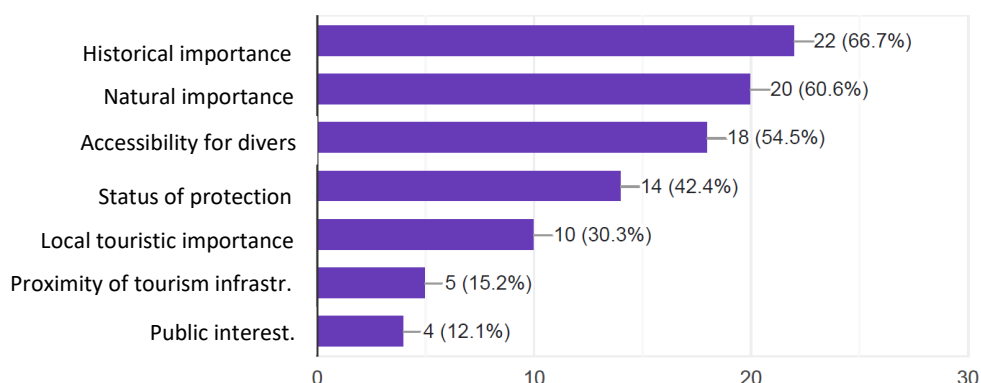


Figure 3. Stakeholders' Priorities for Selecting Underwater Cultural Heritage for Tourism and Development.

When asked which criteria should be prioritized in selecting underwater cultural heritage for tourism development, respondents most often pointed to the historical significance of the site, followed by its status

of protection and preservation and the accessibility for divers. These answers suggest that stakeholders see cultural value and safeguarding as the primary considerations, with practical visitor access also playing a decisive role. Other factors such as natural beauty, proximity to tourism infrastructure, and local/regional importance were mentioned but ranked lower in comparison, reflecting a shared understanding that tourism potential must be built on cultural authenticity and proper conservation [Figure 3].

The outcome of this process for Montenegro will be the selection of six underwater cultural heritage sites that meet the necessary standards and collectively represent a balanced portfolio of attractions. This portfolio will ensure thematic diversity, ranging from ancient trade routes and shipwrecks to modern maritime heritage, and will be designed to appeal to different categories of visitors, from professional divers to the general public. Importantly, not all sites need to be physically accessible, thereby demonstrating a dual model of conservation and interpretation.

Once selected, each site will be documented through a comprehensive dossier containing details of its location, legal framework, condition, threats, safety measures, and interpretive themes. These dossiers will serve as the foundation for digital promotion through interactive maps, AR/VR tours, and integration into WRECKS4ALL VR Showroom exhibitions. Furthermore, they will provide a structured basis for governance and decision-making by relevant institutions, ensuring that the process remains transparent, participatory, and aligned with both national legislation and international frameworks such as the UNESCO 2001 Convention.

The selection and analysis of UCH sites is thus not merely a technical exercise but a strategic step toward building a cross-border tourism offer that safeguards heritage, diversifies the economy, and strengthens regional identity. By combining rigorous criteria with innovative approaches to interpretation and accessibility, Montenegro can ensure that its underwater heritage contributes to sustainable tourism development while remaining protected for future generations (Fa, Finlayson & Finlayson, 2011). Evaluation score is offered in the range from 1 to 5, where 1 is lowest and 5 highest score. The selection criteria are as follows:

- Historical value at the national level – 1 - 5
- Historical value at the international level – 1 – 5
- Natural value at the national level – 1 – 5
- Natural value at the international level – 1- 5
- Preservation and condition of the site – 1 – 5
- Location and accessibility of the site – 1 – 5
- Attractiveness of the site for diving tourism – 1 – 5
- Exposure to threats – 1- 5
- Feasibility of development and maintenance of infrastructure for physical access – 1 – 5
- Quality of the site for digitization and presentation through dry dive products (3D, VR, AR) – 1-5

Table 1: Adapted Conservation Prioritization Model evaluation (Fa, Finlayson & Finlayson, 2011)

Selection criteria	Name of the site	Steamship Carola	SMS Zenta	Steamship Qinto	Torpedo boat Higans 78	Steamship Goritia	Steamship Oreste	MY Rumija	Steamship Cetinje
Historical value at the national level		5	5	5	5	5	3	5	5
Historical value at the international level		2	4	2	2	2	2	4	2
Natural value at the national level		3	4	3	3	3	2	2	2
Natural value at the international level		1	1	1	1	1	1	1	1
Preservation and condition of the site		4	4	3	3	4	3	2	2
Location and accessibility of the site		3	2	3	4	3	3	1	2
Attractiveness of the site for diving tourism		5	5	5	5	5	4	4	4
Exposure to threats		1	1	2	2	2	1	5	3
Feasibility of development and maintenance of infrastructure for physical access		3	1	4	4	4	5	3	2
Quality of the site for digitization and presentation through dry dive products (3D, VR, AR).		5	5	5	5	5	5	5	5
Total score:		32	32	33	34	34	29	32	28

The final selection of underwater cultural heritage sites focused on the six wrecks with the highest total evaluation scores (32 or above), marking them as the most viable for valorization based on historical significance, tourist potential, and feasibility of development [Table 1]. Consequently, the Steamship Oreste and Steamship Cetinje were not included in this primary group. The Steamship Oreste received the lowest overall score of 29, primarily due to lower scores in natural value, preservation, and diving attractiveness compared to the top sites, despite its high feasibility for infrastructure development. The Steamship Cetinje scored 28, the absolute lowest, reflecting challenges across multiple categories, including its limited international historical value and lower preservation status. While historically significant at the national level, their comparative scores indicated a lower overall return on investment for immediate valorization efforts relative to the top six contenders.



Figure 4: The Steamship Karola, photography of the detail.

The Steamship Karola was a trading vessel built in 1892 in Newcastle, England, for the Austro-Hungarian company Adria (based in Rijeka) [Figure 4]. It connected ports like Rijeka, Trieste, Malta, Syracuse, and Tunis. Its commercial service ended with World War I, during which it was used for military purposes in Dalmatia. Its final voyage ended on June 22, 1916, when it sank near Cape Djeran (Ulcinj) at a depth of 17 meters following a collision with the steamboat Matias Kiralji due to dense fog (Gačević, 2012). The Karola wreck received a high overall score of 32. It is rated very highly for its Historical value at the national level (5) and its Attractiveness of the site for diving tourism (5), indicating it's a significant and popular dive site. The Quality of the site for digitization (5) is also maxed out, suggesting excellent potential for virtual presentation. Its low exposure to threats (1) is a positive factor for long-term preservation. Scores are lower for its international historical/natural value and modest for preservation/accessibility.

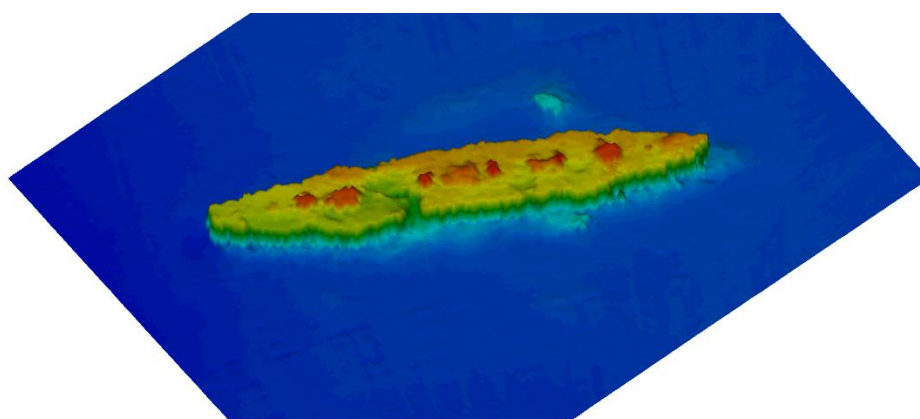


Figure 5: SMS Zenta recorded by MBES

The SMS Zenta was the lead ship of the Zenta class of cruisers, built for the Austro-Hungarian navy at the beginning of the 20th century for scouting and torpedo attack protection [Figure 5]. It participated in intercontinental travel, including a mission to East Asia (1899) and the Boxer Rebellion in China. During World War I, as part of the international fleet blocking the Montenegrin coast, it was intercepted by the French fleet

on August 16, 1914. In the ensuing naval battle off the coast of Bar, the heavily outmatched SMS Zenta was struck, caught fire, and sank, with more than half of its crew killed or missing. The wreck lies at a depth of 71 meters (Gačević, 2012). The SMS Zenta received a total score of 32. It is highly valued across the board for Historical value (5 national, 4 international), Natural value at the national level (4), and is considered an extremely Attractive site for diving tourism (5) with max potential for digitization (5). The low exposure to threats (1), likely due to its significant depth, is notable. However, its Location and accessibility (2) and Feasibility of development (1) are significantly low, reflecting the challenges of accessing a deep-water wreck.

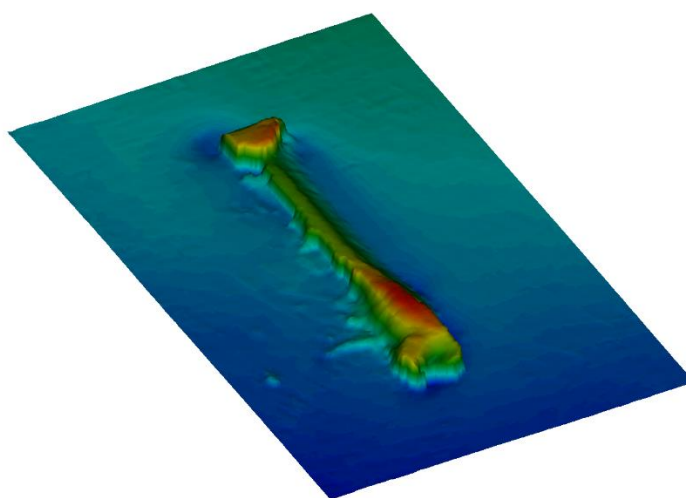


Figure 6: Steamship Quinto, recorded by MBES

The SS Kvinto was originally a port ship, built in 1922, which was later extended and refurbished into a trading vessel [Figure 6]. By the 1930s, it was named Kvinto and mobilized by the Italian Navy as a warship, despite being unarmed. In late December 1940, during the Greek-Italian war, it was transporting fuel and war material along the Montenegrin coast when it was located and sunk by the Greek submarine Katsonis south of Bar (Gačević, 2012). The wreck lies on the sandy bottom at a depth of 34 meters. The SS Kvinto achieved a total score of 33. It stands out for its Historical value at the national level (5) and its Attractiveness for diving tourism (5), combined with excellent Quality for digitization (5). It has a high score for the Feasibility of development and maintenance (4), suggesting relatively easier infrastructure installation compared to some others. The lower Preservation and condition (3) and slightly higher Exposure to threats (2) indicate some challenges in its current state.

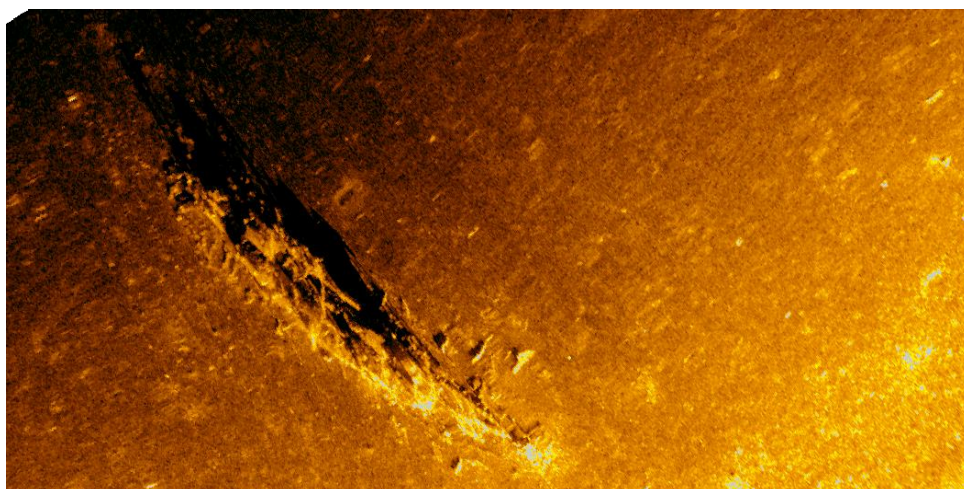


Figure 7: The Torpedo Boat Higin 78, recorded by Side Scan Sonar

The Torpedo boat Higin 78 was a class of boat used by the American navy during WWII, declared surplus in 1948 [Figure 7]. Yugoslavia, under Josip Broz Tito, purchased these boats in 1948 as part of a modernization and shift toward Western powers following the Informbiro Resolution and the split with Stalin. Yugoslavia later produced its own copies. Two specimens were intentionally sunk in 1972 by Captain Jovo Koluvija near Špiljice towards Rose and near the Mladost children's home in Bjela after being declared unseaworthy during a tug operation (Gačević, 2012). The Torpedo boat Higin 78 achieved the highest total score of 34 (tied with Steamship Goritia). It scores top marks for Historical value at the national level (5), Attractiveness for diving tourism (5), and Quality for digitization (5). It is rated highly for its Location and accessibility (4) and the Feasibility of development (4). Its lower international value and modest preservation scores are offset by its high accessibility and tourism potential, positioning it as a top candidate for development.

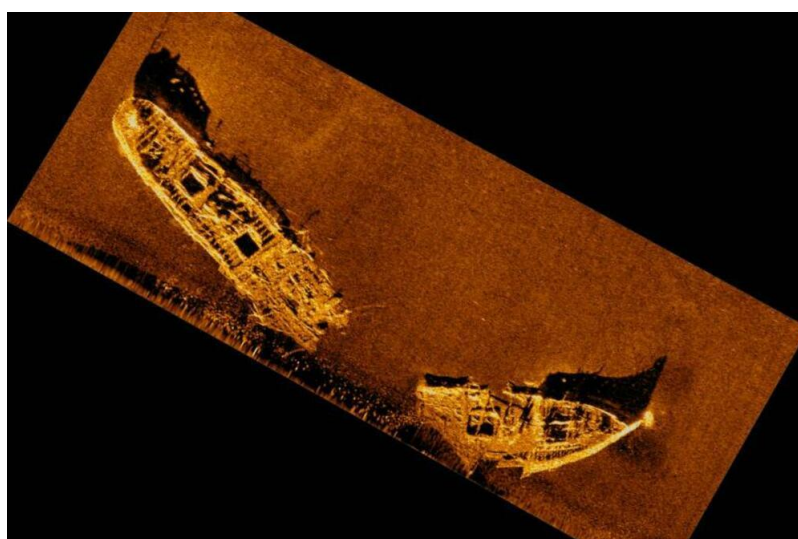


Figure 8: The steamship Goritia, recorded by Side Scan Sonar

The Steamship Goritia was an Austrian Lloyd steamship built in 1903. It was approximately 104 meters long with a capacity of around 3,104 gross tonnage. During World War I, it was repurposed for military needs, primarily for ammunition storage on the Albanian coast [Figure 8]. Its final journey ended on the night of August 19, 1918, on its return from Durrës, when it struck a naval mine (the most commonly cited cause), exploded, caught fire, and sank. The wreck is one of the largest and best-known off the coast of Montenegro (Gačević, 2012). The Steamship Goritia achieved the highest total score of 34 (tied with Torpedo boat Higin 78). It is rated highly across several key areas: Historical value at the national level (5), Attractiveness for diving tourism (5), and maximum potential for Quality for digitization (5). Its high scores for Location and accessibility (4) and Feasibility of development (4) reflect its relatively shallow depth and popularity. The preservation and condition of the site is rated as good (4). Its scores for international value and natural value are low, but this is offset by its strong national significance and tourism appeal.

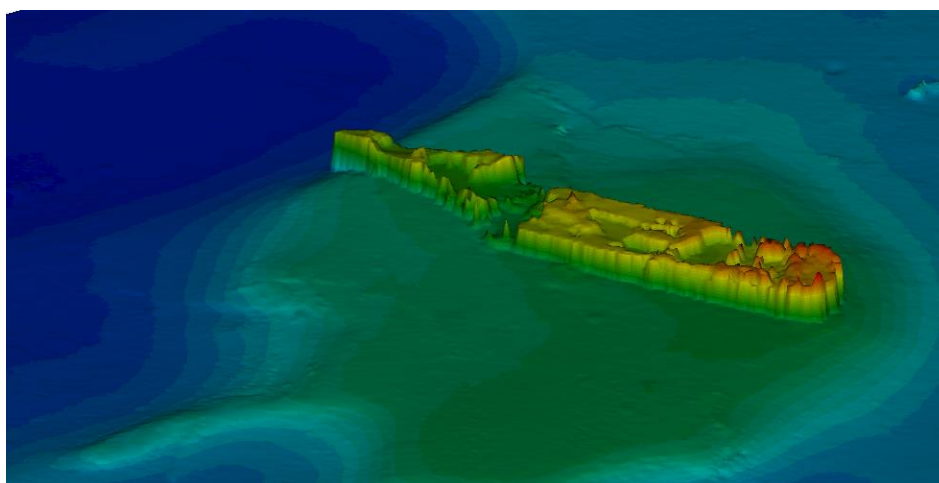


Figure 9: MY Rumija, recorded by MBES

The MY Rumija was a steam yacht in the Montenegrin navy, serving from 1905 to 1915. Originally built in the UK and purchased as Zaza, it was a gift from Sultan Abdul Hamid II to Prince Nicholas I of Montenegro, and was renamed Rumija in 1908 [Figure 9]. It was used in the Balkan Wars and World War I for transporting troops and supplies. Its sinking occurred on March 2, 1915, when it was attacked and torpedoed/damaged by Austro-Hungarian forces in the port of Bar (Antivari). The wreck, which is almost completely ruined, lies in the aquatorium of the current Port of Bar at a depth of about 8.3 to 12.5 meters and has been recognized as a protected cultural asset since 1967 (Gačević, 2012). The MY Rumija received a total score of 32. It is highly significant for both its Historical value at the national level (5) and international level (4), reflecting its unique history as a royal gift and its role in World War I. However, it scores extremely low on Location and accessibility (1) and highest on Exposure to threats (5), which is consistent with its location almost in the middle of the active Port of Bar. Its Preservation and condition is low (2), reflecting its "almost completely ruined" state. Despite the poor physical condition, its Quality for digitization (5) and good Attractiveness for diving tourism (4) suggest that its value lies more in its historical and digital presentation than in its physical state as a wreck.

1.2 Legislative Framework:

Notwithstanding the fact that recreational diving at underwater cultural heritage (UCH) sites in Montenegro is not formally prohibited, the country still lacks a coherent and comprehensive set of strategies, policies, and regulatory instruments for protecting of UCH sites, managing dive tourism and granting controlled access to underwater cultural resources. At present, only few underwater sites enjoy legal protection: Bigovica Bay and the royal yacht *Rumija*, area of ancient archeological site Risan, and the 16th-century shipwreck near Cape Kabala, declared a protected cultural good following the theft of an anchor. Occasionally, sites are declared protected for a certain period of time as a consequence of damages, looting and media pressure on responsible institutions. Despite numerous formal initiatives submitted for the declaration of additional underwater deposits as cultural goods, many of which already fall within the definition of cultural heritage under Article 1 of the UNESCO Convention on the Protection of the Underwater Cultural Heritage, the competent Authority has not advanced these processes beyond acknowledging receipt of proposals for protection (MacKintosh, 2019).

In practice, divers are free to access most underwater heritage sites along the Montenegrin coast, as the law does not impose specific prohibitions neither there is control nor enforcement. By the definition of the UNESCO 2001 Convention, to which Montenegro is a party and which is enforced by Constitution, such sites are cultural heritage and should be subject to principles of protection, monitoring, and valorization. However, institutional capacity for systematic management is weak, and the tourism potential of UCH has just started to be formally recognized within cultural or tourism planning frameworks. The dive tourism sector operates under outdated regulations, without proper alignment to international standards, which places both the preservation of heritage and the sustainability of the sector at risk (MacKintosh, 2019).

Based on the online survey results, in which 33 representatives of various sectors in chain of underwater cultural heritage and tourism participated, a significant finding is the widespread belief that the existing legal and institutional framework in Montenegro is inadequate for managing underwater cultural heritage [Figure 10]. Respondents expressed that current national laws do not sufficiently support the protection and sustainable use of these resources, and, importantly, they do not formally recognize diving tourism as a distinct economic sector. This lack of a clear legal framework and institutional support, combined with a perceived lack of expertise and a conservative approach from official bodies, were identified as the biggest obstacles to the sector's development.



Figure 10. The existing national laws adequately support the protection and sustainable use of underwater cultural heritage.

While a thorough analysis of Montenegro's legal framework is a critical prerequisite for establishing a comprehensive action plan, it is also important to recognize the existing normative instruments that can facilitate the development of protection system and touristic valorization of UCH. The legal analysis would serve to identify and leverage these enabling provisions while simultaneously revealing and addressing the regulatory gaps that currently hinder a more systematic and sustainable approach to managing underwater cultural heritage. This dual-purpose analysis is essential for creating a strategic roadmap that is not only ambitious in its goals but also grounded in the realities of the national legal landscape.

The Law on the Protection of Cultural Properties

The central piece of legislation governing heritage management is the Law on the Protection of Cultural Properties (Official Gazette of Montenegro, nos. 049/10, 040/11, 044/17, 018/19). Article 6 establishes that Montenegro is obliged to protect cultural assets on its territory, including inland waters and the territorial sea. Articles 18 and 19 detail the procedure for declaring cultural goods under protection, including the right of any citizen or organization to submit an initiative, with the Authority obliged to respond within 90 days. Articles 39 and 57 define the framework for managing cultural goods, requiring the designation of competent entities at state or municipal level and ensuring that cultural goods are used in ways that respect their integrity and sustainable use.

Particularly relevant for underwater cultural heritage are the provisions on concessions (Articles 59–61), which allow state-owned immovable cultural goods to be granted for use under strict conditions, including tourism, scientific, and educational purposes. Importantly, unexplored archaeological sites and reserves are excluded, ensuring that only sites with sufficient research and management plans may be valorized. This provides a legal foundation for granting concessions to dive operators or cultural institutions, provided that comprehensive management and revitalization plans are in place. Despite the legal provisions that allow for concessions of state-owned cultural goods for tourism and other purposes, there are no cases of granting such concessions for underwater cultural heritage (UCH) sites in Montenegro to date. This

indicates a significant gap between legal possibilities and practical implementation, preventing the formal protection and valorization of these sites for sustainable tourism. This issue is a major hurdle for the development of the UCH dive tourism sector, as it limits the ability of dive operators and cultural institutions to establish comprehensive management and revitalization plans.

UNESCO Convention and International Commitments

Montenegro ratified the UNESCO Convention on the Protection of the Underwater Cultural Heritage in 2008 (Official Gazette of Montenegro, no. 04/08). While its provisions have yet to be systematically integrated into national law, the Constitution of Montenegro (Article 9) gives ratified treaties precedence over domestic legislation. This means that principles such as in situ preservation as a first option and the promotion of responsible public access carry direct legal authority. In line with this, Montenegro already piloted inter-ministerial monitoring of coastal UCH sites in 2016 through the Joint Operations Team, involving the Navy, Maritime Security, and Border Police. Although discontinued, this model illustrates the feasibility of cross-sectoral cooperation for site protection (MacKintosh, 2019).

While the WRECKS4ALL project made significant strides in implementing the UNESCO 2001 Convention through establishing the first academic research unit, providing public access to underwater cultural heritage (UCH) via digital technologies, and compiling a GIS inventory of the underwater cultural heritage sites, the enhancement and translation of the convention's principles into national legislation and their enforcement is still advised. To address this, the Action Plan proposes key amendments to the existing Law on Cultural Properties. These changes are designed to align Montenegro's domestic legislation with its international commitments. The proposed amendments would introduce a formal, convention-consistent definition of UCH and establish a dedicated legal chapter to regulate the management of underwater archaeological sites, including clear permitting procedures and qualifications for researchers. The plan also aims to foster inter-institutional synergy among authorities like the maritime police, navy, and port authorities to combat illicit activities. Finally, an innovative proposal involves integrating the Vessel Traffic Service (VTS) system to digitally map protected sites, providing real-time alerts for unauthorized activities and creating a robust, proactive mechanism for in situ protection.

Spatial Planning and Coastal Zone Management

The integration of UCH into spatial and tourism planning remains limited. The **Spatial Plan of Montenegro until 2040** recognizes the potential of coastal tourism for socio-economic development but stops short of identifying underwater heritage as a driver of diversification. This general planning document is presenting all UCH sites in line with MSP and ICZM frameworks. Similarly, while the **Spatial Plan of Special Purpose for the Coastal Area (2018)** includes cultural heritage measures, underwater sites such as the **ancient wrecks** or the **SMS Zenta** are absent from planning documents, despite their eligibility as UCH under UNESCO provisions.

The Law on Spatial Planning and Construction of Facilities (Official Gazette, nos. 064/17, 044/18, 063/18, 011/19, 082/20) sets objectives for rational use of land, sea, and seabed, including protection of cultural assets. Following the impact of WRECKS4ALL project, the integration of underwater cultural heritage (UCH) into spatial and tourism planning in Montenegro has seen a significant and positive shift. While

previous documents, such as the General Spatial Plan and Spatial Plan of Special Purpose for the Coastal Area (2018), failed to explicitly include all important and exposed UCH sites, the situation has recently changed. The newly adopted Spatial Plan of Montenegro Until 2040 now officially recognizes UCH and integrates these sites into its planning documents. This inputs should be translated to new Spatial Plan of Special Purpose for the Coastal Area ensuring underwater cultural heritage sites would be considered during the planning phases. This major step forward reflects Montenegro's international commitments, particularly its alignment with the EU Directives of the Maritime Spatial Planning and Integrated Coastal Zone Management Protocols. Montenegro has ratified the Protocol on Integrated Coastal Zone Management (ICZM) of the Mediterranean (Official Gazette, no. 16/2011), aligned with EU Directive 2014/89/EU on maritime spatial planning. This framework acknowledges underwater cultural heritage as part of marine spatial resources, and opened opportunities for its integration into marine protected areas (MPAs) and sustainable tourism. Indeed, recent declarations of MPAs, Platamuni, Katič, and Stari Ulcinj, illustrate progress in coastal resource protection, though linkages to underwater heritage valorization remain underdeveloped.

Other Relevant Legislation

Several other legal frameworks in Montenegro indirectly influence the management of underwater cultural heritage (UCH). The Law on the Sea (Official Gazette, nos. 17/07, 06/08, 40/11) regulates archaeological research but lacks clear definitions, creating ambiguity. The Law on Nature Protection (Official Gazette, nos. 054/16, 018/19) provides a basis for establishing marine protected areas (MPAs), which could be strategically aligned with protection and valorization UCH sites to integrate both environmental and cultural conservation efforts. Lastly, the regulation of recreational diving, currently governed by a bylaw of the Law on Tourism and Services (Official Gazette, nos. 2/18, 13/18, 25/19), is widely considered inadequate. Its requirements, such as mandating dive operators to have a hyperbaric chamber, are seen as unrealistic and misaligned with international standards, thereby hindering the growth and professionalism of the sector. Furthermore, there is an evident conflict with the Law on Sports, which allows sport dive clubs to provide tourism services, leaving the entire sector in a state of ambiguity, a gray zone, and a lack of proper regulation and enforcement.

2. Sustainable Tourism Assessment:

2.1. Tourism Assessment:

Montenegro presents itself as a tourism destination characterized by a compact geographical area containing diverse natural and cultural assets, primarily concentrated along its Adriatic coastline and in its mountainous northern region. The country's tourism offering is rooted in its coastal areas, featuring prominent destinations such as the Bay of Kotor, Budva, and Ulcinj, complemented by five national parks, including Biogradska Gora National Park, Durmitor, Lovćen, Prokletije and Lake Skadar, which form the basis for its mountain, lake, and adventure tourism sectors. The development and management of this sector are guided by a national strategic framework aimed at positioning the country as a year-round, high-quality destination [Figure 11].

Connectivity is a central component of the tourism infrastructure. Air access is provided through two international airports, Podgorica (TGD) and Tivat (TIV), which serve a mix of legacy and low-cost carriers, connecting Montenegro to key European source markets. Tivat Airport, in particular, caters to the coastal tourism demand, while Podgorica serves as the primary administrative and business hub. The road network is fundamental for both international arrivals from neighboring countries and internal tourist mobility. The Adriatic regional road remains the main coastal artery, though it experiences significant congestion during the peak season. To address this and improve access to the less-developed northern region, major infrastructure projects are underway, most notably the Bar-Boljare highway, which aims to create a modern transport corridor from the coast to the Serbian border. Maritime access is also significant, with the Port of Kotor being a major cruise destination and the Port of Bar handling ferry services.

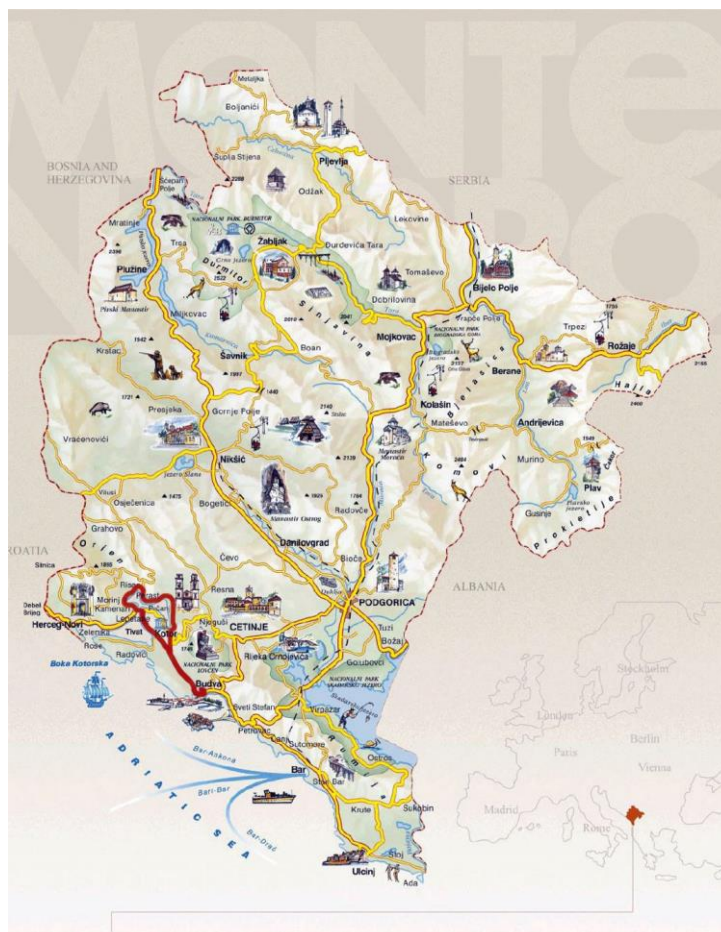


Figure 11: Transport infrastructure and tourism offer

The accommodation structure has undergone substantial transformation, reflecting the national strategy's focus on attracting higher-spending tourists. This is evident in the development of large-scale, integrated luxury resorts such as Porto Montenegro, Luštica Bay, and Portonovi, which have introduced international five-star hotel brands and high-end residential real estate. Alongside these flagship projects, the hotel sector has seen growth in both new constructions and the modernization of existing properties. However, the accommodation landscape remains dominated by private establishments, including

apartments, rooms, and guesthouses, which constitute a significant portion of the total bed capacity and cater to a broader market segment. The legal framework governing accommodation aims to standardize quality and formalize the private rental sector through categorization and registration processes.

Touristic services and entertainment options are diverse but show a strong seasonal and geographical concentration. The summer season along the coast provides a wide array of water-based activities, beaches, and a vibrant nightlife, particularly in and around Budva. Cultural tourism is centered on historical sites like the medieval towns of Kotor and Perast, the old royal capital of Cetinje, and numerous monasteries. While the coast develops these specialized offerings, the northern region's tourism product continues to be based on its natural environment, with national parks central to eco-tourism. The tourism product is based on nature and adventure, with activities such as hiking, mountaineering in Durmitor and Prokletije national parks, and white-water rafting on the Tara River. Efforts to extend the tourist season, a key objective of national masterplans, involve developing MICE (Meetings, Incentives, Conferences, and Exhibitions) tourism, wellness and spa facilities, and enhancing the winter sports offering at ski centers like Kolašin and Žabljak.

The entire tourism sector operates within a legislative and strategic context defined by the Government of Montenegro. The Law on Tourism and Hospitality provides the primary legal basis for the industry's operation, while the national tourism development strategy outlines long-term goals. These goals consistently emphasize sustainability, diversification of the tourism product away from its heavy reliance on the summer coastal model, improvement of service quality, and the attraction of foreign direct investment for upscale tourism infrastructure. The strategy recognizes tourism as a primary driver of the national economy, with data from institutions like Monstat indicating its substantial contribution to GDP. The implementation of this strategy is overseen by the National Tourism Organization and local tourist organizations, which are responsible for promotion, information provision, and supporting the development of a more competitive and sustainable tourism sector in line with defined national priorities.

The Tourism Development Strategy to 2025 emphasizes sustainable cultural tourism as a symbol of quality, identifying it as a key area for development to enhance the destination's image and extend the season. A central element of this is the focus on cultural heritage. This initiative aligns with the Smart Specialization Strategy (RIS3) and its vision for a 'Digitalized Montenegro,' which promotes using advanced ICT solutions like virtual and augmented reality to create innovative e-tourism services based on cultural assets. Furthermore, this development is supported by the National Strategy for Sustainable Development until 2030, which frames the preservation of cultural heritage as fundamental to economic sustainability. The approach also addresses national employment goals; the National Employment Strategy until 2025 recognizes that managing cultural heritage sites will create new, skilled jobs in fields from maritime archaeology to IT and tourism. National strategies continue to emphasize diversification across all regions to include MICE tourism, rural and agritourism, and wellness offerings to further extend the tourist season.

2.2 Dive Tourism and Services Assessment:

Dive tourism in Montenegro remains an emerging niche within the country's broader tourism sector, which heavily relies on coastal and adventure activities along its 300 km Adriatic coastline. As of 2025, the sector is characterized by a modest but growing infrastructure, focusing on sites like wrecks, caves, reefs, and underwater cultural heritage. The season typically runs from May to October, with peak activity in summer when water temperatures are suitable for diving. Despite overall tourism growth, Montenegro saw a 6% year-on-year rise in tourist arrivals in May 2025, with foreigners comprising 86.1%, dive tourism faces challenges from broader issues like traffic congestion and economic strains affecting beaches and related activities. However, despite institutional inertia, initiatives like the Wrecks4all, BlueMED Plus, MeDryDive, Wrecks4all 2.0, EU-funded projects are positioning Montenegro as an attractive, heritage-focused dive destination.

Montenegro hosts approximately 5 certified dive centers and operators, concentrated in coastal areas such as Bar, Budva and Herceg Novi. Key providers include Pro Diving Montenegro, Scuba Quest Montenegro, Diving Montenegro Budva, Budva Diving Center, and Adriatic Blue Diving Center. These centers offer services ranging from introductory dives (approximately €60-€80) to full-day trips (approximately €100 for two dives), including equipment, guides, and boat access. PADI and SSI affiliation are common, ensuring international standards, but the number of service providers is relatively low compared to neighboring countries, limiting capacity for large-scale tourism.



Figure 12. The assessment of dive tourism service quality in Montenegro.

The stakeholder's assessment of dive tourism service quality in Montenegro reveals a need for significant improvement [Figure 12]. With an average rating of just 2.36 out of 5, survey respondents clearly indicate dissatisfaction with the current offerings. These findings underscore the institutional and operational challenges that prevent the sector from meeting international standards and fully leveraging Montenegro's rich underwater potential. On contrary, analysis of online Travel platforms has revealed that safety standards are generally high among certified providers, with emphasis on professional teams, well-maintained equipment, and adherence to international guidelines like PADI, SSI and CMAS certifications. Recent

TripAdvisor reviews (as of May 2025) for key providers show overall ratings ranging from 4.6 to 5.0 out of 5, based on 10 to 96 reviews per center, reinforcing strong safety practices such as thorough briefings, equipment checks, and prioritization of diver security, e.g., weather-related cancellations for safety. Equipment is consistently described as well-maintained and high-quality across dive centers. Staff professionalism is a highlight, with instructors praised for being patient, knowledgeable, and attentive, particularly for beginners and families. Reviews emphasize organized operations, comfortable boats, and enjoyable experiences for beginners and experts, with activities including wreck, cave, and night dives. Montenegro is considered a safe tourist destination overall, with low crime and stable environments supporting dive activities. However, quality varies; some centers lack advanced facilities, and broader environmental issues like pollution could impact site conditions. Customer service is praised for friendliness and inclusivity, with options for non-certified divers and flexibility in scheduling, but occasional complaints note communication issues (e.g., unnotified cancellations) and room for improvement in personalized experiences and eco-friendly practices. Overall, recent feedback (2024-2025) indicates highly positive experiences, with many reviewers planning return visits and recommending the centers for their welcoming atmosphere and memorable dives.

Promotion is primarily driven by individual dive centers through websites, social media, and partnerships, alongside national efforts via the National Tourism Organization of Montenegro, which emphasizes "Uncover Your Wild Side" for adventure tourism. Projects like Wrecks4All promote underwater heritage sites to attract divers, using innovative tools like virtual tours. Herceg Novi has seen growing interest in diving tourism, with seasonal increases in visitors exploring the Bay of Kotor. However, dive tourism is not heavily featured on the official montenegro.travel site, indicating limited mainstream integration. Overall, promotion is niche, rather than a national priority.



Figure 13. Promotion of dive tourism.

The survey results indicate a clear problem with the **promotion of diving tourism** [Figure 13]. With an average rating of only 1.91 out of 5, and the majority of respondents (**42.4%**) giving the lowest possible

score of 1, the data suggests that current marketing efforts are widely perceived as ineffective. Conversely, the long-term sustainability of the industry is viewed more positively [Figure 14], with an average rating of **3.42**. While this is a more favorable score, it still points to room for improvement. Overall, the findings suggest that while the core concept of diving tourism may be seen as viable in the long term, its current promotion is a significant weakness that needs to be addressed.



Figure 14. Long term sustainability of dive tourism.

Dive tourism receives moderate recognition within Montenegro's destination management, integrated through EU-funded initiatives like Interreg's Wrecks4All and BLUEMED, which link it to broader cultural heritage and sustainable tourism networks across the Adriatic (e.g., with Croatia and Bosnia). The Montenegro Tourism Development Strategy 2022-2025 emphasizes destination management and product creation, indirectly supporting dive tourism via ecotourism and adventure segments. Connectivity is evident in collaborations between dive centers, local authorities, and projects like Wrecks4All, BlueMED, MeDryDive, which promote underwater sites for tourism diversification. However, it remains peripheral compared to beach tourism, with limited coordination in national strategies, the dive sites are not fully embedded in mainstream itineraries.

Compared to developed dive destinations like Croatia (with extensive wrecks and over 100 sites), Greece (famous for clear waters and ancient ruins), and Malta (known for caves and accessibility to the dive sites), Montenegro is less mature, offering fewer sites but with untapped potential in uncrowded, heritage-rich areas. It lags in infrastructure and marketing but benefits from lower costs and less dive tourism.

To advance sustainably and align with EU best practices, Montenegro should increase certified centers and sites through investments, aiming for 20+ providers by 2030, while enforcing ISO/PADI/SSI/etc. standards for safety. Embed dive tourism in the national strategy, collaborating with destination management organizations to create bundled packages (e.g., dive + hiking). Leverage EU funds for marketing campaigns targeting eco-conscious European customers. Involve locals in management via bottom-up approaches, introduce virtual/accessible tours for inclusivity, and track economic impacts (global dive

tourism contributes significantly to economies). Conduct regular SWOT updates, diversify beyond summer seasons (e.g., winter dives), and benchmark against Albania, Greece, Croatia and Malta for competitive growth. This approach could transform dive tourism into a resilient, sustainable pillar, contributing to Montenegro's goal of balanced economic growth.

2.3 Legislative and Operational Framework:

The existing legislative and operational framework for dive tourism in Montenegro possesses significant potential due to its rich underwater cultural and natural heritage. However, the current framework is fragmented and inadequate, hindering the sector's full development and leaving it largely unregulated. This report assesses the current state of the framework and proposes key adjustments to foster sustainable growth.

Table 2. Stakeholder`s survey - Assessment of Diving Tourism Development in Montenegro

Score range: 1 = very low, 5 = very high

Item	Average rating
Overall level of development of diving tourism in the destination.	2.18
Assessment of the potential for developing diving tourism in the destination.	4.06
Quality level of the diving tourism offer within the overall destination offer.	2.41
Scope level of the diving tourism offer within the overall destination offer.	2.22
Quality of diving tourism promotion in the international market.	2.26
Level of long-term sustainability of diving tourism in the destination.	3.14
Level of protection of the underwater heritage of the destination.	2.56
Existing legal frameworks allow for the simple integration of underwater cultural heritage into tourism initiatives.	1.97
The existing legal framework recognizes diving tourism as an economic sector.	1.94
Existing national laws adequately support the protection and sustainable use of underwater cultural heritage.	2.03

Item	Average rating
The impacts of corruption and the grey economy are present as obstacles to the development of diving tourism.	3.52

A stakeholder survey [Table 2] reveals significant consensus on the regulatory and developmental challenges facing diving tourism in Montenegro. An overwhelming 97% of respondents believe that current regulations fall short of EU standards, highlighting a critical misalignment that impacts growth and safety. In response, 90.9% advocate for basing diving tourism and service quality management on ISO standards, underscoring a strong desire for international benchmarks to elevate professionalism and reliability. The primary obstacle identified is the absence of a robust legal framework and regulations, cited by 43.8%, followed by inadequate training of inspection services (28.1%), institutional conservatism and lack of expertise (15.6%), and non-recognition of the sector (12.5%), collectively pointing to systemic barriers that demand urgent reform. For effective management, stakeholders favor diving centers or clubs taking the lead (78.8%), supported by tourist organizations (57.6%) and cultural heritage institutions (51.5%), with calls for greater institutional cooperation (27.3%) and involvement from local governments (24.2%), public-private consortia (12.1%), and concessionaires (6.1%) to foster collaborative governance. To drive development, priorities include promoting diving destinations (84.8%), adopting comprehensive legal regulations (78.8%), and achieving institutional recognition (78.8%), alongside marketing and tourism packages (57.6%), separating the sector from sports or security classifications (21.2%), and creating engagement platforms (21.2%), emphasizing a multifaceted approach centered on visibility, policy enhancement, and stakeholder integration.



Figure 15. The current legal framework recognizes dive tourism as a distinct economic branch

Dive tourism in Montenegro is not fully recognized as an economic sector within the existing legal framework. The survey results [Figure 15] support this, with an average rating of 1.94 out of 5, where 78.8%

of respondents either disagreed or strongly disagreed with the statement that the current legal framework recognizes dive tourism as a distinct economic branch. For years, dive tourism was regulated by institutions related to the military and sports, rather than tourism. The current legislation treats it as a sports and recreational activity, which creates legal confusion and leaves the sector in a "gray zone" without adequate quality control and the application of international standards. The survey results indicate that corruption and the gray economy are perceived as significant obstacles to the development of dive tourism, with an average rating of 3.52 out of 5. This is the highest average rating on the scale, suggesting that a majority of respondents believe that these factors are prevalent. A combined 54.5% of respondents rated this issue as either 4 or 5.

The core issue lies in the lack of a clear, dedicated legal framework. Dive tourism is currently governed by the Law on Tourism and Hospitality, which ambiguously classifies recreational diving as a "sports-recreational and adventure activity." This allows non-profit sports associations to provide commercial tourism services without proper quality control or adherence to international standards. Furthermore, a key regulatory bylaw on minimum technical conditions is not only out of sync with international standards but also contains impractical requirements, such as mandating that all service providers possess a hyperbaric chamber, a medical device that requires specialized staff and pose an significant investment for SME scale dive centers are.



Figure 16. Existing legal frameworks allow for the simple integration of underwater cultural heritage into tourism initiatives.

Based on the data provided by the stakeholder's survey, the average rating of 1.97 indicates that most respondents disagree that the existing legal frameworks allow for the simple integration of underwater cultural heritage into tourism initiatives [Figure 16]. While the Law on the Protection of Cultural Property exists, the mechanisms for its preservation and sustainable use for tourism are underdeveloped. Despite Montenegro ratifying the UNESCO Convention on the Protection of the Underwater Cultural Heritage in 2008, its core principles have not been integrated into national legislation (MacKintosh, 2019). As a result,

the Ministry of Culture and Media does not perceive underwater cultural sites as a tourism resource, and only a handful of locations are legally protected. Similarly, the Law on Nature Protection has designated several marine protected areas (MPAs), but their management plans have yet to define the conditions for diving activities within these zones.

The institutional recognition of dive tourism's potential is notably weak. Promotion is unsystematic and often inaccurate. Montenegro does not participate in specialized international dive tourism trade shows, and promotion at general tourism fairs is minimal. The collaboration among stakeholders is also lacking. There are no specialized tour operators offering dive tourism packages, and the connection between dive centers and other tourism sectors (like accommodation and transport) is very limited. This fragmentation prevents the creation of a cohesive, marketable national tourism product.

To transition the dive tourism sector from a "gray zone" to a regulated, high-quality industry, the following adjustments are necessary. The Law on Tourism and Hospitality must be amended to clearly distinguish recreational diving as a tourism service separate from sports activities. All regulatory bylaws should be based on ISO 24803:2017 standards, which would ensure service quality and safety. The Ministry of Culture and Media, in collaboration with the Administration for the Protection of Cultural Property, must design a system for the protection and sustainable use of underwater cultural heritage, in line with the UNESCO 2001 Convention. The Public Enterprise "Morsko Dobro" should also define the conditions for diving within protected marine areas.

Destination Management Organizations (DMOs) need to brand Montenegro as a dive destination with a recognizable visual identity. A detailed marketing strategy, including the creation of a multilingual dive guide with comprehensive site descriptions, is crucial. This will facilitate Montenegro's presence at international dive tourism fairs. The implementation of a clear legal and promotional framework will encourage Destination Management Companies (DMCs) to create integrated tourism products and packages. This will connect dive centers with other tourism service providers, offering visitors a wide range of options, from wreck diving packages to combined cultural and adventure tourism experiences.

3. Cooperation Framework:

3.1 Stakeholder Mapping:

The management of shipwrecks and underwater cultural heritage cannot be understood in isolation from the broader range of societal, environmental, and economic interests that converge upon them. Archaeological and historical values represent only one dimension of their significance, existing alongside other legitimate concerns such as navigation safety, tourism development, environmental protection, and national security [Figure 17]. Recognizing this multiplicity of perspectives underscores the importance of adopting an integrated approach in which heritage is not privileged at the expense of other sectors, but considered in balance with them. Against this backdrop, stakeholder mapping becomes a critical tool. By identifying, categorizing, and analyzing the key actors engaged in the underwater cultural heritage and dive

tourism value chain, it is possible to clarify their interests, assess their relative influence, and design strategies for constructive engagement that support both preservation and sustainable use (Firth, 2018).

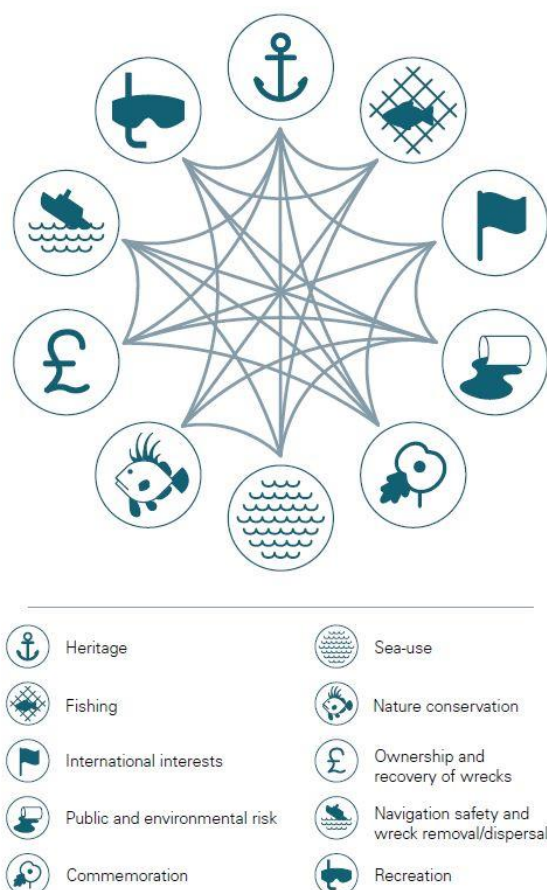


Figure 17: Stakeholders matrix (Firth, 2018).

The governance and development of underwater cultural heritage and dive tourism in Montenegro involves a wide range of stakeholders whose interests, levels of influence, and relationships are often complex and sometimes conflicting [Figure 18]. At the center of this constellation stand the state institutions, which possess the strongest formal authority. The Government of Montenegro sets overarching policy priorities and allocates resources, while sectoral ministries and directorates pursue more specialized agendas. The Ministry of Culture and Media, through its Directorate for the Protection of Cultural Heritage, is primarily tasked with safeguarding underwater sites, ensuring compliance with international conventions, and preventing illicit activities such as looting. Its authority is significant, yet frequently constrained by limited financial and human capacities. The Ministry of Ecology, Spatial Planning and Urbanism exerts influence through marine spatial planning and environmental protection, often intersecting with heritage management and tourism development in ways that require careful coordination. Security institutions, notably the Navy, Border Police, and the Maritime Safety Administration, play a decisive role in monitoring maritime space, regulating navigation, and enforcing safety at sea. Their engagement with cultural heritage authorities tends to be fragmented, reflecting the broader challenges of inter-institutional cooperation. Local authorities,

including coastal municipalities and the public enterprise “Morsko Dobro”, are directly involved in managing the coastal zone and balancing economic, environmental, and heritage interests. Additional state bodies such as the Hydro meteorological and Seismological Institute provide essential data for safe diving and marine operations, indirectly supporting both tourism and heritage management.

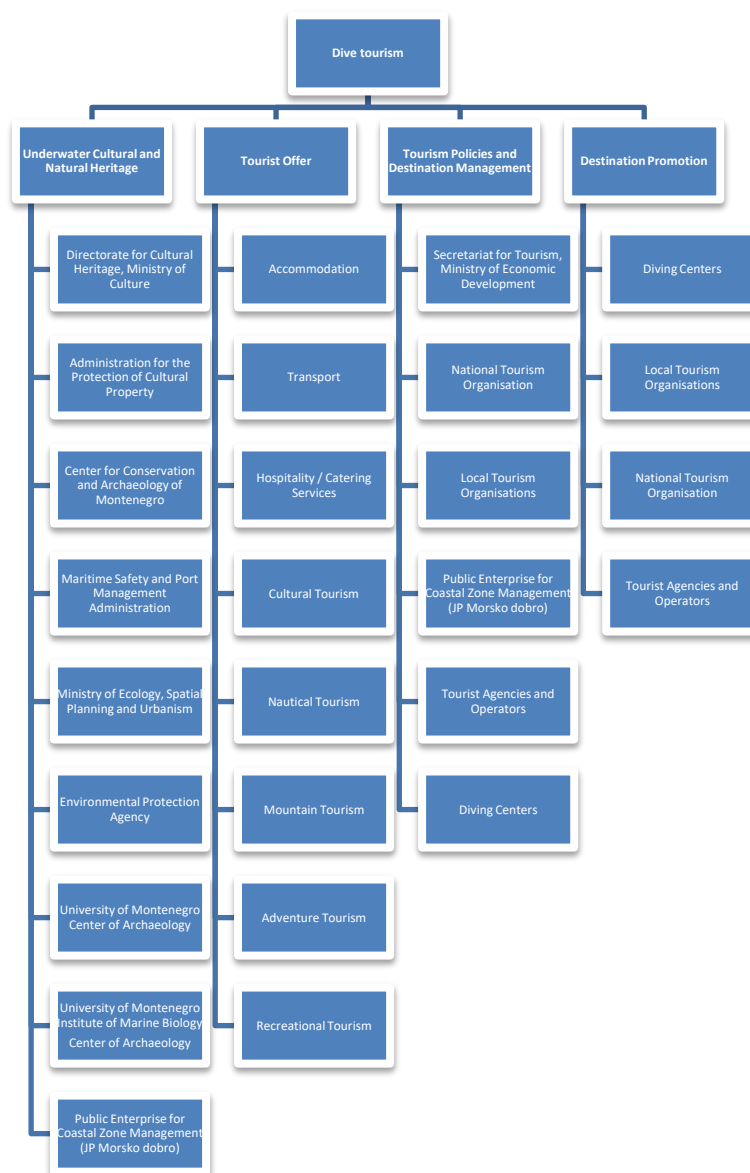


Figure 18: Montenegro Stakeholder Matrix

Alongside regulatory institutions, academic and research organizations constitute another central group of stakeholders. The University of Montenegro, through its Institute of Marine Biology, Center for Archaeology, and other faculties and institutes is instrumental in generating knowledge, conducting field research, and training future specialists. Their work provides the evidence base for policy decisions, while the Center for Conservation and Archaeology of Montenegro contributes expertise in preservation and restoration. These institutions do not possess formal regulatory power, but their influence derives from their

intellectual authority, technical expertise, and ability to connect national initiatives with international research networks. They are also critical for capacity building and digital innovation in heritage documentation, serving as knowledge brokers between government, private actors, and international partners.

The private sector represents a distinct category of stakeholders, driven primarily by economic incentives. Small and medium-sized tourism enterprises, particularly dive centers, tour operators, hotels, and maritime service providers, play a direct role in shaping visitor experiences and developing Montenegro's reputation as a dive destination. Their influence is moderate: while they cannot set regulations, they create market demand, generate revenue, and can serve as the first line of observation for threats to underwater sites. Their relationship with the state is often cooperative but occasionally strained, especially in the absence of a clear legal framework regulating diving activities and site access. For these actors, predictability and transparent procedures are key prerequisites for sustainable engagement.

Civil society organizations and non-governmental actors contribute to the value chain primarily through advocacy, awareness-raising, and community mobilization. Their formal power is limited, yet their capacity to act as watchdogs, mobilize public opinion, and engage local communities grants them a form of soft influence that should not be underestimated. They are particularly important in addressing enforcement gaps and in building legitimacy for heritage protection initiatives. International and regional organizations such as UNESCO, European Union programmes, and various research foundations also exert substantial influence. They bring funding, technical expertise, and global visibility, often acting as bridges between Montenegrin institutions and wider regional frameworks. Their role is indispensable for aligning national policies with international standards, although donor priorities do not always align perfectly with local needs.

Tourism and recreational stakeholders, including the National Tourism Organization and local, municipal tourist boards, are motivated by the diversification of Montenegro's tourism offer and the creation of sustainable attractions. While they lack direct regulatory authority, they shape demand, branding, and the narratives that attract visitors. Their relationships with private operators are generally close, while their dependence on state authorities is marked by the need for permissions and frameworks that allow them to market cultural heritage responsibly. At the community level, fishermen, coastal residents, youth groups, and local visitors embody a mixture of interests, ranging from employment opportunities and cultural pride to concerns about over-tourism, environmental degradation, or restrictions on traditional practices. Though their institutional power is limited, their social legitimacy makes them indispensable stakeholders whose acceptance or resistance can determine the success of projects.

Finally, media and communication actors influence the entire value chain by shaping narratives around shipwrecks and diving tourism. Their role is double-edged: responsible communication can raise awareness, attract visitors, and foster pride, while careless reporting may increase the risks of looting or unsustainable exploitation. Their influence is therefore diffuse but powerful, requiring careful engagement strategies.

Taken together, this mapping illustrates that the underwater cultural heritage and dive tourism value chain in Montenegro rests on a delicate balance between protection, economic development, environmental

stewardship, and national security. State authorities remain the central regulators, but their effectiveness depends on cooperation with research institutions, private operators, international partners, and civil society. The challenge lies in creating mechanisms that enable integrated management, minimize conflicts of interest, and maximize the multiple benefits that shipwrecks and underwater heritage can offer to society, the marine environment, and the economy.

3.2 Local Community and Stakeholder Engagement:

A sustainable and enduring dive tourism sector, particularly one founded upon the preservation and valorization of Underwater Cultural Heritage (UCH), is contingent on a sophisticated and inclusive approach to stakeholder engagement. The academic consensus and empirical evidence underscore that a successful UCH tourism model transcends mere economic transaction; it is a complex socio-cultural process that requires a delicate balance of diverse and often conflicting interests. The challenge, as highlighted by the provided texts and supported by research, lies in transitioning from a fragmented, top-down governance model to a collaborative, multi-stakeholder ecosystem where all parties, especially local communities, are recognized as co-creators of value. This necessitates a strategic and well-articulated communication and collaboration plan to ensure that the benefits of UCH tourism are equitably shared and contribute meaningfully to local development (Firth, 2018).

The proposed communication plan is designed to be multi-directional and dynamic, moving beyond the traditional one-way transmission of information. Its primary objective is to cultivate a shared vision and build a foundation of trust among all stakeholders. Academic literature on cultural tourism consistently advocates for a "bottom-up" approach, where local communities are not just passive recipients of information but active participants in the design and management processes (Firth, 2018). This is crucial for fostering a sense of ownership and accountability. The plan outlines several key communication channels. Firstly, the creation of a dedicated, multilingual digital presence, including a website and strategic social media accounts, serves not only as a promotional tool but also as a platform for shaping a unified national narrative about UCH. This digital ecosystem, which should be co-managed by the National Tourism Organization (NTO) and local tourist boards, would feature high-quality content and facilitate community interaction. Secondly, regular, in-person workshops and public forums are indispensable for fostering direct dialogue and minimizing inter-institutional conflicts. These events act as a "strategic manager" and a "coordinator," as described in academic frameworks, by bringing together diverse stakeholders to clarify roles, align interests, and collectively address challenges. The communication strategy must also incorporate targeted, non-media engagement, which research has shown to be particularly vital in culturally rich, rural areas. This involves providing clear and transparent information on legal frameworks and conservation efforts directly to local dive centers and community groups, which in turn strengthens their capacity for self-regulation and partnership.

Collaboration, as an operational counterpart to communication, is the mechanism through which shared benefits are realized. The current institutional landscape in Montenegro is fragmented, with security and cultural authorities often operating without communication flow. The procedures are under the heavy burden of bureaucracy. To overcome this, a formal collaborative mechanism, such as a public-private

consortium, should be established. This model, analogous to successful public-private partnerships in other cultural heritage and marine conservation projects globally, would formalize a framework for cooperation. Within this consortium, each stakeholder's role and responsibility would be clearly defined. State institutions would maintain their regulatory and enforcement roles, but would also be tasked with creating an enabling environment for integrated management. Academic and research organizations would provide the scientific and technical expertise essential for informed decision-making. The private sector, dive tourism and general tourism operators, driven by economic incentives, would be empowered to innovate and create high-quality tourism products, while local communities and civil society organizations would serve as crucial advocates and watchdogs, ensuring that tourism development remains aligned with local values and contributes to community well-being. By fostering this collaborative ecosystem, Montenegro can ensure that tourism revenue is not only generated but also reinvested back into site preservation, local community projects, and educational initiatives. This cyclical model of value creation and reinvestment is the cornerstone of a truly sustainable and resilient UCH and dive tourism sector, transforming the fragile resource into a shared asset that benefits all.

3.3 Cross-Border Integration:

The successful creation of a unified and integrated cross-border dive tourism product in the South Adriatic region requires identifying key stakeholders in neighboring countries, developing shared management practices, and implementing joint marketing initiatives. The framework for this cooperation is anchored in the distinct roles of Montenegro's neighboring countries: Croatia as a strategic partner and model for best practices, Bosnia and Herzegovina as a complementary digital and cultural gateway, and Albania as an emerging partner with untapped potential.



Figure 19: Current level of cooperation with actors from neighboring countries on developing joint diving tourism products

Stakeholders survey express significant concern regarding the current level of cooperation with actors from neighboring countries on developing joint diving tourism products [Figure 19], rating it an

average of 2.15 on a scale from 1 (very poor) to 5 (excellent). The majority (66.7%) rated it 2 or below, with 27.3% at 1 and 39.4% at 2, while 27.3% gave a neutral 3, and only 3% rated it a 4, with no 5s, signaling weak regional ties. This low assessment suggests limited cross-border collaboration, which could hinder the growth of a cohesive regional diving tourism market. Enhancing partnerships and shared initiatives with neighboring countries may be crucial to leveraging collective resources and expertise for sustainable development.

Croatia possesses a mature and well-organized dive tourism market. Key stakeholders include the Croatian Ministry of Culture and Media, responsible for protecting underwater cultural heritage, and the Croatian National Tourist Board (HTZ), which promotes Croatian tourism. A particularly significant best practice model is the public-private partnership between the Diving Tourism Group PRO DIVING CROATIA, an expert association of over 120 diving centers, and the HTZ, which promotes diving at international tourism fairs. The Croatian Diving Association (HRS) also issues mandatory diving cards, providing an additional layer of professional regulation. The Croatian Maritime Museum Split, a WRECKS4ALL project partner, has also contributed to mapping sites and managing regional workshops. For Montenegro, the adoption of a similar public-private partnership model is crucial to professionalize its own sector, which currently operates in a legal "gray zone". University of Zadar and Split and the International Center of Underwater Archaeology Zadar are identified as academic stakeholders providing expertise in the research, conservation, and protection of UCH.

Bosnia and Herzegovina's (BiH) contribution to a cross-border dive product is uniquely defined by its geography and the presence of a dive sector in Neum at the Adriatic and inland waters, lakes, submerged caves, caverns, etc. The Commission to Preserve National Monuments (KONS) is the national body responsible for registering heritage sites of cultural and historical importance, while the Tourist Board of Herzegovina – Neretva Canton was a key WRECKS4ALL project partner, hosting a VR showroom in Mostar. The "dry dive" VR showroom allows for the promotion of underwater cultural heritage to a wider, non-diving public. Therefore, BiH's strategic value lies in its land-based heritage and digital infrastructure. There are sport dive clubs across the country with members often diving in Croatia or Montenegro.

Albania presents a promising opportunity for product diversification and joint promotion. Its dive sector is professionalizing, with government-licensed centers like Saranda Diving Center and Albania Adventure Diving Center actively marketing specific wreck sites. Key stakeholders for cooperation include the Albanian Ministry of Culture, Tourism and Sport, National Institute of Cultural Heritage, National Institute for Registration of Cultural Heritage responsible for protection and management of underwater cultural heritage and the National Tourism Agency, tasked with promoting the country as a tourist destination. The University of Tirana for research and municipalities that promote their underwater assets are also key stakeholders. Formal partnerships with these entities can expand the geographic scope and introduce new sites to a joint initiative.

Based on this stakeholder analysis, a unified, cross-border initiative must create shared management practices and joint marketing strategies. This involves Montenegrin authorities working with an expert association of its own dive centers to establish a structured and regulated sector, aligning with Croatian best practices. A shared digital platform should be created, leveraging existing digital assets like VR and AR tours from all three countries to position the region as a single, coherent dive destination. The EU co-funded

mechanisms such as ERASMUS, Horizon, COST and Interreg Programmes provide a clear framework for such cooperation, with the specific objective of developing and promoting cultural heritage in the framework of tourism. This approach transforms the region's fragmented resources into a cohesive, marketable product, enhancing its appeal as an attractive and trustworthy dive destination.

3.4 Funding sources:

Securing long-term financial sustainability is a critical prerequisite for the development of a professional and high-quality dive tourism sector in the South Adriatic region. The strategic roadmap for this sector's growth is underpinned by a multi-faceted approach to funding, drawing from a variety of national, international, and cross-border programs [Table 3]. These mechanisms are designed not only to provide capital for infrastructure and digitalization but also to support initiatives that promote cultural heritage, environmental sustainability, and small business development.

Projects under this program must contribute to a "smarter" area by promoting innovative economic transformation for small and medium-sized enterprises (SMEs) and a "greener" area by promoting "blue investment" and biodiversity protection. Eligibility for these funds extends to public bodies, bodies governed by public law, and private non-profit organizations. Other EU programs, such as the European Heritage Hub, offer a Small Grants Scheme that supports civil society-led heritage projects in Montenegro and other neighboring countries with a total allocation of around €250,000. Montenegro's recent association with the EU's LIFE program also allows local entities to apply for funding for projects that address environmental and climate challenges, which can be crucial for protecting marine heritage sites.

National funding from the Ministry of Culture and Media serves as a crucial starting point for projects focused on cultural heritage. While typically smaller in scale, these funds are instrumental for supporting "quick-win" projects and demonstrating domestic commitment, which is often a prerequisite for larger international awards. For 2024, the Ministry co-financed 52 projects for the protection and preservation of cultural assets with a total of €798,000, with a focus on archaeological and conservation research. Similarly, the Ministry of Tourism, Ecology, and Sustainable Development allocated €550,000 to support 121 projects in 2025, with a focus on enhancing cultural, adventure, and sports tourism through the use of "smart tech".

The true transformative potential, however, lies in a strategic, multi-layered approach that leverages large-scale European Union (EU) programs. These are essential for addressing systemic barriers such as the inadequate legal framework and weak institutional capacity. The Instrument for Pre-accession Assistance (IPA III) is the most critical and robust funding mechanism for Montenegro's long-term strategic development. With a budget of €14.162 billion for the 2021-2027 period, IPA III is designed to support candidate countries in adopting and implementing the reforms required for EU membership, including legal and institutional alignment. The WRECKS4ALL 2.0 Action Plan's call for key amendments to legislation to align with the UNESCO 2001 Convention, such as introducing a formal definition of UCH and establishing clear permitting procedures, are precisely the types of reforms that IPA III is designed to support.

A primary source of funding is the European Union's regional cooperation framework. The WRECKS4ALL project, for instance, was co-funded by the Interreg IPA CBC Croatia, Bosnia and Herzegovina, and Montenegro program, which aims to strengthen economic and territorial development through sustainable tourism practices. Building on this, the subsequent WRECKS4ALL 2.0 is co-funded through the Interreg IPA South Adriatic Programme 2021-2027. With a total budget of over €81 million, this program aims to enhance the role of culture and sustainable tourism in economic development and social inclusion by supporting joint strategies and action plans. For the digital and research-focused components, Horizon Europe and Creative Europe represent suitable funding streams. Horizon Europe, the EU's flagship research and innovation program, includes a "Culture, Creativity and Inclusive Society" cluster (Cluster 2) that supports initiatives to safeguard cultural heritage and promote socio-economic transformations. Montenegro is an eligible country for Creative Europe, and is considered a "low audiovisual capacity" country, which can increase its competitiveness for funding. The program is a key source of grants for cultural promotion and the development of digital tools for accessing cultural heritage.

The EU's LIFE program offers a unique opportunity to integrate cultural preservation with environmental protection. Montenegro's recent association with the LIFE program allows local entities to apply for funding for projects that address environmental and climate challenges. This is particularly relevant for initiatives that seek to protect both marine ecosystems and the UCH within them, and aligns with the broader "blue economy" and Green Agenda priorities. Additional international sources include the European Heritage Hub Small Grants Scheme, led by Europa Nostra, which supports civil society-led heritage projects in the Western Balkans with grants from €2,000 to €50,000. The U.S. Ambassadors Fund for Cultural Preservation (AFCP) also provides significant funding, with awards up to \$500,000 for projects that preserve historic buildings, archaeological sites, and other cultural heritage. Other international financial institutions, such as the European Bank for Reconstruction and Development (EBRD) and the World Bank Group, provide large-scale support for infrastructure, sustainable tourism, and private sector investments.

Table 3: Sources of funding

Funding Source	Key Program Objectives / Budget	Recommended for These Activities
National Funding		
Ministry of Culture and Media	- Supports projects for protection and preservation of cultural assets. Total of €798,000 for 52 projects in 2024. - Focuses on archaeological and conservation research, and cultural heritage promotion.	- Desk-based research and site analysis. - Development of site dossiers and documentation. - Small-scale conservation and promotion projects.
Ministry of Tourism and Sustainable Development	- Supports sustainable tourism and digital innovation. Allocated €550,000 to 121 projects in 2025. - Aims to enhance cultural, adventure, and sports tourism through smart tech adoption.	- Development of VR/AR tours and digital platforms. - Creation of multilingual dive guides and marketing materials. - Pilot projects for sustainable tourism practices.
European Union Programs		

Funding Source	Key Program Objectives / Budget	Recommended for These Activities
Interreg IPA South Adriatic Programme	- Aims to enhance the role of culture and sustainable tourism in economic development. - Total budget over €81 million for 2021-2027. - Supports "blue investment" and biodiversity protection.	- Joint promotion and marketing initiatives with Albania and Italy. - Creation of a cross-border cultural route and shared management practices.
Instrument for Pre-accession Assistance (IPA III)	- Supports reforms for EU accession, with a budget of €14.162 billion for 2021-2027. - Focuses on legal and institutional alignment with EU standards.	- Drafting legal amendments to the Law on the Protection of Cultural Properties. - Capacity building for state institutions. - Developing a new regulatory framework for dive tourism.
Horizon Europe	- EU's flagship research and innovation program. - "Cluster 2" supports safeguarding cultural heritage and socio-economic transformations.	- Research and development of digital technologies for heritage. - Scientific and technological aspects of creating VR/AR tours and digital platforms.
Creative Europe	- Supports the culture and audiovisual sectors. - Montenegro is an eligible country with "low audiovisual capacity," which can increase competitiveness for funding.	- Production of high-quality digital content for VR showrooms. - Cultural promotion and cross-border collaborations. - Development of digital tools for accessing cultural heritage.
LIFE Programme	- Supports environmental, nature conservation, and climate action projects. - Montenegro is a participating country.	- Projects that integrate UCH preservation with marine protected area (MPA) management. - Initiatives focused on the environmental protection of dive sites.
Other International Sources		
European Heritage Hub Small Grants Scheme	- Supports civil society-led heritage projects in the Western Balkans. - Grants range from €2,000 to €50,000.	- Small-scale research and documentation projects. - Community-level awareness campaigns. - Building capacity for local NGOs.
U.S. Ambassadors Fund for Cultural Preservation (AFCP)	- Supports the preservation of historic buildings, archaeological sites, and museum collections. - Awards can reach up to \$500,000.	- Preservation and restoration of specific archaeological sites. - Conservation projects for underwater artifacts.
World Bank Group	- New Country Partnership Framework for Montenegro (2025-2029) focuses on sustainable economic growth and climate resilience.	- Leveraging private sector investments in sustainable tourism. - Large-scale infrastructure development that supports tourism.
European Bank for Reconstruction and Development (EBRD)	- Supports infrastructure upgrades and projects that enhance regional connectivity. - Has a dedicated focus on	- Investments in transport networks and water infrastructure that enhance

Funding Source	Key Program Objectives / Budget	Recommended for These Activities
	women-led SMEs and cultural heritage preservation.	tourism. - Support for SMEs in the tourism sector.

The successful implementation of the WRECKS4ALL 2.0 Action Plan requires a multi-layered, phased funding strategy that moves beyond one-off applications. The most effective approach is to align specific project components with the funding sources most suitable for their scale and objectives. The following matrix provides a clear, actionable guide for connecting the core pillars of the Action Plan to the most appropriate national and international funding sources.

4. Optimal Destination Management Model:

4.1 Dive Destination Management Model Development:

The development of dive tourism in Montenegro demands a comprehensive and strategic Destination Management Model (DMM) designed to effectively transform the country's significant underwater potential, rich in both Underwater Cultural Heritage (UCH) and natural beauty, into a sustainable, high-quality tourism product. The current state, characterized by an inadequate legal framework and uncoordinated promotional activities, necessitates a model that prioritizes the adjustment of legislation, strong sector integration, and alignment with international standards. This proposed model is specifically designed to be regionally compatible and fully aligned with European Union best practices and recommendations, ensuring its verification and endorsement by key Destination Management Companies (DMC) and Destination Management Organizations (DMO).

The DMM is fundamentally built upon three interconnected pillars [Table 3], moving the sector from its current unregulated status toward a standardized, secure, and economically viable tourism branch. The first and most critical pillar focuses on the Legislative and Institutional Framework, prioritizing a swift adjustment of the legal foundation for sustainability. The central objective here is the establishment of a clear legal framework that distinctly separates recreational diving services from the domain of sports and military regulations, placing it firmly within the economic and tourism sector. This requires amendments to the Law on Tourism and Hospitality to precisely define recreational diving services, simultaneously eliminating ambiguous terminology, such as "other legal entities," which currently allows non-profit sports associations to provide commercial tourism services without quality or safety oversight. Complementary sub-legal acts must be implemented to detail the minimal technical requirements for dive service provision, which must be exclusively based on the internationally recognized standard ISO 24803:2017 (Recreational diving services). Adherence to this standard is the baseline for raising service quality, enhancing user safety, and boosting the overall credibility of the Montenegrin dive destination. Furthermore, state institutions, notably the Ministry of Culture and Media and its directorates, are mandated to design and implement a system of protection and framework for utilization of UCH sites, such as shipwrecks and other cultural deposits, in

accordance with the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage. This framework must stipulate the conditions under which diving can occur at protected sites, thereby translating heritage into a sustainably managed tourism asset. Correspondingly, JP Morsko Dobro, managing the marine protected areas, must define diving conditions within these nature parks, ensuring they adhere to the principles of natural protection and the ISO standards.

The second pillar emphasizes Sector Connectivity and Stakeholder Engagement, focusing on creating functional clusters and efficient inter-sectoral communication to fully integrate dive tourism with the broader national tourism strategy. DMOs (such as the National Tourism Organization and local TOs) play a crucial role in destination branding and creating the national dive offer, while DMCs (travel agencies and tour operators) are tasked with developing and selling integrated tourism products. These DMCs serve as the essential link, facilitating inter-sectoral communication and product definition by closely monitoring market demand. Dive centers must be clustered with providers of accommodation, transport, hospitality, cultural, nautical, adventure, and recreational tourism. This clustering enables DMCs to create attractive, integrated packages, such as combining a shipwreck dive package with local accommodation and cultural tours. Critically, only dive centers operating under international standards and possessing the necessary operational capacities (currently a limited number) will be recognized as the official custodians of the dive offering, ensuring a baseline of quality and economic viability.

The third pillar is dedicated to Systematic Promotion and Economic Viability. Promotional activities must be organized and targeted, based on a standardized and branded product. DMOs, in collaboration with relevant stakeholders, are required to brand the dive destination, develop a recognizable visual identity, and execute a detailed action plan for national and international marketing campaigns. Key promotional tools include the creation of a multi-lingual guide detailing all attractive UCH and natural dive sites, promotional videos, and brochures. Crucially, Montenegro must secure a national stand at prominent international dive tourism fairs, a presence currently lacking, to effectively communicate the quality and safety assurances derived from the standardized framework. The transition of the sector from an unregulated gray zone to a legally defined and standardized operation will significantly increase its economic feasibility by enabling transparent financial flows, investment potential, and the development of specialized tourism products. DMC and tour operators will utilize this stable framework to create diverse products, such as shipwreck packages, cave diving tours, or mixed UCH and natural attraction packages, thereby managing the destination by offering visitors a wide choice of inter-sectoral tourism products.

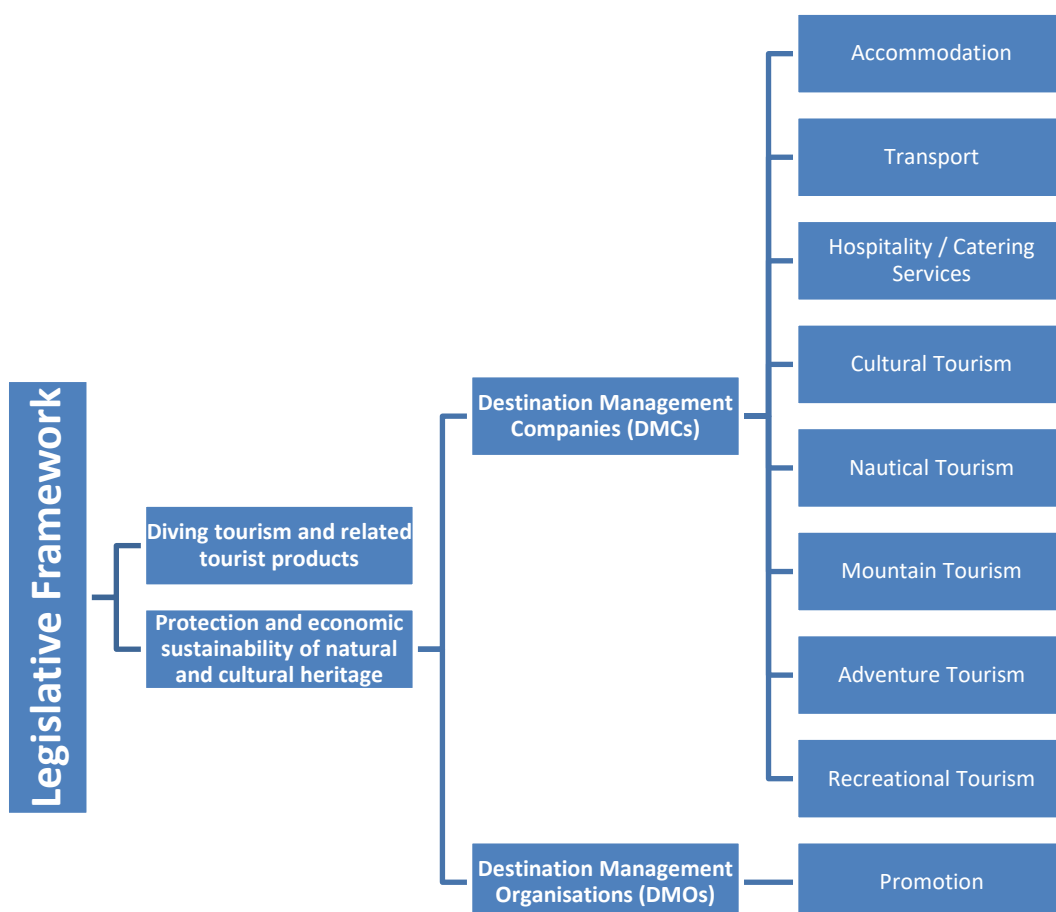


Figure 20: Montenegro Destination Management Model

This DMM provides the necessary corrective mechanism for the Montenegrin dive sector. By prioritizing legislative reform and the implementation of the ISO 24803:2017 standard, it ensures alignment with EU best practices and guarantees regional compatibility [Figure 20]. The model's emphasis on mandatory standardization and the active involvement and verification by both DMO and DMC actors ensures the sustained market acceptance, safety, and economic success of the integrated dive tourism product in Montenegro.

Table 3. Destination Management Model

PILLAR 1: LEGISLATIVE AND INSTITUTIONAL FRAMEWORK (Safety & Compliance)	PILLAR 2: SECTOR CONNECTIVITY AND ENGAGEMENT (Coordination & Product)	PILLAR 3: SYSTEMATIC PROMOTION AND ECONOMIC VIABILITY (Branding & Market)
Priority: Standardization and Sustainability	Priority: Integration and Stakeholder Engagement	Priority: Market Acceptance and Feasibility
1. Amendments to Law on Tourism (Separate from Sport)	1. DMC/DMO Verification and Cooperation	1. Destination Branding and Visual Identity (DMO-led)
2. Sub-legal Acts based on ISO 24803:2017 Standards	2. Clustering of Dive Centers with Related Tourism (e.g., Accommodation,)	2. Creation of Multi-lingual Dive Guide (National Offer)
3. UCH Management (UNESCO 2001) and Marine Protected Area (MPA) Regulations	3. Development of Integrated Tourism Products/Packages	3. Targeted International Marketing (e.g., National Stand at Fairs)

↓

CORE OUTCOME: STANDARDIZED AND CREDIBLE SECTOR

Managed as UCH/Natural Asset Tourism Product

Regionally Compatible and EU Aligned

↑ Verified by ↓

DMOs (Destination Management Organizations)	DMCs (Destination Management Companies)
--	--

↓ Leads to ↓

Sustainable Market Acceptance and Economic Success

5. Innovation Framework:

5.1 Digital Technologies for Promotion:

The promotion of Underwater Cultural Heritage (UCH) and dive tourism is undergoing a profound transformation driven by the implementation of novel digital technologies (Gambin et al., 2021). These technologies are instrumental in overcoming the primary barrier to UCH engagement: physical inaccessibility. At the core of this paradigm shift is the strategic use of Extended Reality (XR) technologies—specifically Virtual Reality (VR) and Augmented Reality (AR)—supported by advanced metric documentation methods like multi-image photogrammetry. These combined methods allow for the creation of precise, immersive

digital tourism products, including VR experiences, AR mobile applications, and digital platforms featuring interactive/virtual maps, which collectively enhance the appreciation and promotion of UCH and dive tourism globally (Gambin et al., 2021).

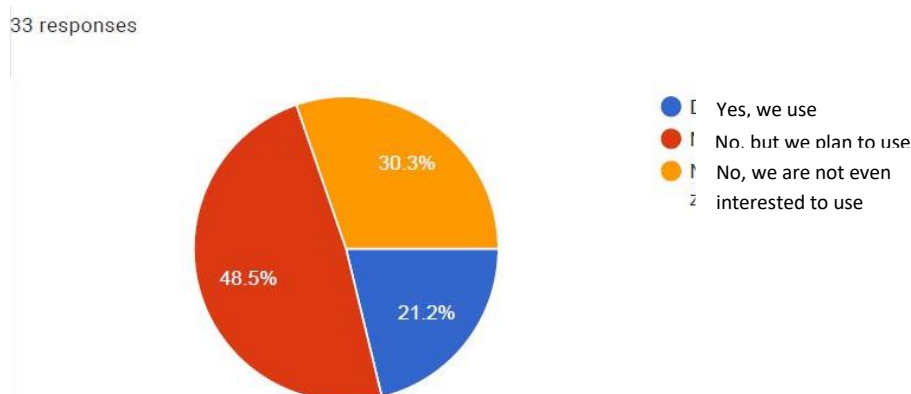


Figure 21: Stakeholders report on use of novel digital technologies in the institutions and organizations in Montenegro.

The Wrecks4All 2.0 stakeholder survey highlights a nascent but promising interest in digital technologies for promoting underwater cultural heritage (UCH) and diving tourism in Montenegro [Figure 21 and Figure 22], with only 21.2% of organizations currently using such tools, 30.3% planning to adopt them, and 48.5% showing no interest, primarily due to barriers like lack of technical knowledge (51.5%), low tourist awareness or demand (48.5%), high costs (36.4%), and limited infrastructure (3%). To address these gaps and enhance promotion, the action plan proposes implementing novel digital solutions such as virtual reality (VR) for immersive virtual dives into shipwrecks and archaeological sites, augmented reality (AR) apps for real-time overlays of historical information during actual dives, mobile applications integrating GIS for interactive virtual maps and guides, and digital platforms for online booking and educational content—technologies favored by respondents, with digital maps/guides at 66.7%, mobile apps at 51.5%, VR at 48.5%, and AR at 30.3%. These products, inspired by successful initiatives like the Wrecks4All, MeDryDive AR app for Mediterranean UCH sites and Greece's VIRTUALDiver platform for exploring submerged environments, would benefit the cultural heritage sector by enabling non-invasive preservation and detailed 3D modeling to document and protect fragile sites without physical disturbance, while fostering research and education through accessible virtual reconstructions. For the tourism sector, they offer enhanced visitor engagement, language-bridging features, and extended seasonal appeal by attracting virtual tourists and promoting safe, interactive experiences that boost destination attractiveness and revenue, as seen in AR's role in making heritage more immersive and realistic.

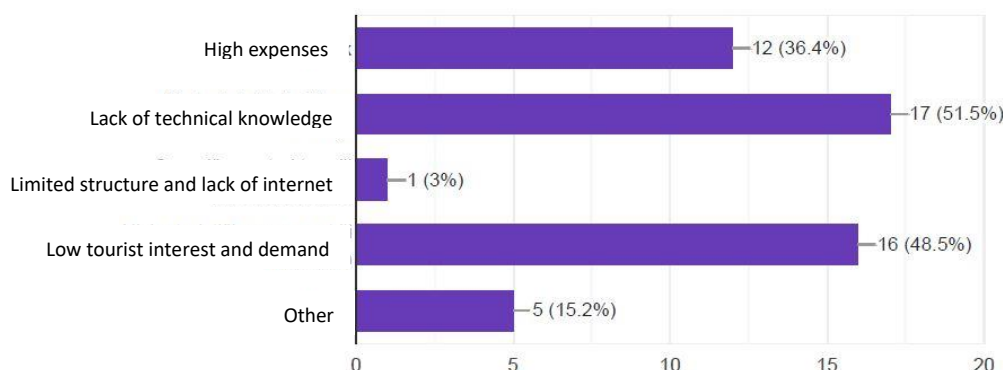


Figure 22: Reasons which are obstacle for use and implementation of digital technologies.

The foundational step in this digital ecosystem is the methodology of multi-image photogrammetry. This discipline utilizes hundreds or thousands of overlapping two-dimensional images, captured in situ by divers or remote operated vehicles (ROVs), to "record and reconstruct" the complex three-dimensional geometry and surface textures of submerged sites. This approach is highly effective for UCH documentation because it is non-invasive and can achieve sub-centimetre accuracy, generating high-resolution point clouds and detailed 3D meshes. The methodology is, however, challenged by the inherent difficulties of the sub-aquatic environment: low light penetration, selective color absorption (attenuation), backscatter from water turbidity, and light refraction at the water-housing interface. To compensate, specialists employ rigorous techniques, including the use of external strobe lighting to restore color fidelity, integrating metric scale bars and Ground Control Points (GCPs) for geometric accuracy, and applying Structure-from-Motion (SfM) and Multi-View Stereo (MVS) algorithms during post-processing to reconstruct the scene digitally. These generated models are not mere visualizations; they are scientifically accurate, georeferenced digital twins that can be analyzed and measured in a controlled, dry laboratory environment (Bruno et al., 2010).

Once these metric models are created, they serve as the indispensable "digital raw material" for developing end-user products. Virtual Reality (VR) applications leverage these 3D models to create fully immersive, synthetic environments. By wearing a VR headset, the general public can experience a hyper-realistic, virtual dive. This virtual modality is crucial for accessing deep, dangerous, or highly protected sites that are off-limits to recreational divers. It allows users to "visualise, understand, and value" significant heritage assets from a comfortable, dry setting. Conversely, Augmented Reality (AR) applications, often deployed via mobile devices, tablets, or even specialized underwater headsets, serve to enrich the physical experience. AR allows a user in a museum to see a 3D reconstruction of a recovered artifact superimposed over its current fragmented state, or enables an authorized tourist diver to view a historical reconstruction of a shipwreck projected onto its contemporary, degraded remains on the seabed, thereby enhancing interpretation at the actual site location. Additionally, these rich 3D assets are utilized to populate sophisticated digital platforms to create highly interactive and virtual maps, enabling remote users to navigate sites and access detailed interpretive content, historical narratives, and archaeological data from anywhere in the world (Gambin et al., 2021).

The deployment of these advanced digital products yields substantial benefits across multiple stakeholder groups. For the cultural heritage sector, these tools are invaluable for preservation, research, and effective site management. The high-fidelity documentation provides a reliable, repeatable baseline for monitoring the physical condition of sites over time, offering critical data for conservation planning and mitigation of threats. Furthermore, the ability to digitally reconstruct missing or deteriorated elements aids researchers in answering complex archaeological questions. The tourism sector benefits profoundly from market expansion and the promotion of responsible tourism practices. By offering high-quality virtual and augmented experiences, tourism operators can attract a significantly broader market—including non-diving tourists, educational groups, and those with physical limitations—who cannot physically access the deep-sea wrecks. This capability diversifies revenue streams. Crucially, the technology supports sustainable dive tourism by allowing operators to promote the historical significance and fragile nature of the sites before the dive, minimizing physical impact by replacing exploratory behavior with focused, informed visitation. Finally, the general public gains unprecedented, democratic access to a heritage category that has historically been confined to an elite few. These digital experiences are highly engaging and educational, often integrating gamification to turn passive viewing into active learning, as demonstrated in projects like Wrecks4All. By making UCH accessible and engaging, these platforms foster a greater appreciation for maritime history, ocean literacy, and the importance of preserving these submerged treasures, thereby acting as a powerful advocacy tool for conservation (Bruno et al., 2010; Gambin et al., 2021).

5.2 WRECKS4ALL VR Showrooms Establishment:

This proposal outlines a detailed plan for the establishment of WRECKS4ALL Virtual Reality (VR) Showroom at University of Montenegro in Institute of Interdisciplinary and Multidisciplinary studies in Podgorica, strategic hub designed to offer immersive experiences of the South Adriatic's Underwater Cultural Heritage (UCH) [Figure 23]. The primary vision is to create a network of innovative, accessible, and educational centers that make the region's submerged history available to a broad audience, including those who cannot physically dive. By leveraging cutting-edge XR technologies, this showroom will serve as a cornerstone of a new, sustainable tourism model, attracting visitors, raising awareness, and fostering a deeper appreciation for the shared maritime heritage of the region while reducing environmental pressure on the fragile underwater sites themselves. The showroom is designed to be more than just viewing centers; they will be dynamic spaces for community engagement, education, and cross-border cultural exchange, aligning with the core objectives of the WRECKS4ALL project.

The proposed primary location for the WRECKS4ALL VR Showroom in Montenegro is ECO building in Podgorica, an existing University's facility strategically positioned on the university center for high visibility and easy access. The showroom will be housed within at the Institute of Interdisciplinary and Multidisciplinary Studies, a dedicated 50 square-meter space in an established educational institution, allowing for synergies with ongoing training and promotional activities [Figure 24]. The interior will be transformed to evoke a sense of underwater exploration, blending ancient history with modern technology in a modular design capable of accommodating up to 20 visitors simultaneously. This immersive atmosphere will be achieved through soft, deep-blue lighting and subtle projections of marine life and water caustics,

enhanced by soundscapes of ambient marine audio and a diver's gentle breathing. A palette of natural and industrial materials, such as sustainable wood, brushed metal, and corten steel, will create a modern yet archaeologically resonant feel. The space will be carefully laid out with a reception area, a main immersive VR zone, and interactive information points, with seating integrated seamlessly into the design.

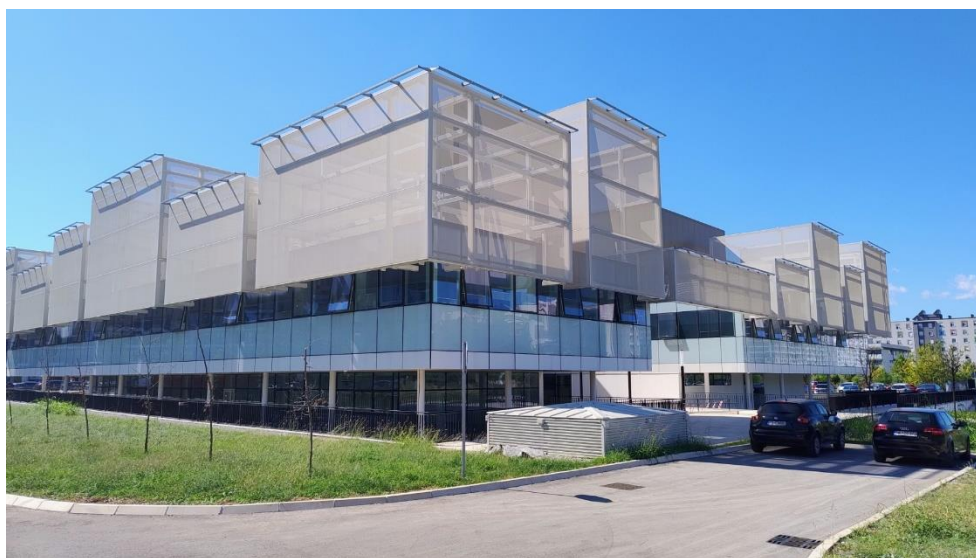


Figure 23: Institute of Interdisciplinary and Multidisciplinary Studies, Podgorica

Crucially, the showroom will be designed for full accessibility to ensure an equitable and enriching experience for all. The facility will be free of architectural barriers, providing ramp access and wide pathways for wheelchair users, alongside ergonomic, stable seating in the VR area. For visitors with sensory impairments, the experience will be enhanced with detailed audio guides, Braille information panels, 3D prints of shipwrecks and immersive audio descriptions, while multilingual subtitles and sign language video options will cater to those with hearing impairments. The design will also consider neurodivergent individuals by featuring clear, intuitive signage and offering the option for sensory-friendly time slots with reduced stimuli. To welcome families, interactive touch-screen tables will be positioned at a lower height for children, and the VR experiences will include simplified, shorter narrative options tailored to younger attention spans.

The visitor's journey is meticulously designed to build context and excitement, beginning in the Introductory Area, a dimly lit space featuring a large, interactive touchscreen map of the South Adriatic's key UCH sites and cinematic projections of the region's coastal landscapes. This flows into the heart of the showroom, the Immersive VR Room, where visitors are seated at one of 20 individual stations equipped with a state-of-the-art Meta Quest 3 headset. Here, they can simulate a real scuba dive, choosing between a curated, narrated "Guided Mode" that explains the history of sites through interactive pop-ups, or a "Free Exploration Mode" that allows for self-paced discovery with a virtual flashlight. The VR experience itself is built from highly detailed and scientifically accurate 3D photogrammetric models of the actual underwater sites. Finally, the journey concludes in the Debriefing Area, where a multimedia interactive table allows visitors to learn about the technology behind the project, reinforcing the connection between tourism, innovation, and heritage preservation. This multi-faceted experience is designed to captivate a diverse

audience, from general tourists and families seeking unique cultural activities, to scuba diving enthusiasts eager to preview sites, and educational groups looking for innovative learning tools. Importantly, it also aims to engage the local community, fostering a sense of ownership and pride in their shared heritage.



Figure 24: The space suitable for adaptation to Wrecks4All VR Showroom within the Institute of Interdisciplinary and Multidisciplinary Studies, Podgorica

To deliver this seamless experience, the showroom will be equipped with technological infrastructure. The core of the system will be 20 Meta Quest 3 standalone VR headsets, supported by high-definition projectors, interactive touchscreens, and a high-quality sound system. The immersive content itself is built from 3D models created using underwater photogrammetry, with interactive experiences developed in the Unity VR engine. A companion mobile app for Android and iOS will also offer Augmented Reality (AR) features, allowing users to project 3D models of the wrecks into their real-world environment. The realization of this technologically advanced facility requires a carefully planned budget. The total initial investment is estimated at €105,000, covering showroom equipment, the purchase of technological hardware, content licensing, and accessibility adaptations. Annual operating costs are projected to be around €39,000, encompassing staffing, maintenance, marketing, and utilities [Table 4]. Financial sustainability will be secured through a mixed-funding model that includes revenue generation from entry fees with tiered pricing, securing public funding from municipal, national, and EU sources, forging public-private partnerships with local tourism operators, and seeking corporate sponsorships. A key principle will be the reinvestment of a portion of revenues into content updates and UCH conservation initiatives.

Table 4: Estimated Budget: The budget is based on establishing a fully functional showroom for 20 visitors.

Item	Estimated Costs (€)	Description
Initial Investment		
Showroom Renovation & Setup	35,000	Physical adaptation of the space, installation of lighting, sound, seating, and display structures.
Technological Hardware (20 VR sets)	25,000	20x Meta Quest 3 headsets, charging stations, projectors, interactive screens, server.
VR Content & Software Licenses	20,000	Licensing of existing WRECKS4ALL content and development of custom modules.
Accessibility Adaptations	10,000	Costs for audio guides, Braille panels, 3D prints, sign language video production, and other inclusive features.
Total Initial Investment	105,000	
Annual Operating Costs		
Staffing (1 Manager, 1 Technician)	25,000	Salaries for staff responsible for daily operations, visitor assistance, and technical maintenance.
Technology Maintenance & Updates	5,000	Software updates, hardware maintenance, and content refreshment.
Marketing & Promotion	5,000	Digital campaigns, partnerships, and promotional materials.
Utilities & Overheads	4,000	Electricity, internet, and other operational expenses.
Total Annual Operating Costs	39,000	

Financial Sustainability Plan: Sustainability will be achieved through a mixed-funding model:

1. **Revenue Generation:** An entry fee will be charged for the VR experience. Tiered pricing will be available for individuals, families, and educational groups.

2. **Public Funding:** The initial investment will be sought through a combination of municipal budgets, national cultural heritage funds, and EU funding programs (e.g., Interreg, Creative Europe).
3. **Public-Private Partnerships (PPPs):** Collaboration with local tourism operators (hotels, tour agencies) to create package deals that include a visit to the showroom.
4. **Sponsorships:** Partnerships with tech companies or maritime businesses for corporate sponsorship.
5. **Reinvestment:** A portion of the revenue generated will be reinvested into content updates, technology upgrades, and UCH conservation initiatives.

To establish the showroom as a must-visit destination, a multi-channel marketing campaign will be launched, built around the strong brand identity and the slogan, "WRECKS4ALL: Dive into History of South Adriatic" The campaign will heavily leverage digital marketing, including a dedicated multilingual webpage with an online booking system and an active social media presence featuring compelling video trailers and user-generated content. Local and regional partnerships with tour operators, hotels, and schools will be essential for integrating the showroom into tourist itineraries and educational programs. The promotional strategy will be further supported by a high-profile launch event and participation in international tourism fairs to attract a global audience.

Ultimately, the WRECKS4ALL VR Showroom has the immense potential to revolutionize how the South Adriatic's Underwater Cultural Heritage is perceived and experienced. It will democratize access to this hidden world, breaking down the physical and financial barriers of scuba diving for a wider audience. Through powerful, immersive storytelling, it will offer a deeply personal and emotionally resonant connection to history that static exhibits cannot match. This initiative also represents a model for sustainable tourism, helping protect fragile underwater ecosystems and archaeological sites by offering a high-quality virtual alternative while creating a new, year-round economic driver. Perhaps most importantly, the showroom will serve as a physical catalyst for cross-border cooperation, showcasing a shared regional heritage and encouraging a new appreciation for the underwater treasures of the South Adriatic.

6. Dive destination development plan:

6.1 Road Map:

This strategic Road Map, synthesized from the comprehensive analysis of previously collected data, primary research outcomes, and collaborative stakeholder inputs, delineates a systemic pathway for the formal development of the South Adriatic as a high-value dive tourism destination [Table 5]. Its core objectives are to ensure sustainable growth, facilitate effective integration into the broader cross-border tourism offer, and promote the protected Underwater Cultural Heritage (UCH) as a foundational tourism resource. This document serves as a critical reference for decision-makers, guiding essential system improvements and establishing alignment with international best practice benchmarks, notably the UNESCO

2001 Convention on the Protection of the Underwater Cultural Heritage and the ISO 24803:2017 standard for recreational diving service requirements.

The current state of the destination presents distinct strategic vectors for development. Key strengths include the undeniable richness and historical significance of the region's UCH assets, complemented by the existing technological foundation, specifically the 3D documentation and Virtual Reality (VR) Showroom infrastructure, developed during the WRECKS4ALL project. Furthermore, the demonstrated institutional capacity, particularly the University of Montenegro's leadership in cross-border initiatives, positions the territory advantageously. Conversely, the principal weaknesses reside in the current regulatory environment: there is an absence of an explicit legislative framework defining dive tourism as a recognized economic service and, critically, a lack of a centralized, transparent concession and permitting system for controlled UCH access. This regulatory deficit contributes to potential fragmentation in destination management. These conditions collectively shape significant opportunities, which include capitalizing on the global demand for high-value, specialized heritage tourism and formalizing cross-border synchronization with regional partners (Italy, Croatia, Albania, Bosnia and Herzegovina) under the Interreg IPA framework. Additionally, the existing digital assets offer an opportunity to extend market reach beyond certified divers to non-diving cultural tourists, amplifying the resource's impact.

The successful implementation of the Road Map is strategically designed to maximize the positive economic effect of UCH valorization on coastal communities. The impact of underwater heritage tourism on the local economy is profound, functioning as an economic multiplier. By attracting specialized, high-yield tourists who typically spend more and stay longer than mass-market counterparts, the sector necessitates the professionalization of local services. This demand drives the creation of specialized, skilled employment—such as certified UCH dive guides and conservation technicians—which is crucial for retaining educated youth and diversifying the local employment base away from seasonal, unskilled labor. The formalization and standardization process (mandating ISO 24803:2017 compliance) directly supports this economic outcome by requiring higher operational standards and professionalism across the value chain, ensuring that the economic gains are localized and sustained.

The necessary way forward is advised through a structured, three-phased progression—Foundation, Operationalization, and Integration—encompassing five core strategic actions. The following matrix details the specific steps, identifies the primary institutional stakeholders, defines the quantifiable indicators of success, and specifies the expected results for each action, prioritizing systemic formalization before market-facing integration to achieve a sustainable and legally compliant UCH tourism offer.

Table 5: The Road Map

Strategic Action (Phase)	Primary Stakeholders	Indicators of Success	Expected Results
1. Legislative and Standardization Formalization	Ministry of Tourism and Sustainable Development, Ministry of Culture and Media, Heritage Institutions, National Accreditation Bodies.	Number of legal acts or amendments adopted; Compliance rate of commercial dive centers with the standard.	Formal recognition of dive tourism as a regulated economic service. Legal grounds for site protection and use are clearly defined and compliant with international conventions.
2. Standardized Valorization Model Establishment	Dive Management Consortium (Newly Created Body on the base of cluster), Local Municipalities, Ministry of Finance.	Establishment date of the Cluster/ Consortium; Number of site concessions awarded; Revenue generated from concession fees dedicated to conservation.	Establishment of a transparent, centralized permitting and concession system for controlled access. Creation of a dedicated and sustainable funding mechanism for site monitoring and preservation.
3. Economic Integration and Destination Structuring	Destination Management Organizations, Certified Dive Centers, Local Enterprise Sector (Accommodation, Restaurants, Transport), Local Cultural Sites.	Number of formalized functional clusters created. Measured increase in non-dive tourist receipts in targeted coastal communities.	Effective localization of economic benefits through cluster development. Increased utilization of local, peripheral, and non-dive services by the high-yield tourist segment.
4. Digital Democratization and Conservation	Institutions, Ministry of Tourism, /Tech Sector, Coastal Museums.	Number of Showrooms successfully deployed and operational; Measured visitor engagement rate with assets. Frequency of 3D	Extended market reach to non-diving cultural tourists, diversifying the visitor base. Establishment of a data-driven, proactive monitoring protocol for in-situ site preservation.

		data updates used for conservation assessment.	
5. Cross-Border Synchronization and Joint Promotion	Interreg Partners (Italy, Croatia, Albania, Bosnia and Herzegovina), National Tourism Organizations (), Ministries of Foreign Affairs.	Date of formal joint management protocol adoption; Number of joint marketing campaigns executed. Measured increase in cross-border and package tour bookings.	Establishment of a cohesive, internationally recognized South Adriatic Cultural Route. Achievement of synergistic market positioning and resource pooling for global competitiveness.

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ITALY - Wrecks4All Action Plan

University of Salento

1. Underwater Cultural Heritage (UCH) Sites Selection

1.1 Selection Criteria and Analysis

Underwater Cultural Heritage of Puglia Region

With over fifty years of continuous activity in the field of underwater research, Puglia ranks as one of the most advanced regions in Italy in the study and enhancement of submerged cultural heritage. This decades-long commitment, promoted and supported by the universities in the region through national and international projects, has enabled the exploration and systematic cataloging of extensive coastal areas and marine seabeds. The adopted methodological approach is based on a holistic and interdisciplinary analysis, which considers coastal and underwater landscapes from a diachronic and contextual perspective, allowing for a comprehensive understanding of the historical and environmental evolution of these areas.

Puglia was also one of the first Italian regions to establish a specific information system for managing cultural heritage. The Regional Cultural Heritage Information System (SIRPaC), now known as Cartapulia, represents a key tool for the protection, planning, and development of the region's cultural heritage. Through Cartapulia, thousands of sites of significant cultural interest have been cataloged, including numerous coastal and underwater sites, providing a solid foundation for enhancement and conservation efforts.

The Department of Tourism, Culture Economics, and Territorial Enhancement of the Puglia Region has collected and expanded this valuable legacy, promoting a series of initiatives in recent years aimed at the knowledge, preservation, and accessibility of the regional underwater heritage. A notable example is the creation of the Euro-Mediterranean Archaeological Center for Marine Landscapes (ESAC), established in collaboration with the Bibliomuseal Poles of the Puglia Region. The center, the result of an agreement between the Regional Department, the three universities, and the National Superintendency for Underwater Cultural Heritage, plays a coordinating role in research, cataloging, preservation, and training activities related to submerged heritage, while promoting cultural policies aimed at enhancing and sustainably developing the blue economy.

The Puglia Region boasts a rich and valuable underwater heritage, which serves as a testament to its significant historical value and strong Mediterranean identity. These assets, particularly important for the development of sustainable and profitable tourism, such as diving tourism, have been cataloged in the webGIS portal UnderwaterMuseMap. This tool, part of a cross-border project, has mapped the underwater deposits with these characteristics.

The underwater heritage of Puglia can be divided into three main macro-categories:

- submerged or semi-submerged coastal structures due to sea-level changes, such as remains of settlements, docks, port infrastructures, caves, and quarries;
- shipwrecks, including cargo, hulls, and onboard equipment;
- mobile finds, such as scattered materials, port dump sites, and isolated or decontextualized artifacts, including anchors, amphorae, and ceramics.

Among the most significant coastal sites, particularly due to recent studies, are: Torre Pietra, the Roman dock at S. Margherita di Savoia, Polignano (Cala S. Vito, with fish traps, canals, and medieval quarries), Mola

(Cala Padovano), Monopoli (with structures at Cala Incina and Cala Marzano), the imposing Roman port structures of Egnazia, as well as the sites of Torre Guaceto, Torre S. Sabina, S. Cataldo, and Otranto. Porto Cesareo also offers important evidence, such as Roman and Bronze Age settlements and necropolises. Another key element is represented by commercial flows and maritime routes, recently documented through the cargos and ships identified along these routes. Among the most remarkable, for their conservation in situ and accessibility, are the twin Ionian shipwrecks of Torre Sinfonò and S. Caterina, the cargo of tiles from Saturo, and the shipwreck of Tripolitanian amphorae in Porto Cesareo. The waters of the Tremiti Islands also hold numerous high-value sites, such as the Roman wreck of Tre Senghe and the Lombard steamer.

However, many of the wrecks that have washed ashore, often at shallow depths and characterized by wooden remains, are not suitable for in situ enhancement due to the fragility of the material and the constant sediment movements. In these cases, enhancement is ensured through the use of multimedia tools and immersive technologies such as virtual reality (VR) and augmented reality (AR), with the help of apps, videos, and animations. Currently, only a few sites of the regional underwater heritage are truly accessible: among them, the Roman port of Egnazia, the lapidary ships of S. Pietro in Bevagna, and the wreck of the columns in Porto Cesareo. All these sites can be visited via snorkeling, up to a maximum depth of 6 meters.

Selection Criteria for the six Underwater Archaeological Sites

In the framework of this Action Plan, the selection of UCH (Underwater Cultural Heritage) sites for integration into a cross-border tourist route is based on a rigorous methodological analysis, grounded in objective and multidimensional criteria. One of the fundamental criteria for site selection is their **historical and natural significance**. Shipwrecks, submerged structures, ancient artifacts, and archaeological remains are elements of exceptional interest both for scientific research and for the enhancement of shared cultural heritage. At the same time, the presence of protected marine ecosystems and endemic species further increases the site's value, contributing to the promotion of a model for sustainable and conscious tourism. Another essential aspect concerns the **site's state of preservation** and the risk of deterioration in both the short and long term. Phenomena such as coastal erosion, changes in marine conditions, pollution, and the impact of unregulated human activities can compromise the integrity of the sites. Therefore, it is crucial to conduct a thorough analysis of existing protection measures and any necessary recovery or mitigation actions to ensure their safeguarding.

The inclusion of a site in a tourist route also presupposes a **high level of attractiveness for underwater tourism**. In addition to its cultural and environmental relevance, the site must offer a quality diving experience, accessible to divers with different levels of experience. Factors such as underwater visibility, the presence of guided paths, supporting infrastructure, and the surrounding landscape are decisive for the integration of the site into the tourism offer.

The selection also takes into account the **site's significance at the national, regional, and cross-border levels**. The shared identity and historical value between the involved areas represent a crucial element to strengthen cultural and tourism cooperation, especially in the case of sites connected to ancient trade routes, significant historical events, or well-established cultural traditions.

Finally, **accessibility** is another decisive factor in the selection of sites, both in terms of logistics and environmental aspects. The depth of submerged structures, meteorological and marine conditions, the

availability of services for visitors, and compatibility with sustainable tourism strategies must be carefully evaluated to ensure responsible use of resources without compromising their conservation.

The adoption of these criteria allows for the identification of six particularly important sites, which meet high standards of protection and enhancement, contributing to the development of an innovative, sustainable tourist offering aimed at strengthening cooperation between the involved territories.

1. Harbour Complex of Posto San Giovanni at Le Cesine - *Vernole* (LE)

At the northern limits of the State Nature Reserve and WWF Oasis Le Cesine, in the locality of Posto San Giovanni, lies an intriguing submerged complex, identified as an ancient harbour. This site holds strategic importance for tourism enhancement, as it possesses characteristics that make it ideal for inclusion in an Action Plan aimed at promoting the region.

One of the key elements for its selection is its historical and archaeological significance. The submerged complex offers an imposing and intricate structure that extends approximately 150 meters eastward, about 50 meters from the ancient coastline. Despite the erosive action of the sea compromising its integrity, captivating details are still visible, including the foundation of a large pier made of blocks with a perpendicular arm to the shore and a large rectangular head measuring 24 x 30 meters. The surrounding area features other shaped blocks, likely used as bollards for boats, as well as sections of stone canals. The presence of an emerging structure, known as the "Submerged Church," adds further charm to the site: with a rectangular plan measuring 33 by 15 meters and three rooms, it still retains part of its cement walls, though the marine erosion has damaged its sides. The hypothesis that it might have been a tower-lighthouse enhances the historical value of the complex, placing it in a broader context related to the history of navigation and Mediterranean harbours. Notably, ancient sources suggest a possible link between this harbour and Augustus, who may have stopped there on his journey to Rome.

In addition to its historical value, the site stands out for its unique environmental context. Located within the State Nature Reserve and WWF Oasis Le Cesine, the submerged harbour lies in an area of extraordinary biodiversity, where coastal habitats, wetlands, and a rich ecosystem of plant and animal species intersect. This makes it perfectly compatible with a model of sustainable tourism, capable of combining the enhancement of cultural heritage with environmental protection. The WWF Oasis already serves as a reference point for nature tourism, and integrating the submerged harbour complex into the reserve's attraction network would offer visitors a complete experience, spanning from archaeology to the discovery of local ecosystems.

Another criterion justifying its selection is its ability to tell the story of the evolution of the coastal landscape and economic activities over time. Along the beach facing the remains of the harbour, there are basins carved into the rock, sometimes interconnected by canals, identified as a salt production facility. Their presence testifies to an ancient productive activity that characterized the area, also found in other historic Mediterranean locations such as Malta, Ventotene, and Licosia. These basins, known locally as "Conche del Sale," resemble those described by Pliny in his *Naturalis Historia*, confirming the importance of the area in the ancient economy.

The site's selection is further supported by recent archaeological findings in the nearby locality of Specchiuddhri, where excavations revealed remains dating back to the Middle Bronze Age and Early Iron Age. Here, the remains of a large wall approximately 15 meters long and ceramic fragments similar to those

preserved in the Acaya Castle were found, suggesting the area was inhabited from the mid-2nd millennium BC to the early 1st millennium BC. The reconstruction of the ancient landscape highlighted that this settlement stood on a small peninsula extending towards the sea, adding another piece to the understanding of the settlement history of the coast.

Finally, another key element for the selection of this site is its potential for tourism use. Although partially submerged and subject to natural changes caused by storms, which sometimes cover or uncover the structures, the site can be made accessible through guided snorkeling tours or using immersive technologies, such as augmented reality. Its proximity to locations already included in tourist itineraries, such as the WWF Oasis Le Cesine and the fortified village of Acaya, allows for the development of thematic routes that tell the story of the transformation of the coastal landscape, from early settlement forms to the present day. The presence of a cycling route that crosses the territory offers an immersive experience combining nature, history, and culture. The route, approximately 36.7 km long, winds through scenic landscapes featuring centuries-old olive groves, flowering meadows, and sites of historical and archaeological importance. The route allows visitors to explore not only the natural beauty of the reserve but also significant historical remnants, such as the fortified settlement of Acaya, the historic farmhouses of the Salentine countryside, and the traditional villages of Vernole and Strudà.

Along the way, cyclists have the opportunity to admire the Adriatic Harbour at San Cataldo, another site of interest in the Action Plan, and the archaeological park of Roca Vecchia, home to the famous Grotta della Poesia. These places, rich in charm and history, strengthen the connection between the submerged site of Posto San Giovanni and other points of interest along the Adriatic coast, creating an itinerary that combines active tourism with the discovery of cultural and environmental heritage. The presence of this easily bikeable route contributes to promoting a model of sustainable and slow tourism, which values the territory without disrupting its natural balance.

The uniqueness of the site, its historical and environmental value, the evidence of ancient economic activities, and its potential for sustainable use make it an ideal destination to be enhanced within the context of high-quality cultural and naturalistic tourism.

2. Harbour of Adriano at *San Cataldo* (LE)

The Harbour of San Cataldo, located along the Adriatic coast of Salento, represents an archaeological site of extraordinary historical and natural significance, making it an ideal candidate for inclusion in a cross-border tourist itinerary. Its location in a region rich in history and culture further enhances the site's value, both in terms of heritage preservation and its tourism potential. The site holds notable importance not only for its historical and archaeological value but also due to its integration into an area of remarkable natural beauty, which enriches its appeal and potential for sustainable tourism development.

The historical aspect of the site is documented by the remains of an ancient Roman quay attributed to Emperor Hadrian, dating back to the 2nd century AD. This quay, one of the first port structures in the area, was a crucial element in ancient maritime trade, serving as an important hub for commercial and defensive routes in the Mediterranean. Although the structure has been damaged over the centuries due to storms and subsequent reconstruction efforts, it still retains significant traces, including walls made from limestone blocks and ancient cement. These materials, used by Roman engineers, testify to the construction skills of the era and the great attention given to the durability of structures. The remains of this imposing work, still

visible on the seabed, allow us to reconstruct part of the history of a port that, over the centuries, has played a fundamental defensive and commercial role for Salento.

Over the following centuries, the site of the Harbour of San Cataldo remained of great strategic and commercial importance. Another significant testimony is the medieval tower built by Gualtieri di Brienne, a French nobleman who governed the area in the 13th century. The tower represents an important defensive element, constructed to protect the area from pirate incursions and to ensure the safety of maritime routes. The structure of the tower, still visible and recognizable in the area, is an integral part of the archaeological complex of the site and illustrates the evolution of the port's function, which adapted and transformed over time in response to historical and geopolitical needs.

In the 14th century, the site was again renovated through the intervention of Maria d'Enghien, Queen of Naples, who ordered the construction of a new quay to strengthen the functionality of the port, ensuring its central role in Mediterranean trade routes. This reconstruction marks a phase of modernization of the site, adapting infrastructure to meet the needs of the period. The presence of this new quay, along with the remains of the medieval tower and the Roman quay, gives the Harbour of San Cataldo a historical continuity spanning different periods, from Roman to medieval rule, providing a comprehensive overview of the various historical phases that shaped the area.

In addition to the important archaeological remains visible on-site, the Castromediano Museum in Lecce houses numerous artifacts from the Harbour of San Cataldo, including fragments of amphorae, nautical instruments, coins, and other items related to ancient port life. These artifacts, displayed in the museum, allow visitors to deepen their historical understanding of the site and better appreciate the role the port played over the centuries. The museum thus serves as a key reference point for those wishing to explore the site's history and place it in the broader context of ancient Mediterranean trade routes.

Easily reachable from Lecce, the site is located in an area that, in 2024, received the Blue Flag recognition, attesting to the environmental quality and sustainability of the local waters and tourist services. This recognition underscores the quality of the area and its ability to attract tourism sensitive to environmental conservation. The site is situated in an extraordinarily beautiful natural context, including coastal landscapes, cliffs, and seabeds rich in biodiversity. The submerged remains of the Roman quay, in particular, offer a unique perspective for underwater tourism, allowing exploration of the seabed through snorkeling and diving activities.

From the site's condition perspective, although the remains are partially damaged by natural events and 20th-century reconstructions, the Harbour of San Cataldo remains in a state of preservation that allows its historical significance to still be appreciated. However, the site faces significant risks of erosion and deterioration, primarily due to the action of the sea and the effects of climate change. The need for conservation interventions is evident to ensure the long-term protection of the site and prevent further structural damage.

The tourist attractiveness of the Harbour of San Cataldo is therefore exceptionally high, not only because of its historical importance but also due to its privileged location, which allows visitors to combine archaeological visits with the experience of an unspoiled natural environment. Additionally, its proximity to Lecce and other places of interest in the region, as well as the possibility of integrating the site into a cross-border tourist itinerary, enhances its potential to contribute to regional tourism development. The presence of tourist facilities nearby, combined with its historical and natural significance, supports the inclusion of the

Harbour of San Cataldo in a tourism offering that blends cultural heritage and scenic beauty, aiming for sustainable use of local resources.

3. Roman Settlement on the Isola dei Conigli - *Porto Cesareo* (LE)

Porto Cesareo, an enchanting tourist destination located along the Ionian coast of Salento, is renowned for its extraordinary natural beauty and vibrant tourism scene. The town attracts visitors each year with its crystal-clear waters, sandy beaches, and the lively atmosphere of its numerous beach clubs. While Porto Cesareo is a prime spot for beach tourism, it also holds significant historical and cultural value, thanks to the presence of various archaeological and natural sites that enhance the experience for tourists. The appeal of the area extends beyond its beaches and sea, encompassing regions of ecological and archaeological importance that testify to the history and biodiversity of this part of Salento.

A perfect example of this connection between nature and history is the Isola dei Conigli, a small paradise island located just off the coast of Porto Cesareo, easily accessible by boat. The island, named after the rabbit farming that took place there post-World War II, is now a natural oasis offering a unique experience of pristine beauty, immersed in the turquoise waters of the sea. Isola dei Conigli is part of the Porto Cesareo Marine Protected Area, one of the most protected and valued marine areas in the region, underscoring its ecological and tourist value. The island's surface is primarily covered by a pine forest of Aleppo pines, a result of reforestation efforts by the State Forestry Corps in the 1950s, aimed at preserving Mediterranean biodiversity. However, Isola dei Conigli is not just a place of rare natural beauty; it also holds considerable archaeological interest, telling the story of settlements dating back to the Roman period. Along the edges of the pine forest, the remains of a Roman settlement can be seen, including foundations, traces of walls, remnants of flooring, and fragments of pottery. These artifacts provide insights into daily life and the activities that took place on the island between the 1st and 4th centuries AD. The island's strategic position, which was once part of a much larger coastline, suggests that the settlement was a significant hub for the Roman community, possibly linked to a seaside villa or a seasonal village that utilized the sea's resources. The site also holds great subaqueous interest, as numerous artifacts have been recovered from the surrounding waters, including amphorae and anchors from the same period. These underwater finds, combined with the visible remains on the island, offer important evidence of the trade routes and maritime activities that characterized the region in antiquity. Isola dei Conigli is, therefore, an underwater archaeological site of great value, which can be explored through diving and snorkeling activities due to the clarity of the surrounding waters and the presence of submerged historical artifacts.

Access to the island is exclusively by boat, pedal boat, or organized tours from the Porto Cesareo harbor. Visiting Isola dei Conigli offers a comprehensive experience that blends nature, history, and culture, making it particularly suitable for inclusion in cross-border tourist itineraries. The protected area that encompasses the island, along with other sites like Scalo di Furno and Torre Chianca, forms an ecological and historical complex that enriches the tourist offerings of Porto Cesareo.

Additionally, the presence of other natural and historical resources nearby, such as the P. Parenzan Marine Biology Museum, further strengthens Porto Cesareo's potential as an international cultural and natural destination.

From a conservation and management perspective, while Isola dei Conigli maintains a significant state of natural health, it is subject to risks stemming from natural erosion and tourist pressures. Striking a balance between tourism development and environmental conservation is crucial to ensure the long-term protection

of the site. Visitor awareness, monitoring of water quality, and the introduction of active conservation measures, such as access regulations and restoration interventions, are essential to maintain biodiversity and protect the submerged archaeological heritage.

In conclusion, Isola dei Conigli represents a site of priceless archaeological and natural value, uniting the charm of an unspoiled landscape with a rich historical heritage of Roman and subaqueous significance. Its inclusion in a cross-border tourist circuit, valuing both its natural beauty and historical and archaeological interest, presents a unique opportunity to enhance the tourist offerings of Porto Cesareo and contribute to the development of sustainable tourism. This would promote an experiential form of tourism that respects and protects the local heritage while fostering its long-term preservation.

4. Roman Necropolis of Torre Chianca - *Porto Cesareo* (LE)

The site of Torre Chianca represents a significant testimony to the history of settlement along the Salentine coast, marked by continuous habitation from the Bronze Age to the Roman period. As you walk along the promontory of Torre Chianca and the one immediately to the west, you can observe the remains of walls and ancient artifacts that narrate the story of a well-frequented settlement during the Bronze Age and the Roman era. Evidence of a community living in the area as early as the 2nd millennium BCE is provided by a dark soil layer rich in ceramics and animal remains, visible in a section of land washed away by the sea. Additionally, numerous postholes for wooden houses on the rock ledge just below sea level and other remains further corroborate the settlement's early presence.

Even more evident is the existence of a small Roman settlement, likely dedicated to exploiting maritime resources, evidenced by wall foundations that disappear beneath the sea level, and an associated necropolis, of which sarcophagi, stele (tombstones with inscriptions commemorating the deceased), and rock-cut tombs remain. Some of these tombs, due to coastal erosion and strong waves that have affected this part of the Salentine coast in recent years, have been recently identified near the shoreline and submerged, only a few meters underwater, in the small bay north of the Tower. These submerged tombs testify to a profound change in the landscape: the inlet, extending up to the nearby Chianca Island, was once dry land during the Roman era.

Visitors can also explore the imposing Torre Chianca, also known as Torre Santo Stefano, which served as a refuge for Italian soldiers during World War II and today houses the Marine Turtle Rescue Center and the Environmental Education Center. Inside the tower, there is an interesting archaeological exhibit. By immersing oneself in the crystal-clear waters of Torre Chianca, one can see submerged archaeological sites such as the nearby Tripolitanian amphorae and Roman columns.

From a tourism perspective, Torre Chianca offers a unique experience for underwater tourism. The crystal-clear waters provide excellent visibility of the submerged remains, including the nearby cargo of Tripolitanian amphorae and the Roman column wreck, making the site particularly attractive to both expert divers and enthusiasts. Moreover, the presence of the Marine Turtle Rescue Center and the Environmental Education Center allows for the integration of archaeological discovery with environmental awareness initiatives, fostering a sustainable approach to cultural tourism.

This aspect is further strengthened by the site's location within the Porto Cesareo Marine Protected Area, which ensures the protection of the marine ecosystem and hosts other significant submerged archaeological sites. The proximity of different points of interest facilitates the integration of the Torre Chianca site into a

broader tourism itinerary, allowing visitors to easily explore a route of great historical and environmental value.

The accessibility of the site is ensured, as it is equipped with numerous services for marine and underwater tourism. Torre Chianca is easily reachable by road along the coastal route, with nearby parking and easy access points. The area is served by diving centers and specialized tour operators who offer guided tours and dives to explore the submerged remains safely.

Adding to the historical and archaeological context, along the coast of Porto Cesareo, halfway between the town center and Torre Chianca, remains of a fortified village from the 15th to the early 14th century BCE and into the Archaic period can be found at the Scalo di Furno promontory. During the 2nd millennium BCE, the entire area between the mainland and Malva Island was not submerged as it is today but was dry land and populated with various settlements. In the submerged area between the Scalo di Furno promontory and the small island in front, at a depth ranging from 2 to 3.5 meters, the lower terrace of the Scalo di Furno village has been identified, with submerged remains of what is believed to be the defensive wall and an area with a paved floor rich in ceramic fragments.

The strategic location of Torre Chianca and its integration into ancient maritime trade routes enhance its relevance on a transnational scale. Artifacts discovered in the area attest to the deep connections between Salento, the Eastern Mediterranean, and North Africa, highlighting a dense network of exchanges that transcended local and national boundaries. In this context, the site plays a key role in defining a transnational cultural itinerary aimed at promoting the submerged heritage and strengthening cooperation between the involved territories.

Torre Chianca, with its archaeological, historical, and environmental significance, not only offers a fascinating glimpse into the ancient past but also serves as a gateway to sustainable and experiential tourism that fosters a deeper connection between visitors and the region's rich heritage.

5. Shipwreck of the Tripolitanian Amphorae - Porto Cesareo (LE)

The site of La Pierta, located between Torre Chianca and Torre Lapillo, just a few hundred meters from the coast, hosts an important wreck of North African Roman amphorae from the ancient province of Tripolitania, now modern-day Libya. The remains of the wreck lie on the seafloor at a depth ranging from 3.5 to 5.5 meters, making the site accessible for snorkeling activities, allowing visitors to explore this extraordinary underwater historical testimony.

The area of the site is characterized by the presence of concretion fragments of amphorae—handles, bottoms, rims, and walls—that, over the centuries, have cemented together due to marine erosion and the growth of bio-construction organisms such as mollusks, polychaetes, and encrusting red algae. The result is a formation that, due to its particular shape, resembles large fungal structures with elongated "caps," giving the site an extremely captivating and fascinating appearance for visitors.

These ceramic fragments, dating back to the late 2nd century AD, once constituted large containers used to transport sauces, fish preserves, or wine. It cannot be excluded that some of these containers may have contained oil, as suggested by similar finds from Monte Testaccio in Rome and Leptis Magna. The extent of the seafloor surface covered by the amphorae remains, along with the quantity and distribution of the fragments, suggests that this was a large, homogeneous cargo. This indicates that the ship was likely engaged in a "direct" commercial journey, transporting goods from a production point to a consumption location. The ship, probably bound for the ports of the Eastern Mediterranean, likely sank along the Ionian

route between Crotone and Porto Cesareo, possibly due to a storm that pushed it northward, tragically interrupting its journey.

From a tourism perspective, the site of La Pierta offers a unique opportunity for enthusiasts of underwater archaeology, thanks to the excellent visibility of the submerged remains and the possibility to explore them through snorkeling. However, the significance of the site goes beyond its archaeological importance. Its location, within a broader context of historical and cultural interest, allows for an expanded tourist experience through visits to other valuable archaeological areas. Just a short distance from the site of La Pierta, the promontory of Torre Chianca and its shallow waters host the submerged necropolis and the underwater site of the Roman columns, further enriching the area's tourism offer.

The proximity of various points of interest—such as the column wreck, the submerged remains of the Torre Chianca necropolis, and the fortified village of Scalo di Furno—facilitates the creation of an integrated itinerary that offers a historically, culturally, and naturally rich archaeological journey. This itinerary allows visitors to explore a wide range of sites related to the history of maritime trade, underwater archaeology, and environmental conservation, promoting a comprehensive and engaging experience of the area. Additionally, the inclusion of the La Pierta site in a transnational cultural itinerary is particularly significant from an environmental protection standpoint. The site's position within a protected marine area ensures the safeguarding of the marine ecosystem and promotes sustainable and responsible tourism. The integration of conservation efforts with the promotion of historical heritage allows for the creation of a tourism offering that respects the environment and fosters the growth of conscious tourism, capable of attracting both local and international visitors.

Finally, the site's accessibility through snorkeling activities makes it an easily integrable destination within a broader tourism offer, contributing to the enhancement and promotion of the region's underwater and cultural heritage. The site of La Pierta, with its intrinsic charm, thus becomes a key element in the proposed itinerary, which aims to create a network of significant places capable of attracting visitors and stimulating the development of cultural and sustainable tourism in the area.

6. Shipwreck of the Columns of Torre Chianca - *Porto Cesareo* (LE)

In the area of Torre Chianca, at a depth of just 4.5 meters and 80 meters from the coast, lie five monolithic Roman columns dating back to the 2nd century AD, resting on the sandy seabed. This submerged archaeological site is located within the Marine Protected Area of Porto Cesareo. Here, a ship sank carrying a cargo of various goods and five enormous cipollino marble columns from the Greek island of Euboea, in the Aegean Sea.

The columns, each about 9 meters long and 70–100 cm in diameter, were all quarried in Karystos, at the southern tip of Euboea. They remain in a roughly finished state, with fluting only partially carved, and are now mostly covered by green algae and some sponges. Of the shipwreck discovered in 1960, only these columns remain. Other artifacts, such as amphorae and bricks, are now preserved at the Aragonese Castle of Taranto.

The site is easily accessible by sea via boat or from land by swimming the short 80-meter stretch from the nearby inlet next to the Tower. Viewing the five columns does not require scuba diving certification—just a mask and fins are enough to enjoy seawatching.

The selection of archaeological sites of great value, such as the Isola dei Conigli, the submerged necropolis, the village of Scalo di Furno, the cargo of Tripolitanian amphorae, and the shipwreck of the columns, clearly highlights the intention to create a submerged archaeological park in the Porto Cesareo area. These locations represent tangible evidence of a past rich in history, trade, and interactions between civilizations that navigated the waters of these seas. The idea of integrating these sites into a unified pathway underscores the desire to offer an experience that not only enhances the underwater archaeological heritage but also the connection between history, nature, and sustainable tourism.

This project finds an ideal counterpart on the Adriatic side, with the ports of San Cataldo and the Molo di Posto San Giovanni alle Cesine. These places, located along the Adriatic coast, complete a broad route that develops between two seas, the Ionian and the Adriatic, in a sort of journey through time that connects settlements, harbors, and trade routes from the 2nd millennium BC to modern times. This itinerary offers a fascinating contrast between landscapes that have transformed over the centuries, highlighting how the locations, while remaining fixed, have witnessed significant evolutions in historical paths and methods of human settlement.

1.2 Legislative Framework

Compliance with EU guidelines for the protection and promotion of Underwater Cultural Heritage.

The plan is aligned with two fundamental references related to cultural heritage: the 2001 UNESCO Convention and the 2005 Faro Convention. Following the UNESCO Convention on the Protection of Underwater Cultural Heritage (2001), ratified by Italy and incorporated into national law by the Law of October 23, 2009, No. 157, a new phase of the process of reclaiming cultural heritage as a shared value, or 'popular' heritage, is represented by the Framework Convention on the Value of Cultural Heritage for Society. The latter, adopted by the Committee of Ministers of the Council of Europe on October 13, 2005, in Faro, was ratified by Italy on September 23, 2020 (Chamber of Deputies). This Convention defined an innovative and revolutionary concept of cultural heritage, understood as the set of resources inherited from the past, identified by citizens themselves as a reflection and expression of their values, beliefs, knowledge, and evolving traditions. It recognizes the right of every citizen, and of all humanity, to benefit from cultural heritage, accompanied by the responsibility to respect it. These principles form the foundation for research, conservation, protection, management, and participation, as well as for cultural dialogue, fostering the creation of a sustainable and multicultural social, political, and economic environment. It is now evident that underwater cultural heritage is increasingly required to generate a social return, as well as a cultural one, creating a positive impact on the economic and social fabric of a community.

Furthermore, the European Union guidelines promote Blue Growth and responsible, sustainable tourism linked to the sea and underwater cultural heritage. Experiencing the submerged past is rapidly becoming an important resource in the leisure industry and the 'experience economy.' However, this development brings both opportunities and risks for the protection of such heritage. The guiding considerations for granting public access may include the following:

- Distinguish between access and intrusion;
- Prohibit unauthorized intrusion;
- Do not limit access, but channel it;
- Develop routes;
- Allow access under the guidance of a 'guardian';
- Involve the recreational diving industry in protection and management;
- Make access conditional on responsible behavior;
- Reduce restrictions to access only as strictly necessary.

Compliance with Italian Guidelines for the Protection and Promotion of Underwater Cultural Heritage.

The underwater cultural heritage of the Puglia Sea is under the supervision and jurisdiction of the regional offices for the Conservation of Archaeology, Fine Arts, and Landscape Heritage in the provinces of Brindisi, Lecce, and Taranto, as well as in the provinces of Barletta-Andria-Trani and Foggia, and the Metropolitan City of Bari (*Superintendency of Archaeology, Fine Arts and Landscape – SABAP for the provinces of Brindisi, Lecce, and Taranto; Superintendency of Archaeology, Fine Arts and Landscape – SABAP for the provinces of Barletta-Andria-Trani and Foggia; Superintendency of Archaeology, Fine Arts and Landscape – SABAP for the Metropolitan City of Bari*).

Taranto will also host the headquarters of the new Underwater Heritage Archaeology Conservation Office (*National Superintendency for Underwater Archaeology*), which will also have operational units in Venice and Naples (Art. 37 DPCM 2 December 2019, n. 169).

The Region of Puglia – *Department of Tourism and Cultural Industry, Management and Enhancement of Cultural Heritage* plays an important role in managing regional and international projects related to underwater cultural heritage, as well as Marine Protected Areas. Furthermore, the Region of Puglia has funded many research and innovation programs (e.g., Future in Research), as well as projects for the regeneration of museums and cultural sites, and others supporting cultural, creative, tourism enterprises, and performing arts, such as the "Radici e Ali" call (POR 2014-2020), aimed at fostering youth entrepreneurship projects in the fields of culture and integrated customer service assistance.

Overview of legislation/regulations

- C.P.C.M. 3763/6 of 20.04.1982 (Spadolini Ministerial Circular)
- Framework Law of 6 December 1991 on Marine Protected Areas
- Presidential Decree 554 of 1999 or regulation of the Merloni Law
- Framework Law of Cultural Heritage DL 42 of 22/01/2004 (Codice Urbani) and subsequent amendments and additions; Art. 10, paragraph 4, i) Ships and floating structures of artistic, historical or ethno-anthropological interest
- Unesco Convention 2001. Convention on the protection of the Underwater Cultural Heritage = Law 23 October 2009, n. 157. Ratification and implementation of the Convention on the Protection of the Underwater Cultural Heritage, with Annex, adopted in Paris on 2 November 2001, and rules for updating internal rules and regulations.
- Faro Convention 2005. Framework Convention on the Value of Cultural Heritage for Society, adopted by the Committee of Ministers of the Council of Europe on 13 October 2005 in Faro and ratified by Italy on 23 September 2020 (House of Representatives).
- DPCM 2 December 2019 n.169, Art. 37: Establishment of the National Conservation Office for the Underwater Heritage's Archaeology (Soprintendenza Nazionale per l'Archeologia del Patrimonio Subacqueo)

The plan finds a significant reference point in the *Interministerial Decree* of August 7, 2002, No. 304 - *Establishment of the submerged park located in the waters of "Baia," in the Gulf of Pozzuoli*, with which it fully shares the objectives:

Article 3 – finalities:

- environmental and archaeological protection of the area of interest
- the valorization of environmental, historical, archaeological and cultural resources of the area, also for social and employment purposes;
- the dissemination and communication of the knowledge of the maritime and coastal ecology and biology as well as the underwater archaeological heritage of the area;

- the delivery of educational programs for the improvement of the general culture in the ecology, marine biology and archaeology;
- the fulfillment of study and scientific research programs in the ecology, marine biology, environmental protection and archaeology sectors to assure the systematic knowledge of the area;
- the promotion of a socio-economical development compatible with the historical and landscape evidences of the area, also sustaining existing local traditional activities; (in this framework) the regulation of the activities related to the management of the touristic flows, guided visits and public transports would foresee that the above mentioned activities are delivered primarily by the local citizens and businesses.

Moreover, the main interlocutor in Italy for policies and strategies concerning Underwater Cultural Heritage (UCH) is the National Superintendency for Underwater Cultural Heritage, established under Articles 33 and 37 of Ministerial Decree No. 169 of December 2, 2019. It is headquartered in Taranto, with operational centers in Naples and Venice. It is responsible for carrying out the protection, management, and enhancement of underwater cultural heritage as per Article 94 of the Cultural Heritage and Landscape Code, as well as the functions assigned to the Ministry of Culture (such as inventory, protection, conservation, and management of national underwater heritage) according to Law No. 157, concerning the ratification and implementation of the Convention on the Protection of Underwater Cultural Heritage, adopted in Paris on November 2, 2001. Finally, the plan is in perfect alignment with the Maritime Spatial Planning process: understanding, recognizing, and using Underwater Cultural Heritage as a sensitive asset in marine space and reconciling its preservation and promotion within the perspective of a sustainable blue economy represents a real challenge (New study "How to incorporate Underwater Cultural Heritage into Maritime Spatial Planning" | The European Maritime Spatial Planning Platform (europa.eu)). The Region of Puglia has implemented in the Management Plans of the Ionian-Adriatic maritime areas the submerged assets cataloged in the regional cultural heritage information system (www.cartapuglia.it) and in the *UnderwaterMuseMap* portal (<http://mizar.unive.it/underwatermusemap/>) planning units and their uses have been identified; the category "landscape and cultural heritage" appears in almost all units as a priority or limited use with the justification "Widespread presence of submerged archaeological assets."

Regional governance plans and actions in order to enhance UCH and improve sustainable tourism strategies: the establishment of ESAC.

The integration of all the initiatives and activities carried out within the UnderwaterMuse project and the capitalization of other projects led to the creation of the Euro-Mediterranean Landscape Archaeology Center - ESAC, with the aim of producing a structured and qualified proposal for the regional underwater cultural heritage and its increased accessibility.

The Center's comprehensive program addresses its four main objectives – research, conservation, enhancement, and training – and is divided into a series of thematic projects:

- Changing landscapes: settlements, ports, and landings from the second millennium BC to modern times.
- Shipwrecks and cargoes: key stages of maritime routes.
- The sea and the sacred: the path of coastal sanctuaries in Puglia.
- Deep depths: making the invisible heritage visible.
- The culture of the sea and intangible heritage: knowledge, traditions, connections, and mobility.

In line with this holistic vision, the program enhances and presents in a structured pathway – the network of Puglia Landscapes – those assets that can be seen as examples of the historical values of the region and its strong Mediterranean vocation, while also being particularly significant for a highly profitable type of tourism such as underwater tourism. The foundation of this selection is the UnderwaterMuse portal.

2. Sustainable Tourism Assessment

2.1 Tourism Assessment

Puglia is one of the main tourist destinations in Italy, thanks to its unique combination of historical heritage, natural landscapes, gastronomic traditions, and a wide range of services. The region has seen steady growth in tourist arrivals in recent years, supported by targeted development strategies such as the Puglia365 Strategic Tourism Plan, which focuses on seasonality reduction, cultural heritage enhancement, and digital innovation.

Connectivity and Infrastructure

The region is well connected nationally and internationally thanks to its two main airports, Bari Karol Wojtyła and Brindisi Papola Casale, which offer direct connections to numerous European destinations. The railway network ensures accessibility to major urban and tourist centers, while the road network, including the A14 highway and the SS16 Adriatica, facilitates internal connections.

Accommodation Systems and Tourist Offer

The accommodation offer in Puglia is varied and includes luxury hotels, resorts, historic masserie, agritourisms, and non-hotel establishments. The sector has benefited from regional and national incentives aimed at improving the quality of hospitality and promoting sustainable tourism. At the same time, the region offers a wide range of tourist services, including guided tours, food and wine experiences, and outdoor activities such as hiking, cycling tourism, and water sports.

Entertainment and Cultural Offer

Puglia is known for its rich calendar of cultural events and festivals, ranging from traditional music, such as the Notte della Taranta, to film and theater festivals. The region's cultural heritage includes UNESCO sites like Castel del Monte, along with numerous historic villages, museums, and archaeological parks.

Underwater Tourism and Integration into Regional Strategies

As part of the broader regional tourism development, underwater tourism is an emerging sector closely linked to the enhancement of the Underwater Cultural Heritage. The Region of Puglia has integrated the protection and promotion of submerged sites into its planning tools, such as the Regional Territorial Landscape Plan (PPTR) and management programs for Marine Protected Areas. The creation of underwater cultural itineraries and the digitization of submerged sites, through platforms like UnderwaterMuseMap, contribute to the international visibility of this offering and its sustainability.

This synergy between infrastructure, tourist services, and the enhancement of underwater heritage lays the foundation for a sustainable development model, in line with the goals of European Maritime Spatial Planning (MSP) and the blue growth strategies promoted by the European Union.

2.2 Dive Tourism and Services Assessment

The Apulia Region, particularly along the Lecce/Vernole and Porto Cesareo coasts, has seen increasing interest in dive tourism due to the richness of its underwater cultural heritage and marine biodiversity. However, despite the presence of high-value archaeological sites—such as the Bronze Age and Roman settlements, wrecks and decontextualised finds in the MPA Porto Cesareo, as well as the submerged Roman harbors of S. Cataldo (Lecce) and Posto San Giovanni at Le Cesine Nature Reserve (Vernole)—the development of dive tourism remains fragmented. Only a few diving centers (e.g., Orca Diving Center, ASD

Porto Cesareo Diving, Costa del Sud Diving service along the Ionian coast nearby Porto Cesareo, or Mediterraneo Diving in Lecce) as well as several cultural/natural tourism and sport businesses (Riviera di Ponente, Masseria Fossa, Circolo della Vela Marina di Lecce) operate in the area, offering services such as snorkeling, scuba diving, and guided underwater and coastal archaeological tours. While these operators demonstrate expertise and local knowledge, there is no standardized quality control across providers regarding customer safety protocols, multilingual services, or the integration of digital tools like underwater AR/VR for interpretive guidance. Furthermore, the marketing and promotion of dive tourism in the region remain limited and largely disconnected from broader regional destination management networks. Promotion is often reliant on individual operators rather than coordinated strategies tied to the Region's cultural or environmental branding efforts. The lack of comprehensive training programs for guides and inadequate interconnectivity between accommodation services and dive providers pose additional barriers. In contrast to best-practice EU destinations (e.g., Croatia or Greece), where dive tourism is part of an integrated tourism and conservation strategy, Apulia still lacks a unified product offering. Opportunities for development include formalizing a regional dive tourism certification system, strengthening partnerships between stakeholders (tourism boards, operators, universities, and municipalities), and implementing destination-wide sustainable practices. The incorporation of UnderwaterMuseMap and the ESAC center into visitor flows, alongside regional initiatives like Puglia365, provides a viable framework to create thematic routes and structured dive itineraries. Emphasis should be placed on capacity-building, digital innovation, and coordinated marketing to position Apulia as a premier sustainable dive tourism destination in the Mediterranean.

2.3 Legislative and Operational Framework

In the Lecce/Vernole and Porto Cesareo coastal zones, dive tourism activities intersect a complex set of legal and operational frameworks designed to preserve underwater cultural heritage while promoting sustainable economic development. Italy adherence to the UNESCO 2001 Convention and the Faro Convention (2005) provides a strong foundation for the recognition of underwater heritage as a public good. At the regional level, the Cartapulia system and the UnderwaterMuseMap platform catalogue and help regulate submerged cultural assets, while marine protected areas like the Porto Cesareo MPA impose environmental regulations on dive access. Despite this, a gap exists between legislative frameworks and on-the-ground operational enforcement. For example, the shipwrecks and submerged necropolis of Porto Cesareo, though partially protected, are vulnerable to overuse and unregulated diving activities. Similarly, the submerged Roman harbor at Posto San Giovanni, though located within the Le Cesine WWF Oasis, lacks a dedicated legal status that would ensure strict conservation-oriented dive management. Moreover, national guidelines (Codice dei Beni Culturali e del Paesaggio, D.Lgs. 42/2004) are not always harmonized with marine conservation laws, leading to jurisdictional overlaps between the Ministry of Culture, Coast Guard, and environmental authorities. To align with international standards and EU best practices, legislative updates should focus on integrating dive tourism operations into Marine Spatial Planning (MSP) frameworks and formally recognizing underwater archaeological parks under protected area statutes. Operationally, introducing licensing schemes for dive operators—based on adherence to safety, quality, and conservation standards—would support the sustainable use of underwater resources. The creation of cooperative governance bodies, including municipal authorities (e.g., Porto Cesareo and Vernole), local diving operators, and heritage managers (e.g., Superintendency of Archaeology), would allow for shared monitoring responsibilities and adaptive management strategies. Specific policies should also incentivize the use of digital interpretation tools and low-impact infrastructure (e.g., underwater markers, floating platforms), as seen in other EU diving destinations.

3. Cooperation Framework

3.1 Stakeholder mapping

Categorization of Stakeholders

1. Institutional and Regulatory Stakeholders

This category includes public authorities and international organizations responsible for defining the regulatory framework, protecting heritage, and regulating tourism and environmental activities.

- **Superintendency of Archaeology, Fine Arts, and Landscape:** responsible for the protection and enhancement of underwater cultural heritage, as well as issuing permits for explorations and tourist access.
- **Porto Cesareo Marine Protected Area (AMP):** responsible for environmental management and the conservation of marine ecosystems where underwater archaeological sites are located.
- **International Organizations (UNESCO, ICCROM, ICOMOS):** provide guidelines and standards for the conservation of underwater cultural heritage.
- **Region of Puglia and Local Authorities (Municipality of Vernole, Municipality of San Cataldo, Municipality of Porto Cesareo, Province of Lecce):** key actors in planning sustainable tourism and integrating underwater heritage into territorial development strategies.
- **Bibliomuseum Poles of the Region of Puglia:** plays a crucial role in coordinating collaboration between local and regional entities. They assist in implementing educational and cultural activities, engaging the community, and promoting knowledge dissemination.
- **Harbor Master – Coast Guard:** authorities responsible for navigation safety, surveillance, and enforcement of regulations on underwater activities.
 - Coast Guard - Maritime Directorate of Bari, Maritime Offices of Otranto, Maritime Offices of Gallipoli

Level of influence: High

Primary interest: Regulation, protection, and sustainability of activities

2. Scientific and Academic Stakeholders

Research institutions and academic organizations play a central role in the documentation, conservation, and promotion of underwater heritage, as well as in the development of innovative technologies for sustainable access.

- **University of Salento:** conducts archaeological, biological, and environmental studies for the knowledge and enhancement of Underwater Cultural Heritage (UCH).
- **Experts and professionals (underwater archaeologists, marine biologists, art historians, environmental engineers):** provide technical consulting for heritage management.
 - "Angelo Colucci" Society

Level of influence: Medium-High

Primary interest: Research, documentation, and technological innovation

3. Economic and Tourism Sector Stakeholders

The involvement of the private sector is essential for the creation of a sustainable tourism offer and the generation of local economic benefits.

- **Underwater tourism operators (diving centers, diving guides, specialized tour operators):** provide services for experiencing UCH through diving, snorkeling, and guided tours.
 - Centro Sub Campi Flegrei
 - Diving L'Orca
 - L'Orca del Sud

- Gnu Diving SRL
- **Accommodation facilities (hotels, resorts, B&Bs):** integrate underwater tourism into the local tourism offer.
 - Masseria Fossa
 - Masseria Relais Le Cesine
 - Golf Club di Acaya
- **Local catering and food and wine sector:** contributes to the creation of integrated tourist experiences and the enhancement of the territory.
- **Technology companies (VR/AR developers, underwater monitoring software, start-ups):** promote innovative digital solutions for accessibility and promotion of underwater heritage.
 - CETMA
 - Studio Azzurro
 - 3Juice
 - 3D Box Lab
 - 3D Research

Level of influence: Medium

Primary interest: Economic development, tourism promotion, and innovation

4. Social and Community Stakeholders

Active participation from civil society and local communities is essential to ensure the social sustainability of underwater tourism and the protection of cultural heritage.

- **Cultural, environmental, and underwater sector associations:** promote the protection of heritage and environmental education.
 - Riserva naturale Palude del Conte e Duna Costiera di Porto Cesareo
 - Centro Educazione Ambientale - CEA Porto Cesareo
 - Associazione Ambientalista Pro Porto Cesareo ONLUS
 - Pro Loco La Rotonda - San Cataldo di Lecce
- **Residents and local communities:** directly involved in the economic and social impacts of underwater tourism.
- **Tour guides and associations of diving guides:** facilitate the tourist experience, contributing to the dissemination of the historical-cultural value of the sites.
 - The Monuments People
 - Cooperativa "Riviera di Ponente"
 - Circolo Sommozzatori Artiglio
 - Taras Sub
- **Volunteers and enthusiasts of underwater archaeology:** participate in monitoring and awareness activities.

Level of influence: Variable

Primary interest: Heritage preservation and sustainable development

5. Media and Communication Stakeholders

The media and digital platforms play a key role in the dissemination and promotion of underwater tourism and cultural heritage.

- **Traditional media (TV, radio, specialized press):** contribute to the visibility of initiatives and raising public awareness.
 - Agenzia "Puglia&Mare"
 - Agenzia "Mediamorfosi"

- **Social media and influencers in the tourism and cultural sectors:** amplify communication and marketing of underwater tourism.
- **Museums and exhibition centers:** promote underwater heritage through physical and virtual exhibitions.
 - Museo Castromediano di Lecce (LE)
 - Museo di Biologia Marina "Pietro Parenzan", Porto Cesareo (LE)

Level of influence: Medium

Primary interest: Communication, education, and promotion

Stakeholder Engagement Strategies

To ensure effective governance of underwater cultural heritage and promote sustainable tourism development, the following engagement strategies are proposed:

1. Intersectoral working groups and public-private partnerships for the definition of shared strategies.
2. Research and technological innovation projects for the monitoring and sustainable use of UCH.
3. Communication and awareness-raising plans targeting local and international stakeholders.
4. Integration of underwater tourism into regional and local development strategies, with particular attention to environmental and social sustainability.
5. Implementation of participatory governance models to foster dialogue between institutions, local communities, and private operators.

3.2 Local Community and Stakeholder Engagement

The Communication Plan includes a wide range of informative and promotional initiatives, primarily focused on digital channels, aimed at supporting the various activities planned for the selected sites. These initiatives will be implemented through the coordinated use of various tools and communication strategies. In line with the areas of intervention and activities planned for the sites, and with the goal of spreading information, raising awareness, and promoting underwater cultural heritage, the following actions have been planned:

- Development, management, and supervision of the **coordinated image of the selected sites**;
- Creation and management of the **site's narrative**, through news, stories, and associated figures;
- Design, management, and updating of a **dedicated website**, with visitor monitoring and online visibility; the website will be interconnected with the portals of the Regione Puglia and relevant institutions, particularly ESAC;
- Coordination of the promotion of activities through the management of a **mailing list** and the dissemination of communications via a **newsletter** linked to a dedicated institutional email (e.g., *info@lecesine.it* or *communications@lecesine.it*);
- Writing, managing, and distributing **press releases** in collaboration with the press offices of institutions and local and national media (newspapers, online magazines, radio and TV stations, etc.);
- Creation and management of **social media accounts** and pages for the sites, such as:
 - Facebook page (e.g., <https://www.facebook.com/cesinepuglia>);
 - Instagram account (e.g., <https://www.instagram.com/cesinepuglia>);
 - Possible activation of additional social media channels such as YouTube, Twitter, TikTok, and Pinterest;
- Selection and **creation of content** (texts, images, videos) to be published on different platforms, with active interaction with users;
- **Interconnection of social media** accounts and pages with those of Regione Puglia and related institutions;

- **Press Office functions** for managing institutional press releases, in close collaboration with the press offices of the Region and regional agencies, especially concerning initiatives and collaborations to promote institutional activities;
- Writing and producing all **promotional material and brochures** related to the sites' activities and related events;
- Organizing, coordinating, and **promoting events** related to the activities, aimed at spreading knowledge (e.g., exhibition projects, exhibitions, conferences, seminars, workshops, etc.);
- Planning, promoting, and overseeing the methods of carrying out **educational and training activities** (workshops, seminars, and courses for cultural operators/diving guides; activities with schools).

Within the Plan, especially for social communication, a specific editorial strategy is foreseen, which can be adapted over time based on user feedback. This process will help gradually define the style, the form of communication of selected content, and the distinctive tone of the narrative. In the context of social networks, the main channel chosen to give voice to the activities planned for the selected sites and to ensure interaction with communities and stakeholders is the creation of a Facebook page. This choice is motivated by the vast user base and audience that Facebook can reach, allowing the message related to the reserve's commitment to making cultural heritage accessible and promoting the initiatives implemented to reach a large number of people. Additionally, TikTok is planned to be used as a key platform to engage younger generations through dynamic and creative visual content. TikTok offers the possibility to create short and engaging videos that would showcase the beauty of the sites, ecotourism activities, and underwater archaeological discoveries. Thanks to its interactive nature, TikTok can stimulate visitors' interest and encourage active participation, contributing to spreading knowledge and promoting sustainable tourism. As for Pinterest, it serves as a collection of virtual boards, allowing the organization of visual content. It can be useful for highlighting the immense heritage of images related to underwater and coastal archaeological sites and landscapes. However, compared to TikTok, Pinterest is less immediate in engaging a young and dynamic audience, which is crucial for promoting the reserve's activities. The management of the Instagram account, parallel to that of TikTok, will be strongly oriented towards spreading knowledge and promoting underwater cultural heritage and landscapes, leveraging the visual potential of images. Finally, a Social Media Policy will be developed, outlining the motivations, objectives, principles, and general guidelines regarding the presence of the different sites on social media, detailing the management methods of the channels, and setting conduct rules for the working team, consultants, and users.

3.3 Cross-Border Integration

The Puglia Region, as part of the promotion of underwater tourism, is tasked with identifying and actively involving cross-border stakeholders to create an integrated and shared tourist offering that embraces neighboring regions. If well-managed, collaboration between these actors could strengthen the entire Southern Adriatic area as a premier underwater destination.

Here are the main stakeholders to be involved:

Albania:

- **Municipality of Vlora:** the city of Vlora, which represents one of the main tourist destinations in the country, can be a key interlocutor for creating shared underwater itineraries between Puglia and Albania. Collaboration with local authorities would allow for the creation of common tourist packages.
- **Ministry of Economy, Culture, and Innovation:** through joint research, protection, and enhancement projects for submerged heritage, funded by European funds. The integration of advanced technologies for monitoring archaeological sites, the development of shared tourism strategies, and the creation of common guidelines for the protection of submerged cultural heritage would

strengthen cross-border cooperation and promote the Southern Adriatic as a sustainable and innovative underwater destination.

- **Universities and other academic institutions:** through joint research programs, academic exchanges, and specialized training, collaborations would foster the development of innovative technologies, monitoring of submerged sites, and dissemination of knowledge, contributing to the sustainable enhancement of underwater heritage and strengthening the tourism and cultural offering of the Southern Adriatic.
- **Alb Navy National Diving Center:** could support the development of advanced safety protocols for diving at submerged archaeological sites, the training of specialized operators, and the implementation of measures for the protection and monitoring of underwater heritage.
- **Regional Agency of Protected Areas of Albania:** by sharing experiences on conservation models, regulation of underwater activities, and involvement of local communities, an integrated approach could be promoted that combines environmental protection and sustainable tourism development along the Adriatic coast.

Montenegro:

- **University of Montenegro:** the Montenegrin university, especially in the departments of archaeology and marine sciences, could provide expertise in the management and enhancement of underwater heritage in collaboration with universities in Puglia.
- **Diving and tourism organizations:** associations and travel agencies specializing in underwater tourism in Montenegro could collaborate with Puglian tour operators to develop joint tourist packages and promote the Adriatic area as a unique destination.

International Organizations:

- **UNESCO:** the United Nations Educational, Scientific and Cultural Organization could be a key partner in ensuring the protection of underwater heritage and in giving international visibility to shared underwater sites through the creation of a network of World Heritage sites.
- **European Union Delegation:** the EU Delegation could support cross-border cooperation with funding and research projects aimed at protecting underwater heritage and creating sustainable tourism infrastructure.

To strengthen the appeal and reliability of the Southern Adriatic as a premier underwater destination, it is essential to develop joint marketing strategies and shared management practices between the regions involved. The main actions can be articulated as follows:

- **Creation of a shared digital platform:** it is crucial to develop an integrated website and mobile app that become the reference point for tourists interested in underwater tourism in the Southern Adriatic. This platform should contain detailed information on the main diving sites, conditions for underwater activities, local regulations, and hospitality suggestions. Additionally, it should allow for direct booking of diving experiences, tourist packages, and specialization courses. Integration with social media will promote visibility and interaction with the public.
- **Targeted advertising campaigns:** organizing promotional campaigns at international fairs, especially those dedicated to sustainable tourism and underwater activities, such as the Boot in Düsseldorf and the Rome Tourism Fair. It is also important to invest in online advertising on travel and water sports magazines, as well as on social media platforms and search engines to reach a global audience. The visual content should focus on the natural beauty of the underwater landscapes, the richness of underwater heritage, and the safety of the destinations.
- **Combined tourist packages and integrated itineraries:** to attract an international audience, combined tourist packages should be developed that allow visitors to explore various underwater sites in the Southern Adriatic, combining diving with other cultural and recreational activities. For example, packages combining dives at submerged historical sites with cultural tours of coastal cities or nature

excursions. These packages could be promoted both locally and internationally in collaboration with tour operators and travel agencies.

- **Collaborations with influencers and ambassadors:** engage industry experts, influencers, and travel photographers to increase the visibility of the Southern Adriatic as an underwater destination. Influencers can share their experience through blogs, videos, and social media posts, highlighting the beauty of the underwater landscapes, the unique diving experience, and local culture. Organizing events dedicated to underwater activities, with the participation of influential figures in the diving world, will help build a solid image of the region as a destination of excellence.
- **Education and awareness for sustainable tourism:** another crucial element is the creation of training events and educational activities to raise awareness about the importance of underwater heritage and the need for responsible tourism practices. Through collaboration with universities, scientific institutions, and environmental associations, workshops, seminars, and conferences on submerged heritage conservation could be organized. Additionally, educational activities aimed at tourists, such as diving courses focused on marine conservation, could reinforce the sustainability message.
- **Partnerships with tour operators, diving schools, and accommodations:** collaborating with tour operators and travel agencies to develop integrated tourist packages that include underwater experiences, accommodations, and transportation, making the destination easily accessible and convenient. Additionally, local diving schools, along with accommodations and restaurants, could offer special deals for underwater tourists. Partnerships with charter boat operators for underwater excursions and visits to submerged historical sites could complete the tourism offering.
- **Sustainability and environmental certifications:** promote sustainability initiatives and environmental certifications, such as creating a quality brand for Southern Adriatic underwater sites, ensuring their preservation. For example, involving diving operators who adhere to strict safety standards, environmental protection, and instructor training will be a strong point to communicate through marketing channels.

These actions, when implemented synergistically, will help create a strong identity for the Southern Adriatic as a premier underwater destination, increasing its appeal and the trust of tourists. Collaboration among various local and international actors, including institutions, tourism operators, sector experts, and local communities, will be key to achieving these long-term goals.

3.4 Funding sources

To ensure the sustainability of the activities aimed at enhancing the sites outlined in the plan, the Puglia Region can rely on EU funds available in the new programming period (2021-2027). In particular, the *Operational Programme* considers culture and sustainable tourism as fundamental elements for social and economic development. This programme includes targeted interventions for urban regeneration, as well as economic support for the recovery, reuse, and enhancement of public spaces dedicated to cultural initiatives. Specific areas, such as the municipalities in the region, characterized by significant cultural and natural heritage, will undergo redevelopment through integrated investments. Actions will also be financed for the recovery of abandoned areas and structures, with the aim of promoting new economic activities and innovative services for local communities and tourists.

In the context of *European Territorial Cooperation (ETC)* programmes, the Puglia Region is determined to capitalize on the positive results obtained during the previous programming cycle. In this regard, the experience gained in enhancing the underwater sites of the reserve could serve as a valid proposal to respond to calls related to sustainable tourism. During the 2021-2027 programming period, all ETC programmes focus on sustainable tourism and culture as cross-cutting themes, strongly linked to the conservation of natural heritage and the improvement of the socio-economic aspects of local communities. In the *Euro-MED Programme 2021-2027*, the specific mission "Enhancing Sustainable Tourism" aims to

develop sustainable tourism as a central issue, promoting tourism integrated into the circular economy, considering sustainable ecosystem services, using innovative technologies, and fostering the conservation of natural resources and cultural heritage of the sites.

4. Optimal Destination Management Model

4.1 Dive Destination Management Model Development

In line with the principles established by the UNESCO Convention on the Protection of Underwater Cultural Heritage (Paris, 2001) and the Framework Convention on the Value of Cultural Heritage for Society (Faro, 2005), as well as with the European Union guidelines promoting Blue Growth, the management framework for the underwater destination must pursue the objectives outlined below:

1. **Reappropriation of a common good:** the submerged archaeological site should be considered a common good, capable of enhancing the quality of life of the local community through cultural, social, and economic benefits. The enhancement of the site should contribute to strengthening the bond between the community and its territory, fostering a sense of belonging and responsibility. To make this objective concrete, it is necessary to:
 - a) **Create a partnership with local communities:** organize periodic meetings with coastal communities and tourism operators to listen to their needs and expectations regarding site management. This process helps develop a strong sense of belonging and responsibility towards the heritage.
 - b) **Educational and cultural projects:** introduce educational programs in local schools, based on underwater archaeology and marine environment protection, creating a link between the community and the heritage.
 - c) **Development of social and cultural initiatives:** for example, organize events such as underwater festivals or awareness days on marine heritage conservation, to actively engage the population and promote knowledge of the site.
2. **Awareness-raising and dissemination of knowledge:** it is crucial to take concrete measures to increase awareness of the value of submerged cultural heritage. This includes communicating to visitors the unique characteristics of the site, making its historical and natural features understandable and accessible to a broad audience. Some concrete actions include:
 - a) **Creation of educational paths and informative installations:** create interactive and multimedia information panels that tell the history of the site and its cultural significance, using simple and accessible language for tourists, including non-experts.
 - b) **Innovative technologies (AR):** install tablets or mobile devices with augmented reality (AR) that, during dives or kayak explorations, provide detailed information about the site's points of interest, making the experience more engaging and educational.
3. **Responsible and sustainable tourism:** the site should promote experiential and responsible tourism, capable of satisfying the diverse needs of visitors, ranging from aesthetic pleasure to the search for cultural and spiritual meaning. This approach aims to reduce environmental impact and emphasize sustainability as the core of the tourist experience. Actions to be undertaken are:
 - a) **Limit the number of daily visitors:** set a maximum number of visitors to avoid overcrowding and damage to the site. This can be regulated through an online booking system.
 - b) **Education on responsible behaviors:** create informational materials (brochures, videos, etc.) explaining how to behave during visits, encouraging visitors not to touch or damage archaeological remains and to respect the marine environment.
 - c) **Training for tour guides:** offer training courses for tour guides and divers that emphasize the importance of protecting heritage and natural resources during dives.

4. **Integrated and quality tourism offering:** the aim should be to create an integrated tourism offer that maximizes the resources of the community, enhancing existing resources and creating new economic opportunities. The goal is to promote a network of collaboration among local stakeholders to stimulate local economic growth. Concrete actions include:
 - a) **Develop integrated tourism packages:** create packages that combine the underwater experience with other local cultural and natural activities (e.g., excursions, guided tours in protected areas, or visits to local museums), creating synergies among different operators.
 - b) **Cooperation between local operators:** facilitate the creation of cooperation networks among local businesses, such as diving centers, hotels, restaurants, and cultural associations, to maximize economic benefits for the community and enhance the visitor experience.
5. **Proactive and inclusive heritage protection:** the management of the submerged archaeological site should actively involve all stakeholders in the chain, including public institutions, private entities, and citizens, through shared regulations. This inclusive approach is necessary to counter irresponsible and high-impact tourism and to ensure the conservation of underwater heritage. Actions to be implemented are:
 - a) **Create a management committee:** form a committee that includes representatives from local institutions, research centers, tourism operators, and local communities to make shared decisions on site management and heritage protection.
 - b) **Encourage active participation:** organize awareness and training meetings for the local community to engage them in protection activities and the management of tourist resources.
6. **Tourist flow monitoring:** the management of tourist flows must be carefully monitored to reduce negative impacts on the site's natural and cultural resources. Visits should be managed sustainably, guiding tourists towards responsible behaviors. To do this, one can:
 - a) **Implement an online booking system:** this system allows for limiting the influx of visitors during certain periods, avoiding overcrowding and negative impact on submerged heritage.
 - b) **Monitoring and data analysis:** use technologies to collect data on the number of visitors, the most frequented areas, and the environmental impact. These data can be analyzed to optimize the management of tourist flow.

The management framework for the underwater destination should be based on the following services and activities:

- **Production, setup, testing, and maintenance of blue paths and related equipment:** this includes the preparation and care of eco-friendly equipment such as "Ariadne's threads" to guide divers, signaling buoys, informative signs, and replicas of stratigraphic sections of the seabed. The goal is to ensure an intuitive and safe visit to the site, while minimizing the impact on the natural and archaeological environment.
- **Development, maintenance, and provision of underwater tablets with augmented reality (AR):** these devices will be made available to diving centers and tourism companies to enrich the underwater experience with real-time information on the points of interest (PoI) of the site. The tablets will allow divers to view 3D reconstructions of the ancient harbor, providing a better understanding of the historical and archaeological context.
- **Maintenance and provision of transparent canoes, kayaks, and stand-up paddleboards (SUP):** these vehicles will be available for visitors and diving centers, allowing the exploration of the submerged archaeological site without the need for scuba diving, making the experience accessible to a wider audience.
- **Surveillance and protection of exposed archaeological contexts:** specific surveillance systems, such as the NOUS Undersea Vision Surveillance System, will be implemented to constantly monitor the

submerged remains and ensure their conservation during visits. This system will ensure that the most fragile sites are not damaged by tourism or other underwater activities.

- **Implementation and maintenance of a booking platform:** an online platform will be available to allow diving centers, tourism companies, and individual visitors to book guided tours and underwater activities. This system will allow for more efficient management of tourist flows and activities related to the site.
- **Interface and support for local operators:** continuous support will be provided to diving centers, tourism companies, cultural and environmental associations, as well as small and medium-sized enterprises (SMEs). This ongoing dialogue will ensure that activities conducted on the site are well-coordinated and comply with current regulations.
- **Accreditation and training of underwater archaeologists and biologists:** the plan includes training professional figures, such as guides specialized in archaeology and marine biology, who can assist diving centers in enhancing the site, ensuring that visits are conducted in compliance with environmental and archaeological regulations.
- **Integration with other tourism sectors:** to attract a broader audience, underwater tourism must be integrated with other local tourism offerings:
 - **Synergy with cultural and nature tourism:** create itineraries combining diving, excursions in nature reserves, and visits to historical and cultural sites in the region. The offers should be promoted as packages that allow visitors to experience different but complementary activities.
 - **Collaboration with travel agencies and tour operators:** work closely with agencies and tour operators to promote tourism packages that include the submerged archaeological site, increasing its visibility and attractiveness.
- **Economic sustainability of the underwater tourism destination:** it is based on a diversified and autonomous funding model. It is essential to develop mixed funds, involving private investors, corporate sponsorships, and crowdfunding platforms. The funds raised should be primarily used for site maintenance and tourism promotion, ensuring the preservation of the heritage and attracting new visitors. Simultaneously, a revenue system derived from tourism activities, such as entrance fees and equipment rentals, should be implemented. The generated revenue should be reinvested in the conservation and improvement of infrastructures, ensuring the quality and sustainability of the tourism experience in the long term.
- **Identification of Risks and Mitigation Measures for the Underwater Destination:** managing an underwater destination requires a careful assessment of the risks related both to the safety of the site and the protection of the submerged heritage. Before opening to the public, it is crucial to implement safeguarding measures and management strategies to ensure a sustainable and safe experience. Risks can arise from both natural and human factors, and if not adequately addressed, they can compromise the conservation of the site and its tourist appeal.
 - **Risks during the Design and Planning Phase:** during the design phase, some obstacles may slow down or compromise the development of the underwater destination. These include delays in defining agreements between the involved institutions, which may hinder the start of operations and delay the realization of necessary infrastructure. The lack of involvement of key stakeholders, such as local associations, tourism operators, and coastal communities, can lead to poor acceptance of the project and limit support from the local population. Another significant risk is the lack of communication between institutions and operational partners, which can cause misunderstandings and hinder the coordination of activities. To avoid these problems, it is recommended to create a digital platform dedicated to sharing information and updates among the involved actors. From an economic perspective, the lack of adequate funds for the startup and development phase represents a significant

challenge. To mitigate this risk, it is essential to diversify funding sources, including not only public funds but also private investments, sponsorships, and crowdfunding campaigns. Additionally, the inadequacy of local tourism infrastructure, such as accommodations and services for divers, can limit the growth potential of the destination. Creating synergies between local operators and integrating with cultural and nature tourism can help provide a more comprehensive and attractive offer for visitors.

- **Risks during the Implementation Phase:** once the project is launched, managing the underwater destination will face a series of operational challenges. Lack of coordination between managing entities and the relevant authorities may compromise the effectiveness of daily operations and reduce the quality of the tourist experience. Furthermore, the underwater sites may not immediately generate a consistent flow of visitors, putting the economic sustainability of the initiative at risk. From a conservation perspective, exposure of the submerged archaeological assets to unfavorable environmental conditions or possible acts of vandalism represents a concrete risk. A lack of continuous monitoring and periodic restoration interventions could lead to the deterioration of the submerged heritage. Another critical aspect is the accessibility of the site: if there are no adequately equipped diving centers nearby, the number of visitors may be limited. In this regard, it is advisable to encourage the opening of new diving centers and the training of specialized personnel. Finally, poor promotional visibility of the destination due to ineffective communication may reduce its tourist attractiveness. Investing in strategic marketing campaigns and collaborating with influencers and industry experts can help increase the site's visibility.
- **Mitigation Measures for Risk Control:** to ensure the success of the underwater destination, it is crucial to adopt mitigation measures aimed at reducing the identified risks.
 - **Design and Planning Phase**
 - Strengthen dialogue between institutions and stakeholders through regular meetings and working groups, ensuring transparency and participation.
 - Create a digital communication platform to facilitate the sharing of information between public entities, tourism operators, and local communities.
 - Diversify funding sources by involving private investors, foundations, and crowdfunding platforms to ensure the economic sustainability of the project.
 - Develop a network among local operators to integrate underwater tourism offerings with other cultural and nature activities, improving the overall attractiveness of the destination.
 - **Implementation Phase**
 - Train specialized guides to accompany visitors on dives and surface tours, ensuring a safe experience and respect for the submerged heritage.
 - Establish a center for underwater activities that can support operators and tourists with logistics and organizing dives.
 - Implement an environmental monitoring and maintenance plan to prevent the deterioration of the submerged archaeological heritage and intervene promptly in case of damage.
 - Promote targeted marketing campaigns using social media and collaborating with industry experts to increase the destination's visibility at the national and international levels.

Adopting these strategies will allow effective management of the risks related to the creation and management of an underwater destination, ensuring sustainable growth and a high-value tourist experience.

- **Monitoring Key Performance Indicators (KPIs) for a Tourist Destination:** evaluating the effectiveness of a tourist destination requires analyzing specific Key Performance Indicators (KPIs) divided into four main categories: environmental, cultural, social, and financial. These indicators allow for monitoring the impact of tourism on the destination, ensuring sustainable management and continuous improvement of the visitor experience.
 - **Environmental Indicators** (to assess the health of the local ecosystem and the impact of tourism activities on the environment):
 - Number and variety of species present in the area.
 - Quality and distribution of natural resources.
 - Level of ecosystem disruption caused by visitors.
 - Monitoring of pollution from tourism activities.
 - Efficiency of adopted conservation and environmental management measures.
 - **Cultural Indicators** (to measure the level of awareness and enhancement of the cultural heritage of the destination):
 - Perception of the local community regarding the site and tourism.
 - Public awareness of the history and cultural value of the site.
 - Level of understanding of human impacts on cultural and natural heritage.
 - Conservation and degradation status of cultural assets due to visitor access.
 - Effects of entrance organization and possible entrance fees on heritage protection.
 - **Social Indicators** (to evaluate the impact of tourism on the local community and the level of stakeholder engagement):
 - Existence and adequacy of legislation for site management.
 - Availability and competence of human resources employed in sustainable destination management.
 - Number of scientific and research institutions involved in the site's protection and promotion.
 - Number of stakeholders trained and involved in sustainable site management.
 - Level of participation and satisfaction of stakeholders in the tourist services and activities offered.
 - Degree of involvement of the local community in the protection and enhancement of the site.
 - Visitor satisfaction with tourism services and proposed experiences.
 - Effectiveness of communication and awareness-raising activities for public engagement.
 - Educational impact of visits, measured by the level of learning and awareness gained by visitors.
 - **Financial Indicators** (to monitor the economic sustainability of the tourist destination and its capacity to generate value):
 - Net revenue from visits and tourism activities.
 - Number of annual visitors, including the percentage of foreign tourists.
 - Annual expenses for the maintenance and management of the destination.
 - Overall profitability and long-term financial sustainability.
 - Number of local economic activities benefiting from tourism.
 - Indirect economic impact of tourism on the local community (average spending by visitors, employment growth in the tourism sector).

The adoption of these KPIs enables destination managers to optimize development strategies, ensure sustainable tourism, and enhance the visitor experience.

5. Innovation Framework

5.1 Digital Technologies for promotion

-Project proposal for the enhancement of the archaeological heritage of Porto Cesareo through Digital Technologies and the establishment of a submerged and coastal park.

This project aims to make the underwater and terrestrial archaeological sites of Porto Cesareo accessible to a broader audience by leveraging advanced digital technologies such as Virtual Reality (VR), Augmented Reality (AR), and narrative video animations. The goal is to provide remote access for those who cannot or do not wish to dive, thus ensuring an inclusive and engaging experience through innovative digital applications.

A. Technological Innovation:

The technological innovation of this project is reflected in various design choices that prioritize energy efficiency and environmental sustainability, in full alignment with current EU directives:

- Land mobility within the park system is ensured by a solar-powered e-bike sharing service based at Torre Cesarea.
- Sea mobility is enabled by a 6-seat solar-powered boat designed for eco-friendly visitor transport.
- Remote accessibility is provided through storytelling applications using VR/AR and narrative video formats, allowing inclusive access for those who cannot or do not wish to dive.

Three specific sites are identified for these technologies:

- The Scalo di Furno settlement** (emerged site)
- The cargo of Tripolitanian amphorae** (underwater site)
- The Byzantine wreck** (underwater site)

Digital access for the latter two sites is especially critical, as these resources are otherwise inaccessible to non-divers.

The project foresees:

- Preliminary scientific documentation including multi-image digital photogrammetry for generating detailed 3D models;
- Creation of VR applications with interactive, explorable 3D reconstructions using Unreal Engine 4;
- Integration of these models into narrative video formats with educational pop-ups and thematic storytelling (routes, shipbuilding, etc.), accessible both online and via VR headsets in regional museums;
- On-site digital interaction through app-based tablets and sensors activated by divers near the sites;
- A smart surveillance system using sensor-equipped buoys or NOUS Surveillance to monitor and protect key underwater heritage areas.

B. Process Innovation

The proposal builds on a strong, community-driven process led by local associations (e.g., Coordinamento Ambientalisti pro Porto Cesareo), supported by the University of Salento, the MPA, and the cultural authorities. It replicates the successful participatory model of underwater parks in Baia and Gaiola (Naples). The initiative began with a public event (*Un tuffo lungo 3000 anni*, 2021) and continued with the creation of a Technical Working Table (Del. G.C. n. 139/2022), involving all key stakeholders. A notable innovation lies in the regeneration of six coastal "Gates", including four 16th-century towers, integrated into the park's layout to enhance identity and territorial cohesion. The Underwater Park thus becomes a symbolic "historic center" for Porto Cesareo, reconnecting community and place.

C. Innovation in Visitor Services

Innovative service offerings are a core component of the project. These include:

- **Integrated Mobility and Ticketing Services:**

- **Land and Sea Transport:** In addition to the solar-powered e-bike sharing service at Torre Cesarea, eco-friendly solar-powered vessels are used to facilitate sea mobility within the park.
- **On-Site Service Hubs:**
 - *Torre Cesarea:* Equipped with a solar-powered information kiosk, ticketing, and e-bike sharing.
 - *Scalo di Furno:* Re-purposing the fisherman's hut as a multifunctional ticketing/bar facility.
 - *Torre Chianca:* Serving as the venue for the archaeological exhibition and the Environmental Education Center.
- **Solutions for diverse user groups and accessibility needs:**
 - Sensory accessibility will be improved through braille signage and digital applications such as VR and dry-diving experiences with 3D reconstructions of the submerged sites. These tools will enable visitors with sensory or motor disabilities to explore the underwater heritage without entering the water.
 - The regional **Puglia Seascapes** project—developed in collaboration with "Albatros - Progetto Paolo Pinto" and **Scuba Blind International (ASBI)**—has trained four underwater archaeologists in Porto Cesareo as guides for blind and visually impaired divers. These qualified professionals could offer specialized and inclusive diving services within the park's integrated tourism framework.
- **Diving and Snorkeling Equipment Rental:**
The project offers rental services for innovative recreational equipment, including transparent-bottom canoes, transparent stand-up paddle (SUP) boards, standard scuba diving gear, and advanced interactive snorkeling equipment such as the EasyBreath mask with panoramic view and acoustic valve (including future developments to support group communication).

D. Innovation in Audience Monitoring

The proposal leverages existing data collection systems managed by the CEA and local environmental associations. These monitor visitor flows and demographics through their nature and heritage activities, providing an informed basis for adaptive management, audience targeting, and strategic planning.

Project Objective: The use of these technologies will offer a unique opportunity for accessing the underwater and terrestrial archaeological sites of Porto Cesareo, promoting cultural and underwater tourism as well as education and the enhancement of historical heritage in an innovative and accessible way. The project will contribute to the conservation and dissemination of archaeological heritage through digitization, creating multimedia content that allows visitors to experience the past in a completely new and engaging way, without the need for physical diving.

-Project Proposal for the Enhancement of the Cesine Archaeological Site through Augmented Reality (AR)

The proposed project aims to enhance the archaeological heritage of Cesine by utilizing augmented reality (AR) to create an interactive and engaging experience that allows visitors to explore the various historical periods and unique features of the site, both above and below the surface. Cesine, with its complex stratified archaeological evidence, is particularly suited for AR interpretation, which will enable the overlaying of digital elements onto the physical landscape, offering visitors the opportunity to "see" the past come to life in real-time.

Main Objectives of the Project:

1. Provide an immersive and educational experience for the public, facilitating the understanding of the rich history of the site through the overlay of digital content.

2. Enhance and preserve the archaeological heritage of Cesine, highlighting the temporal stratification and different historical phases.
3. Raise awareness about the conservation of biodiversity in the WWF Oasis, integrating information about local fauna and flora through augmented reality, emphasizing the connection between historical heritage and natural richness.
4. Promote cultural tourism through modern technologies, making the site accessible and interesting to audiences of all ages.

Sites Selected for AR:

- I. **Protohistoric Settlement of Specchiuddhri** (coastal site)
- II. **Submerged Dock of Posto San Giovanni** (underwater site)
- III. **Submerged Church** (underwater site)
- IV. **Salt Pans of Conche del Sale** (coastal site)

Planned Activities:

1. **Creation of an Interactive AR Mobile App:** the mobile application will be the core of the project, and visitors can download it onto their personal devices (smartphones, tablets). Once on-site, the app will allow visitors to view enriched digital content through their devices, such as 3D reconstructions, historical animations, and interactive descriptions.
2. **Specchiuddhri - Protohistoric Settlement:**
 - a) **3D Reconstruction of the Site:** using 3D models based on photogrammetric surveys, visitors will be able to virtually explore the wall structure of the Protohistoric Specchiuddhri site. The AR app will display the settlement as it would have appeared during the Bronze and Iron Ages, with the option to interact with objects such as ceramics or post holes.
 - b) **Dynamic Experience:** visitors can activate points of interest (POIs) that show the evolution of the site over time, with animations illustrating how the landscape changed and how people adapted their structures to the conditions of the land.
3. **Submerged Dock (Posto San Giovanni) - Roman Port:**
 - a) **Virtual Submerged Reconstruction:** using augmented reality, visitors at the shore or on nearby panoramic platforms can view the Roman port as if they were underwater. The app will show the structure of the dock, moorings, and typical port activities of the Roman era, providing interactive details about materials used and construction techniques.
 - b) **AR Diving Experience:** the app will also allow for a virtual exploration of the seabed, showing the submerged archaeological remains as if it were a true "dry diving" experience, enabling visitors to discover the submerged site without entering the water.
4. **Submerged Church:**
 - a) **Structure Reconstruction:** the app will allow users to visualize the submerged church in its original state, and by overlaying a digital reconstruction, visitors can see what the structure looked like when it was still above the surface. The interior spaces will be shown, with the possibility to explore and activate historical details (e.g., its strategic location along the coast).
 - b) **Interactive Mode:** visitors will be able to click on cement blocks to discover additional information about the construction and building techniques, and an AR animation will simulate the possible transformation from a church to a signaling tower or lighthouse.
5. **Conche del Sale - Salt Production Pans:**
 - a) **Interactive Visit to the Salt Pans:** the app will show the salt pans and the salt production process, allowing virtual exploration of how they appeared in the Roman era. The "Conche del Sale" will become an interactive point of interest where visitors can explore the function of the pans and learn how salt was extracted and used.

b) **Historical Animation:** an AR animation will depict the flow of water in the canals and how the salting process took place, with comparisons to other salting structures in the Mediterranean.

6. **Additional Elements for an Immersive Experience:**

- a) **Self-Guided AR Tours:** visitors will be able to follow a guided path through the app, which will include both natural points of interest (such as the swamp) and archaeological structures. The experience will be enhanced with descriptive audio, ambient music, and historical testimonies that will guide users in understanding the daily dynamics of the area's inhabitants.
- b) **Interactions with Virtual Artifacts:** at specific points on the site, visitors can "interact" with virtual archaeological artifacts (ceramics, tools, coins) to discover the history and use of these objects.

Advantages of AR:

- **Accessibility and Inclusivity:** visitors can experience the site at any level of knowledge, with the option to explore advanced content based on their interests.
- **Immersive Education:** the use of AR technology promotes visual and interactive learning, making the site's history more understandable and captivating.
- **Enhancement of Submerged Heritage:** AR enables a clear and detailed visualization of submerged sites, which would otherwise be difficult for the general public to access.

Expected Results:

- An increase in visitor interest and participation, as they will have the chance to experience a unique and engaging adventure.
- A better understanding of the archaeological site, thanks to educational and interactive content that promotes active learning.
- The possibility of preserving and disseminating the archaeological heritage of Cesine through new technologies, promoting sustainable and accessible site management.

-*"Sailing the Sea"* Portal – Underwater and Coastal Itineraries of Puglia

The "*Sailing the sea*" project, designed to enhance the underwater and coastal heritage of Puglia, aims to make its historical and natural treasures visible and accessible through the use of modern technologies and an integrated approach involving various stakeholders, including local communities, stakeholders, and competent authorities. The goal is to create a unique tourist experience, enriched by underwater and coastal itineraries that will be easily accessible to a diverse audience, while respecting the environment and promoting sustainability.

Project Structure:

1. **Site Selection and Accessibility:**

- a) the project will focus on sites that are already accessible or easily reachable, equipped with the necessary basic infrastructure to safely welcome tourists, such as safe access points, restrooms, signage, and qualified personnel.
- b) the visibility of underwater and coastal sites will be ensured through effective signage and management that minimizes environmental impact. The inclusion of support services, such as diving centers, environmental protection awareness activities, and appropriate equipment, will promote safe and sustainable access.

2. **Engagement of Stakeholders:**

- a) active engagement of local communities and stakeholders is central to the success of the project. Diving clubs, marine activity centers, environmental associations, cultural and tourism SMEs, as well as fishing and transport operators, will be involved for consent and collaboration.

- b) stakeholders will contribute their expertise and resources, offering services that can enrich the tourist experience, such as guided tours, environmental education activities, e-commerce of local products, and transport services.
3. **Creation of the Portal and App:**
 - a) the project will include the creation of a dedicated website portal and mobile app that will allow tourists to easily explore underwater and coastal itineraries, consulting interactive maps, detailed descriptions of the sites, and useful information.
 - b) users will have access to multimedia content such as photographs, videos, and 3D reconstructions of archaeological sites, providing an immersive visit even before reaching the location.
 - c) additional features will include customizable itineraries, safety information, real-time weather updates, and a section dedicated to events and activities scheduled locally.
4. **Design and Installation of Itineraries:**
 - a) underwater and coastal itineraries will be created and signposted with informational panels, labels, and low-impact signs, both on the coast and underwater, in a way that does not alter the natural environment.
 - b) for underwater sites, "Ariadne's threads" or guide ropes will be installed to orient visitors and allow them to explore safely. Additionally, an underwater brochure will be distributed to help visitors understand the history and significance of the places.
 - c) signage will be designed discreetly and harmoniously to avoid disrupting the natural landscape while ensuring it is clearly visible for visitors.
5. **Communication and Dissemination Plan:**
 - a) a strategic communication plan will be developed to promote the project and inform the public about the itineraries, special events, and activities related to "*Sailing the sea*".
 - b) the plan will include promotional campaigns on social media, collaborations with influencers in cultural and natural tourism, and newsletters to keep users updated on new developments.
 - c) participation in tourism fairs and international events is also planned to expand the visibility of the project and attract an international audience.

Expected Benefits:

- **Promotion of Sustainable Tourism:** the project will contribute to the promotion of sustainable tourism by offering unique, environmentally respectful experiences that will stimulate curiosity and interest in the underwater and coastal natural and historical heritage.
- **Tourism Destagionalization:** through the creation of diversified itineraries and the even distribution of tourist flows, the project will promote destagionalization, attracting tourists even during the low season, reducing overcrowding, and improving the quality of the experience.
- **Economic Sustainability and Employment Opportunities:** the involvement of local SMEs will stimulate economic growth in the area, creating new employment opportunities in the fields of culture, tourism, fishing, and transportation. The project will support the local economy by promoting job creation related to site management and tour guiding.
- **Conservation and Protection of Heritage:** the integration of technologies and low-impact solutions will contribute to preserving underwater and coastal sites, minimizing the damage caused by unregulated tourism. Educational and informational activities on the risks related to the protection of archaeological sites will promote greater awareness among visitors.

The "*Sailing the sea*" portal represents an extraordinary opportunity for Puglia to enhance and protect its rich underwater and coastal heritage, while simultaneously promoting sustainable, inclusive, and engaging tourism. With the integration of innovative technologies, collaboration with local communities, and a strong commitment to destagionalization, the project will have a long-term positive impact on the region, ensuring sustainable economic growth and responsible enjoyment of its natural treasures.

5.2 WRECKS4ALL VR Showroom Establishment

The project involves the creation of two digital and immersive showrooms that will serve as strategic cultural hubs: one located in Torre Chianca, within the context of the Submerged and Coastal Park of Porto Cesareo, and the other at the Cesine Nature Reserve, inside Acaya Castle. Both spaces aim to enhance and narrate the submerged and coastal archaeological heritage of the area, offering innovative and accessible experiences that integrate digital technology, archaeological research, and immersive storytelling.

1) The showroom with the permanent exhibition *“Routes, Goods and Ships. The Story Continues...”*, to be hosted within the historic Torre Chianca, will serve as the narrative and physical core of a broader strategy for the enhancement of the region’s submerged cultural heritage. The conversion of the sixteenth-century coastal tower into a multimedia interpretation centre will enable the integration of archaeology with immersive storytelling, supported by advanced digital technologies.

General Objective

The project aims to establish a multifunctional and inclusive interpretation hub that offers an engaging visitor experience through the combination of traditional exhibition methods and immersive media. The showroom is designed to raise public awareness of Porto Cesareo’s coastal and underwater heritage, providing both on-site experiences and remote access to archaeological narratives.

Exhibition Structure

The showroom will occupy two levels of Torre Chianca and will be organized into three main thematic sections:

Section 1: Landscape Transformations – from the Bronze Age to the Roman Period

- Immersive audiovisual room with synchronized projections of three short films depicting the evolution of the coastal landscape.
- Central spiral installation with integrated seating for visitors.
- Polyurethane reconstructions, commemorative stelae, ambient lighting.
- Two display cases containing original archaeological artefacts.
- Virtual Reality station featuring a 3D model of the column wreck near Torre Chianca.

Section 2: Everything Travels by Sea – Stories of Goods and Ships

- *Subsection 2.1:* Reproduction of a seabed with amphorae displayed on custom corten steel supports, accompanied by immersive video and sound installations.
- *Subsection 2.2:* Reconstruction of a ship’s hold with wooden-plank walls, sail structures and cargo elements.
- Five vertical display cases featuring amphorae and marine artefacts from previous excavations.
- Video station (55” monitor) and QR codes providing access to additional digital content.

Section 3: Marine Resources – Fishing and Local Practices (Panoramic Terrace)

- Open-air interpretive space with corten steel lecterns and integrated QR codes.
- Panoramic viewpoint with georeferenced content from the archaeological GIS.
- Seating area and projection facilities for evening events and educational workshops.
- Display of traditional anchors and local fishing tools from Porto Cesareo.

Integrated Technologies

- **Virtual Reality:** Oculus Quest 2 headsets for immersive exploration of shipwrecks.
- **Augmented Reality:** Mobile app for guided interpretation and interactive learning.
- **Interactive Installations:** Informative pop-ups, audio storytelling, video animations.
- **Sustainable Design:** Use of corten steel, LED lighting, and conservation-friendly materials.
- **Remote Access:** Online content and virtual tours to enhance accessibility and outreach.

Functional Role within the Park System

The Torre Chianca showroom will serve as:

- The *narrative gateway* to the Underwater and Coastal Archaeological Park.
- A centre for visitor orientation, education and public engagement.
- A platform for digital experimentation and participatory experiences.
- A community space for events, workshops, and educational activities.

Cost Plan Torre Chianca Showroom

A) CONSTRUCTION AND PLANT ENGINEERING WORKS

EXPENSE ITEM	NET AMOUNT	VAT 10%	TOTAL AMOUNT
A1 GROUND FLOOR PAVING	€ 2,000.00	€ 200.00	€ 2,200.00
A2 ELECTRICAL SYSTEM AND LIGHTING UPGRADE	€ 3,400.00	€ 340.00	€ 3,740.00
TOTAL A)	€ 5,400.00	€ 540.00	€ 5,940.00

B) SUPPLIES FOR PERMANENT EXHIBITION SET-UP

EXPENSE ITEM	NET AMOUNT	VAT 22%	TOTAL AMOUNT
B0 GROUND FLOOR SET-UP	€ 7,700.00	€ 1,694.00	€ 9,394.00
B1 SECTION 1 SET-UP	€ 36,080.00	€ 7,937.60	€ 44,017.60
B2 SECTION 2.1 SET-UP	€ 19,730.00	€ 4,340.60	€ 24,070.60
B3 SECTION 2.2 SET-UP	€ 18,630.00	€ 4,098.60	€ 22,728.60
B4 SECTION 3 SET-UP	€ 15,000.00	€ 3,300.00	€ 18,300.00
B5 ARCHAEOLOGICAL MATERIAL RESTORATION	€ 5,000.00	€ 1,100.00	€ 6,100.00
B6 CATALOGUE, LOGO AND PANEL LAYOUT DESIGN	€ 12,000.00	€ 2,640.00	€ 14,640.00
B7 TRANSPORT AND INSURANCE	€ 5,000.00	€ 1,100.00	€ 6,100.00
TOTAL B)	€ 118,840.00	€ 26,210.80	€ 145,050.80

C) OVERALL FINANCIAL FRAMEWORK

EXPENSE ITEM	AMOUNT
A) CONSTRUCTION AND PLANT ENGINEERING WORKS	€ 5,400.00
B) EXHIBITION SECTION SET-UP	€ 118,840.00
C) TECHNICAL EXPENSES	€ 20,000.00
D) VAT 10% ON A)	€ 540.00
E) VAT 22% ON B) + C) + F)	€ 30,210.80
F) SOCIAL SECURITY CHARGES 4% ON C)	€ 800.00
TOTAL C)	€ 175,790.80

FIRST FUNCTIONAL PHASE

Property: Torre Chianca – Ground Floor – Works and Fittings

DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
Demolition and disposal of rubble; creation of crawl space, screed and Lecce stone paving –	–	–	€ 2,000.00
Corten steel boards for display panels on Torre Chianca and the underwater park project	2	–	€ 1,600.00
Dibond panels, 3 mm thick, four-color print	2	–	€ 200.00
TOTAL			€ 3,800.00

Property: Torre Chianca – First Floor – Section 1

DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
Self-supporting wooden base for display panel	1	–	€ 200.00
Accaline panel, 2 cm thick, four-color print	1	–	€ 80.00
70% blackout Roman blinds	2	–	€ 300.00
Cabinet-style display cases with built-in crystal walls, metal frame, tempered glass, lock and lighting	2	–	€ 3,000.00
Wooden platforms for stelae set-up	2	–	€ 1,000.00
Polyurethane reconstructions on wooden base to simulate rocky base for stelae display	2	–	€ 1,500.00
LED TVs, 60 inches	3	–	€ 2,000.00
Spiral red velvet sofa for visitor seating	1	–	€ 3,000.00

DESCRIPTION		QUANTITY	UNIT COST	TOTAL COST
TOTAL				€ 8,080.00
A) CONSTRUCTION AND PLANT ENGINEERING WORKS – FIRST FUNCTIONAL PHASE				
EXPENSE ITEM	NET AMOUNT	VAT 10%	TOTAL AMOUNT	
A1 GROUND FLOOR ENTRANCE PAVING	€ 2,000.00	€ 200.00	€ 2,200.00	
TOTAL A)	€ 2,000.00	€ 200.00	€ 2,200.00	
B) SUPPLIES FOR PERMANENT EXHIBITION SET-UP – FIRST FUNCTIONAL PHASE				
EXPENSE ITEM	AMOUNT			
A) CONSTRUCTION AND PLANT ENGINEERING WORKS	€ 2,000.00			
B) EXHIBITION ROOM SET-UP	€ 9,880.00			
C) TECHNICAL EXPENSES	€ 2,000.00			
D) VAT 10% ON A)	€ 200.00			
E) VAT 22% ON B)	€ 2,173.60			
F) SOCIAL SECURITY CHARGES 4% ON C)	€ 80.00			
TOTAL	€ 16,333.60			
C) OVERALL FINANCIAL FRAMEWORK – FIRST FUNCTIONAL PHASE				
EXPENSE ITEM	AMOUNT			
A) CONSTRUCTION AND PLANT ENGINEERING WORKS	€ 2,000.00			
B) EXHIBITION ROOM SET-UP	€ 9,880.00			
C) TECHNICAL EXPENSES	€ 2,000.00			
D) VAT 10% ON A)	€ 200.00			
E) VAT 22% ON B)	€ 2,173.60			
F) SOCIAL SECURITY CHARGES 4% ON C)	€ 80.00			
TOTAL	€ 16,333.60			

2) The proposed location for the **WRECKS4ALL VR Showroom** will be situated in an area of significant artistic and cultural interest, strategically positioned to ensure easy access both from the Cesine Nature Reserve and

the city of Lecce. This location is particularly favorable for residents and international visitors, with specific attention to those who already frequent the area for activities related to the enjoyment of coastal and underwater heritage. The showroom would be integrated into a 36.7 km cycling tourism route connecting San Cataldo to the Cesine Reserve, offering a travel experience immersed in the nature and history of the area. Its location contributes to enriching the tourism and cultural offerings of the area, strengthening the connection between archaeological and environmental sites and promoting a sustainable and integrated model for the enjoyment of local heritage.

Interior Design

The interior of the showroom will be designed to evoke an atmosphere of exploration and underwater discovery. The castle's tuff room, with its raw and minimalist charm, would provide the perfect backdrop for an experience that highlights the contrast between ancient history and modern technology. The tuff walls would add an authentic touch, allowing visitors to feel as though they are in a space suspended between the past and the present.

Key features will include:

- **Immersive environment:** soft lighting with projections of marine landscapes and underwater life to simulate a realistic underwater environment.
- **Modular exhibition spaces:** interactive zones with VR headsets and large immersive screens to allow guests to explore various sites in southern Adriatic.
- **Information points:** interactive tactile panels with detailed information on the sites, their history, and archaeological significance.
- **Rest and safety areas:** comfortable seating for visitors awaiting their VR experience, with clearly indicated safety protocols.

Accessibility

The accessibility of the WRECKS4ALL showroom is designed to ensure an immersive and inclusive experience for all visitors, regardless of their needs.

- **People with motor disabilities:** the showroom will be free of architectural barriers, with facilitated access, wide paths, and ergonomic seating in the headset room.
- **People with visual disabilities:** detailed audioguides, Braille information panels, and immersive audio descriptions for VR content will be available.
- **People with hearing disabilities:** content will include multilingual subtitles, videos in Italian Sign Language (LIS) and International Sign Language (ISL), as well as visual signals to facilitate the experience.
- **Neurodivergent individuals:** the environment will be structured with clear signage, intuitive paths, and the possibility of experiences with reduced visual and auditory stimuli.
- **Children:** interactive tables will be positioned at an appropriate height to allow even young children to explore digital content independently and intuitively. Simplified interactive experiences and shorter VR sessions will be available to cater to their attention span.

Expositive Path:

1. Introductory Area – History and Nature of the Cesine

Objective:

To provide visitors with a historical and environmental framework for understanding the Cesine area, emphasizing the long-standing interaction between human communities and the surrounding wetland and coastal ecosystems.

Key Features:

- **Interactive Map:** Touchscreen display showcasing archaeological sites—both submerged and terrestrial—within and around the Cesine Reserve.
- **Panoramic Wall Projections:** Visual sequences of seasonal transitions within the ecosystem, accompanied by natural soundscapes (e.g., birdsong, wind, and sea).
- **Flora and Fauna Reproductions:** Life-like models of local species, each accompanied by QR codes linking to multilingual audio guides, accessible to children and visually impaired visitors. Captions provide additional interpretive content to encourage independent and inclusive exploration.

2. Immersive Room – Virtual Exploration of the Seabeds

Objective:

To offer visitors a simulated “dive” into the submerged heritage of the Cesine through the use of virtual reality.

Key Features:

- **VR Stations:** Dedicated seating equipped with VR headsets, allowing users to choose from two immersive experiences (requiring a dedicated equipment budget of approximately €50,000, including Oculus Go or Quest devices):
 - *The Rediscovered Port* → A virtual exploration of the prehistoric and historical sites in the Cesine area, including a 3D reconstruction of **Specchiuddri**, the **Salt Conches**, and related coastal features.
 - *The Routes of the Ancient Sea* → A journey through the marine landscape, offering insight into historical seafaring routes and submerged artifacts relevant to the Cesine coastline.
- **Sound and Sensory Effects:** Ambient marine audio and subtle haptic feedback (e.g., seat vibrations) enhance the realism of the experience.
- **Accessibility Measures:**
 - Multilingual subtitles for all VR content.
 - Optional audio descriptions tailored to blind or visually impaired users.
 - Simplified and engaging narration designed specifically for children.

3. Final Area – Archaeology of Seascapes and Technological Innovation

Objective:

To educate visitors on the contemporary methodologies and technologies used in underwater archaeological research in the Cesine area.

Key Features:

- **Multimedia Interactive Table:** Allows visitors to explore documentary footage, digital reconstructions, and 3D models of underwater discoveries. The content illustrates the role of underwater drones, sonar scanning, and 3D modeling in documenting and interpreting submerged sites.
- **GIS Integration – “Sailing the Sea”:** A georeferenced platform highlighting key archaeological discoveries, enriched with augmented reality features and archival imagery.
- **Accessibility Measures:**
 - All multimedia content is available with multilingual subtitles.
 - Optional audio descriptions for visually impaired users ensure inclusive access to interpretive materials.

Cost Plan for Cesine Showroom

Initial investment

Item	Estimated Costs (€)	Description
Showroom Setup (physical and technical infrastructure)	35,000	Costs for renovation of the space, purchase, and installation of VR headsets (Oculus Go/Quest), immersive screens, and other devices.

Interior Design	10,000	Design work to adapt the showroom to the theme, installation of panels, lighting, and structures.
Digital Technologies (VR Software, Licenses)	5,000	Purchase of VR content software, licenses for digital tools, and interactive platforms.
Accessibility and Special Adaptations	5,000	Costs to make the showroom accessible for people with disabilities (audioguides, Braille panels, pathways).
Initial Marketing and Promotion	5,000	Website development, landing page, and social media activities.
Total Initial Investment	60,000	

Annual operating Costs

Item	Estimated Costs (€)	Description
Maintenance and Technology Updates	3,000	VR software updates, headset maintenance, and other equipment upkeep.
Website and Social Media Management	5,000	Continuous updates for the website, social media pages, content creation, and newsletters.
Personnel (Showroom Management)	12,000	Salaries for reception staff, guides, and technical experts for daily operations.
Educational Activities and School Programs	3,000	Costs for organizing educational visits and thematic workshops for schools and universities.
Local Partnerships and Advertising	3,000	Budget for partnerships with local institutions, cultural associations, and promotional activities on local and national media.
Total Annual Operating Costs	26,000	

Marketing Plan and Promotional Activities

1. **Objectives:** the main objectives of the marketing actions are:
 - **Increase the showroom's visibility:** make the project known locally, nationally, and internationally, positioning it as a reference point for cultural and technological tourism.
 - **Increase visitor flow:** encourage word-of-mouth and incentivize direct bookings through targeted communication and strategic collaborations.
 - **Promote the local heritage:** enhance the cultural and archaeological heritage of the area, strengthening the connection with local history and identity.
 - **Establish collaborations and partnerships:** engage local authorities, educational institutions, tour operators, and specialized media, creating synergies to ensure widespread dissemination of the project.
2. **Communication Strategy and Operational Activities:** the marketing plan is based on an integrated approach that combines digital activities, local collaborations, and public relations initiatives, structured as follows:
 - a) **Digital Activities**
 - **Website and Landing Page:** a dedicated website and a specifically designed landing page will serve as the main reference points for all information regarding the VR experience. These tools will be optimized for search engines (SEO) and will include demo videos, photo galleries, detailed itinerary information, and an online booking system.
 - **Social Media Marketing:** active presence on major social media channels (Facebook, Instagram, LinkedIn, and YouTube) will allow for the immersive experience to be shared visually and emotionally. Original content will be created – photos, videos, infographics, and

testimonials – showcasing the synergy between history and technology. Sponsored campaigns, conducted in a targeted and cost-effective manner, will help reach the target audience by leveraging geolocation and segmentation features offered by the platforms.

- **Content Marketing and Email Marketing:** blog posts, interviews, and articles will be developed to delve deeper into topics of cultural heritage and virtual reality. Additionally, through the sending of periodic newsletters, the project will maintain constant contact with potential visitors, updating them on events, news, and special promotions.

b) Collaborations and Partnerships

- **Tourism and Cultural Entities:** the project includes the involvement of local entities and institutions, such as the Municipality, cultural associations, and regional organizations, to promote the experiential path within the territory. These collaborations will contribute to greater dissemination of the project within the tourism and cultural circuits.
- **Educational Institutions:** agreements will be established with schools, universities, and research centers to organize educational visits and thematic workshops. These initiatives will offer added value both from an educational standpoint and to reinforce the project's positioning as a tool for cultural enhancement.
- **Media and Influencers:** a targeted public relations campaign will invite journalists, bloggers, and influencers from the travel and cultural sectors to attend preview sessions and share their experience on social media. This digital word-of-mouth will help create extensive media coverage at low costs.

c) Events

- **Territorial Engagement and Community Involvement Activities:** As part of the preparatory actions for the opening of the Underwater and Coastal Park of Porto Cesareo and the Wrecks4All showroom, a comprehensive territorial engagement plan has been developed. Its main objective is to foster active participation from the local community and key stakeholders, promoting a shared, inclusive, and sustainable approach to the interpretation and enjoyment of the coastal and underwater cultural heritage. At the heart of this plan is the thematic cycle "Towards the Blue Park. Four Days for a Lived, Inclusive and Shared Park", structured around four core values — Accessibility, Sustainability, Protection and Enhancement, and Community. Each day features experiential, participatory, and educational activities targeted at citizens, students, cultural and tourism operators, associations, and institutions. The planned actions include co-design workshops for accessible pathways; educational and creative labs on marine biodiversity and recycling; guided snorkeling and archeowalking experiences; training sessions for tourist guides and professionals; and participatory mapping and collection of oral, written, and multimedia contributions to build a community map of the Park, to be produced in both physical and digital formats. The cycle will culminate in a public event focused on community sharing, featuring family-friendly activities, collective storytelling, and a convivial gathering with tastings of local cuisine. To complement the in-person activities, the project also includes the creation of a thematic podcast series titled "*Voices of the Sea*". These geolocated audio episodes will be available online and along the Park's routes, offering visitors an accessible and engaging way to discover the stories and sites of the underwater heritage through archaeological, historical, and community-based narratives.
- **Launch Event:** the opening of the **WRECKS4ALL VR Showroom** will be a key event, during which the immersive experiences will be previewed to the public, media, and strategic partners. The event will include live demos, presentations, and participation from sector speakers.

- **Open Days and Guided Tours:** the scheduling of themed days and periodic guided tours will help maintain attention on the project, encouraging repeat visits and direct engagement from the local and tourist communities.
- 3. **Timeline:** the operational process will be divided into three main phases:
 - **Pre-Launch Phase (1-3 months):** during this period, the website, landing page, and multimedia content will be developed, along with the initiation of the first collaborations with local entities and educational institutions.
 - **Objective:** prepare the ground for the launch by ensuring effective digital tools and defining communication channels.
 - **Launch Phase (Month 4):** this phase will include the inauguration event, the launch of social media campaigns, and the distribution of press releases.
 - **Objective:** Create a strong initial impact and generate media coverage, attracting the target audience and influencers' attention.
 - **Post-Launch Phase (From Month 5 onwards):** the focus will be on maintaining and continuously updating online content, monitoring performance, and organizing periodic events.
 - **Objective:** consolidate the project's presence, optimize communication strategies, and increase the number of visitors through feedback and the ongoing refinement of activities.
- 4. **Budget and Performance Monitoring:** the marketing investment will be contained, representing about 5-10% of the overall initial investment. Resources will primarily be allocated to digital activities, PR events, and local collaborations. Monitoring of Key Performance Indicators (KPIs) – such as web traffic, conversion rates, social media engagement, and the number of bookings – will be carried out using analytical tools (Google Analytics, Facebook and Instagram Insights, etc.), allowing for monthly and quarterly reviews to continuously optimize strategies.

6. Dive Destination Development Plan

6.1 RoadMap

To outline an optimal model for managing a tourist destination, it is necessary to follow an operational plan that allows for an integrated and strategic approach, from the initial analysis to the enhancement and promotion of submerged cultural heritage. An effective management plan includes several key steps involving local authorities, cultural and scientific institutions, tourism operators, and the local community. The process should be structured as follows:

1st step: composition of the Management Committee

The composition of a management committee is essential to initiate the planning and management of the site. This committee should include the following stakeholders:

- **Superintendency ABAP of Brindisi and Lecce:** responsible for the protection of cultural heritage, overseeing enhancement activities, and approving initiatives;
- **Bibliomuseal Poles of the Apulia Region:** plays a key role in coordinating collaboration between local and regional authorities, providing technical support for museum planning and management. It promotes staff training, facilitates accreditation in the National Museum System, and develops enhancement and promotion strategies. Additionally, it collaborates in the development of educational and cultural activities, involving the community and fostering the spread of knowledge;
- **Apulia Region:** for the supervision of regional policies, funding, and coordination among municipalities;

- **Municipality of Vernole, Municipality of San Cataldo, Municipality of Porto Cesareo:** essential for ensuring that the activities of each relevant underwater site align with the needs of the local community and for facilitating dialogue with citizens. Furthermore, they commit to collaborating with other parties to establish the exhibition space at the Acaya Castle (VE) and the functioning of the submerged archaeological site, ensuring uniform quality standards for the enhancement of museums and cultural sites owned by the public, as established by the D.M. of February 21, 2018, for recognition/accreditation in the National Museum System for regionally significant museums;
- **WWF Italy:** for proper management that complies with environmental conservation standards and best practices for the protected area of the Cesine site;
- **Protected Marine Area (AMP) of Porto Cesareo:** responsible for environmental management and the conservation of marine ecosystems in which the underwater archaeological sites are located;
- **University of Salento:** to provide scientific and technical support in research activities and the evaluation of the archaeological conditions of the reserve;
- **Coast Guard - Local Maritime Office of San Cataldo, Otranto Circomare Dependency, Coast Guard Command LOCAMARE Porto Cesareo:** essential for ensuring safety at sea and compliance with regulations regarding navigation and underwater activities. The Coast Guard will collaborate in monitoring activities within the relevant areas, ensuring that environmental protection standards are adhered to.

2nd step: signing of the Programmatic Agreement

Once the management committee is established, the institutions should sign a Programmatic Agreement that sets the guidelines for the development of an integrated management plan for the tourist destination.

The planned activities include:

- **Collaboration networks:** for the development of cultural and natural heritage, involving local and regional stakeholders.
- **Promotion of the destination:** integrated management should aim at tourism enhancement, promoting creativity, and fostering community inclusion.
- **Establish a Managing Authority:** to monitor and implement the proposed activities. The most suitable entity to take on this role is the EuroMediterranean Center for Coastal and Underwater Archaeology (ESAC), due to its institutional mandate. The EuroMediterranean Center has, among its objectives, "the creation and establishment of underwater parks and/or ecomuseums aimed at 'Blue Growth,' also through the use of remote systems for direct recording, to address the challenges that cultural sites must face in becoming vibrant and inclusive spaces for learning, mediation, and reception, in the name of heritage as a common good."

To achieve the following objectives:

- **Dialogue:** promote active dialogue with social organizations, environmental and cultural systems, local action groups, regional parks, ecomuseums, schools, and private institutions, to involve the community and create a support network for heritage enhancement.
- **Support for cultural enterprises:** provide support to cultural businesses and associations, encouraging cooperation networks and startups, with particular focus on public-private collaboration and technological innovation.
- **Promotion of creativity:** foster interaction between the arts and cultural heritage, developing new forms of storytelling, with a focus on inclusive public archaeology, to make heritage accessible and meaningful.
- **Encouraging patronage:** nurture the culture of patronage through tools such as Art Bonus and legal sponsorships, while promoting volunteerism and civic participation in the care and enhancement of heritage.

- **Research and museum enrichment:** promote research in archaeological sites and expand museum collections, encouraging donations and acquisitions, with active community involvement in the management of public goods.

Duties of the Managing Authority

The Management Authority plays a central role in overseeing and managing the site, ensuring its development according to the management framework guidelines. The main tasks include:

- **Contributing to and implementing projects:** develop and implement projects aimed at protecting and enhancing the underwater cultural heritage.
- **Facilitating communication:** manage interactions between regional and local stakeholders and the Ministry, ensuring an effective and timely flow of information.
- **Simplifying activity management:** optimize operations for research, protection, and enhancement of underwater cultural heritage to ensure maximum efficiency.
- **Proposing tourism solutions:** develop strategies for the tourism promotion of archaeological sites, identifying opportunities to attract visitors and improve the tourist experience.
- **Evaluating future activities:** analyze initiatives related to maritime assets of cultural significance, establishing necessary protection measures for heritage conservation.
- **Providing planning consultancy:** assist in the development of new territorial plans and strategies that integrate cultural heritage into the local context.
- **Training and accreditation:** train and accredit underwater archaeologists and biologists as diving guides for the site, supporting dive centers with expertise in naturalistic and archaeological fields, and promoting adherence to regulations.
- **Implementing an integrated communication plan:** create and manage a communication plan that includes a portal for booking guided visits, special events, and tours.
- **Connecting with museums and cultural sites:** establish connections between the sites and local museums, as well as other cultural spaces, to foster an integrated and accessible cultural experience.

3rd step: Scientific Plan for the Enhancement of the Site

A detailed scientific plan is essential for the protection and enhancement of the sites. The scientific plan will be developed by the University of Salento with consultation from ESAC and the Management Committee, and then approved by the Superintendency. It should include:

- The selection of points of archaeological/natural interest;
- The evaluation of archaeological risks;
- The analysis of environmental conditions and degradation processes that may affect the site (geomorphological changes, currents, storms, etc.);
- The development of a conservation plan to protect the artifacts and archaeological structures, including restoration and maintenance interventions;
- The design of underwater routes, with clear mapping of points of interest;
- The development of digital narratives that can integrate virtual reality (VR) and augmented reality (AR) tools for use in the exhibition setup, thereby enhancing the visitor experience at the site.

4th step: participatory design of the 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. The blue trails can

be practiced by snorkeling, diving or with glass-bottomed kayaks and transparent Stand Up Paddles - SUP, always starting by the beach

5th step: participatory writing of the Site Regulation

The drafting of the site regulation will be conducted through participatory working groups, under the guidance of experts from the Management Authority and with the involvement of all stakeholders. The regulation must be approved by the Ministry of Culture and will ensure compliance with the rules regarding conservation, access, and tourism enjoyment. Key points of the regulation will include:

- Access procedures for various tourist activities, such as snorkeling, diving, kayaking/SUP, with specific guidelines on opening periods and necessary restrictions to protect the archaeological area.
- Rules for managing nautical activities, as established by the Coast Guard, to limit maritime traffic in the area, except for authorized activities such as guided tours and scientific research.
- Authorization for the use of vessels by dive centers, which must be equipped with proper licenses for passenger transport and diving. Guided underwater tours will primarily begin from the beach, where a logistics base will be set up to welcome visitors, manage briefings and debriefings, and provide diving equipment. It will be essential to set up adequate facilities for dive centers and local tourism businesses. The regulation will identify the authorized parties, such as clubs and non-profit associations, and dive centers, for conducting underwater activities. Independent divers with a valid license will not require special permits. Companies organizing guided tours must submit a request to the Superintendency and pay an annual management fee. Reservations for diving, snorkeling, and kayaking/SUP will be made through an online platform. In addition to the main activities, diving courses and special tours, such as night diving and tours for people with disabilities, will be offered under the guidance of accredited experts. Underwater archaeologists and biologists, trained as guides, will assist with activities to ensure the preservation of the submerged heritage and provide information during dives.

6th step: implementation of the Blue Trails

- **Technologies and Innovative Solutions for Sustainable Conservation**
The trails designed for submerged archaeological sites present unique challenges due to the fragility of the structures. It is essential to apply advanced technologies to protect these resources sustainably without compromising their integrity. The introduction of cutting-edge monitoring systems, such as the NOUS Undersea Vision Surveillance System, allows for continuous control of the underwater structures' conditions, ensuring their conservation and preventing damage. These technologies not only assist in protecting cultural heritage but also provide visual support to visitors and operators, facilitating responsible and informed site enjoyment.
- **Eco-sustainable Signage and Innovative Educational Material**
To facilitate navigation and understanding of the archaeological context, an ecological approach is adopted in the selection of materials for signage, minimizing environmental impact. Underwater signage, such as informational plaques and numbered buoys, guides visitors along the trail intuitively. An informative booklet containing detailed maps, 3D models, and insights into marine biology contributes to an immersive experience that encourages education about natural and archaeological heritage. The use of interactive technologies allows visitors to explore and document the site consciously, promoting positive interaction with the environment.
- **Mobile App for an Interactive and Personalized Experience**
An innovative mobile app will allow visitors to easily navigate the site using GPS technology and provide real-time historical, biological, and environmental details. The augmented reality feature is particularly interesting: by framing the archaeological remains, visitors can view historical reconstructions, such as the Roman port, offering an immersive experience that merges the past

with the present. Scanning QR codes will provide access to multimedia content, enriching the visit with in-depth information.

- **Environmental Monitoring for Sustainable Enjoyment**
To ensure that visitors' interaction with the environment is responsible, environmental monitoring stations will be installed along the trails, equipped with sensors to detect water quality, temperature, and biodiversity. Through the app, visitors can view real-time data, raising awareness of the health of the marine ecosystem and actively participating in its protection. This educational approach contributes to raising awareness and encouraging tourists' involvement in environmental conservation.
- **Educational Workshops and In-depth Activities**
Practical workshops and field activities will offer the opportunity to learn archaeological research techniques and environmental conservation methodologies. These workshops, accessible to all visitors, encourage direct and hands-on engagement with cultural and natural heritage, allowing participants to acquire new skills and awareness. Such experiences are crucial for raising awareness among the younger generations about safeguarding heritage and biodiversity.
- **Gamification for an Educational and Engaging Experience**
An innovative element will be the introduction of gamification mechanisms, making the visit more interactive and stimulating. Visitors can participate in challenges and quizzes, earning points or badges for activities such as recognizing marine species or detecting archaeological finds. This playful approach stimulates learning and exploration, making the experience more engaging and profound, with a positive impact on visitor involvement in the protection of cultural and natural heritage.
- **Citizen Science for Conservation and Community Engagement**
The citizen science program will allow visitors to actively contribute to the collection of data on marine biodiversity, such as sightings of rare species or assessments of marine ecosystem health. The data collected will be crucial for research and conservation projects, creating a deeper bond between the community and underwater heritage. Promoting active participation in these initiatives strengthens the commitment to sustainability and ensures that natural and cultural heritage is preserved for future generations.

7th step: Marketing Plan

The marketing strategy focuses on enhancing the submerged cultural heritage through an integrated approach that promotes sustainable initiatives, community education, and inclusion in regional tourism networks. The goal is to position the site as a key cultural destination, through storytelling of its historical value and cooperation among stakeholders.

- ❖ **Enhancement of Cultural Heritage**
 - **Engaging Storytelling:** create a story that highlights the connection between the natural and cultural heritage of the site, using multimedia storytelling (videos, podcasts, virtual tours) to reach a wider audience.
 - **Participatory Events and Initiatives:** organize cultural events, such as exhibitions, festivals, and workshops, involving the local community, strengthening cultural identity, and promoting active participation in heritage preservation.
 - **Digital Educational Content:** develop multimedia content that tells the history and ongoing research, using social media, digital platforms, and presentations in schools and cultural institutions to spread knowledge about the site.
 - **Transparency and Involvement in Research:** document ongoing research and excavation activities on social media, inviting the public to follow progress and participate actively, increasing transparency and interest in the heritage.
- ❖ **Inclusion in Cultural Tourism Routes**

- **Collaborations with Local and Regional Entities:** work with tourism organizations and local authorities to integrate the site into regional tourist circuits, promoting cultural tourism and sustainability.
- **Creation of Thematic Circuits:** integrate the site into a tourist circuit that connects other cultural and natural destinations in the region, offering diverse tourism packages that combine cultural, natural, and educational experiences.
- ❖ **Networking and Strategic Collaborations**
 - **Formation of a Tourism Consortium:** create a consortium of local actors (entrepreneurs, cultural associations, tour guides) to promote an integrated and sustainable tourism offer.
 - **Participation in International Fairs:** promote the site at national and international tourism fairs to attract tour operators and media, increasing the site's international visibility.
- ❖ **Education and Awareness**
 - **Educational Programs for Schools:** offer thematic educational programs for students, with hands-on activities such as workshops, guided tours, and research projects that involve young people in heritage preservation.
 - **Educational Tours:** organize cycles of educational tours aimed at schools, universities, and enthusiast groups, with interactive learning activities led by experts such as archaeologists or historians.
- ❖ **Gamification and Public Engagement**
 - **Interactive Apps and Gamification:** develop an app that includes educational games, such as quizzes and treasure hunts, encouraging visitors to explore the site and learn about its history and biodiversity, rewarding participants with digital or real rewards.
 - **Citizen Science Programs:** engage visitors in citizen science activities, such as collecting data on the ecosystem and heritage, fostering a sense of responsibility and belonging.

Draft Time Plan

	2m	4m	6m	8m	10m	12m	14m	16m	18m	20m	22m	24m
Composition of the Management Committee												
Signing of the Programmatic Agreement												
Scientific Plan for the Enhancement of the Site												
Participatory design of the Blue Trails												
Participatory writing of the Site Regulation												
Implementation of the Blue Trails												

Marketing Plan												
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SWOT Analysis

Strengths:

1. **Integrated and Participatory Approach:** The creation of a management committee involving local authorities, cultural institutions, associations, and NGOs provides a solid foundation for a collaborative and inclusive approach.
2. **Cultural and Scientific Enhancement:** The integration of scientific research and cultural heritage promotion, alongside the protection and restoration of the site, ensures a strong base for long-term management.
3. **Technological Innovation:** The use of advanced technologies, such as augmented reality, mobile apps, and environmental monitoring systems, creates an engaging and modern experience for visitors.
4. **Environmental Sustainability:** The implementation of eco-sustainable solutions for heritage conservation, signage, and Blue Trails underscores the commitment to marine environment protection and responsible management of natural resources.
5. **Education and Awareness:** Educational programs and citizen science initiatives actively involve visitors and the community in the protection and understanding of natural and cultural heritage.
6. **Collaborations and Networking:** The formation of a tourism consortium and participation in international fairs can increase visibility and promote the destination on a global scale.

Weaknesses:

1. **Dependence on Funding and Resources:** The success of the plan relies on public and private funding, which may not always be sufficient or timely to support all planned activities.
2. **Management Complexity:** Managing such a complex project with multiple stakeholders involved could cause difficulties in coordination and resource management.
3. **High Costs for Technology and Maintenance:** The implementation of advanced technologies, such as augmented reality, underwater monitoring, and mobile apps, may require significant investments, along with long-term maintenance costs.
4. **Accessibility and Safety:** The Blue Trails and underwater activities may present challenges in terms of accessibility for people with disabilities or visitors with little experience in underwater activities, potentially excluding some tourist categories.
5. **Tourist Flow Management:** Monitoring and managing tourist flows could be complex, especially during peak seasons, risking environmental damage or creating inconvenience for visitors.

Opportunities:

Presence of effective project solutions for enhancing the attractiveness of the area, both internally and externally

The proposed intervention is located in two strategic areas for tourism in Apulia – Porto Cesareo and Le Cesine – both of which are traditionally characterized by strong seasonal flows, mainly related to coastal and seaside tourism. Given the high volume of visitors (over 350,000 annual arrivals in Porto Cesareo alone) and the uniqueness of their natural and cultural heritage, the project solutions introduced in this first implementation phase aim to requalify the area's tourism offering by shifting towards more sustainable and culturally oriented models.

In Porto Cesareo, the creation of the Coastal and Underwater Park represents a concrete opportunity to diversify and enrich the local tourism model, through an integrated offering that combines environment, archaeology, education, and technological innovation. The successful examples of the Marine Protected

Areas and submerged parks of Baia and Gaiola demonstrate how a systemic and participatory approach can generate significant results in terms of public engagement and heritage enhancement. Porto Cesareo offers a similarly ambitious framework, with over 10 km of coastal development hosting a historical and archaeological palimpsest spanning more than 3,000 years – from the Middle Bronze Age landscapes to the 16th-century coastal defense system of watchtowers.

Meanwhile, the area of Le Cesine – a State Nature Reserve and Natura 2000 site managed by WWF – provides an ideal setting for the development of new-generation nature-based and eco-tourism itineraries. These target audiences interested in biodiversity, sustainability, and slow tourism, and the proposed project envisions enriching this context with interpretive trails, immersive experiences, and educational activities linked to the cultural landscape and local historical memory.

In both areas, the intervention aims to transform tourism from a seasonal, consumption-driven phenomenon into a culturally rich and sustainable experience, with clear economic, occupational, and identity-based benefits for local communities.

2. Presence of project solutions capable of generating positive cultural impacts and fostering networking with other archaeological sites, cultural venues, and attractions

Beyond the expected economic benefits, the project includes a strong cultural and educational component designed to produce long-term impacts in terms of knowledge dissemination, capacity building, and interconnection among heritage sites and local actors.

In Porto Cesareo, the intervention is located within an area of exceptional environmental and landscape value: the Marine Protected Area, the Natura 2000 site “Palude del Conte e Dune Costiere,” and the unique “spunnulate” – natural sinkholes specific to the Salento coastline, with high geological, botanical, faunal, and landscape relevance. These are complemented by the Marine Biology Museum of the University of Salento and the archaeological exhibition hosted inside Torre Chianca, which act as important cultural hubs for the territory. The project seeks to connect and strengthen these elements through integrated thematic itineraries, both physical and digital, increasing public awareness and accessibility to the submerged and coastal cultural heritage.

In Le Cesine, the intervention leverages a rich lagoon ecosystem, symbolic not only for its biodiversity but also for its value in terms of environmental education and the preservation of the Adriatic coastal landscape. The connection with other regional attractions – from rural archaeological sites and local museums to major cultural centers such as Lecce and Otranto – is made possible through a project approach that prioritizes networking and cooperation among public institutions, civil society, and universities.

A key asset of this strategy is the availability of trained local professionals. In Porto Cesareo, a successful partnership between the environmental NGO *Coordinamento Ambientalisti pro Porto Cesareo ONLUS*, the Apulia Region (via the *UnderwaterMuse* project), and the University of Salento has led to the creation of a training program for young professionals under 35 – mainly women – specialized in the promotion and management of environmental and cultural heritage. This included the *A-Mare i Giovani* project, co-funded by the Italian Government under the “Giovani per il Sociale 2018” call, and a 100-hour *UnderwaterMuse* course for tourist and underwater heritage guides. Today, several of the trainees are actively employed in the area, providing cultural and natural guided tours, both on land and underwater.

These human resources represent a valuable foundation that the project intends to further expand, also by replicating this model in the Le Cesine area, where similar figures could be trained to work in environmental and cultural mediation roles.

The itinerary of the sites

The itinerary unfolds along two distinct coastal areas, connecting **two sites on the Adriatic coast** and **four sites on the Ionian coast**, in a route that blends history, archaeology, and marine biodiversity. This journey is not only an exploration of the remains of ancient civilizations but also an immersion into two marine

ecosystems of outstanding importance: **Le Cesine Nature Reserve**, with its wetlands and protected coastal areas along the Adriatic, and the **Protected Marine Area of Porto Cesareo**, one of the Mediterranean's most significant coastal habitats.

The **guiding theme** of the route is the ancient relationship between humans and the sea, evident in the submerged remains of port infrastructures, shipwrecks, and archaeological artifacts that reveal centuries of trade, commerce, and coastal settlements. While the Adriatic and Ionian Seas share a common historical and cultural heritage, they present distinct geomorphological and environmental characteristics, enriching the visitor's experience.

- **The Adriatic area** features two sites of great historical and landscape value: the **Harbour Complex of Posto San Giovanni - Le Cesine**, located within a WWF reserve where Mediterranean scrub merges with internationally significant wetland habitats, and **Adriano's Harbour in San Cataldo**, an ancient Roman harbor whose structure is still partially visible on the seabed.
- **The Ionian area**, on the other hand, is characterized by seabeds rich in archaeological remains. This section includes four key stops: **Isola dei Conigli**, a natural trade harbor; the **Roman Necropolis of Torre Chianca**, evidence of coastal habitation; the **Shipwreck of the Tripolitanian Amphorae**, which testifies to trade routes between Africa and Italy; and finally, the **Shipwreck of the Roman Columns**, one of the Mediterranean's most spectacular underwater discoveries.

Tourist Services and Complementary Activities

To enhance the tourist experience and provide a comprehensive offering, the itinerary connects with a range of additional services and activities that highlight the region:

- **Excursions and personalized guided tours:** Visitors can choose between guided dives, glass-bottom boat tours, snorkeling, and kayak/SUP routes to explore the sites in a sustainable and engaging way.
- **Visitor centers and multimedia experiences:** At the itinerary's starting points (Le Cesine and Porto Cesareo), exhibition spaces will feature digital reconstructions, interactive videos, and augmented reality to narrate the history of the submerged sites.
- **Natural parks and hiking trails:** The Adriatic route is integrated with Le Cesine Nature Reserve, offering opportunities for walking or cycling along nature trails that connect the coastline to the inland areas.
- **Food and wine experiences:** The proximity to historic villages and areas of local production allows visitors to combine the archaeological experience with tastings of traditional products, visits to masserie (farmsteads), and cooking classes.
- **Combined tourism packages:** The destination lends itself to a modular tourism offering, with the possibility of integrated stays combining coastal and cultural experiences, thanks to the presence of sustainable accommodations and agritourism facilities.
- **Activities for families and schools:** The routes are also designed for younger audiences, with educational workshops, citizen science programs, and gamification elements to engage visitors in an interactive and educational experience.
- **Themed events and festivals:** Throughout the year, events will be held focusing on underwater archaeology, maritime culture, and environmental conservation, featuring workshops, conferences, and educational activities.

The integration of **cultural heritage, sustainable tourism, and innovative services** makes this itinerary a model of **conscious tourism**, capable of enhancing the territory while offering a unique experience that blends history, nature, and technology.

ALBANIA - Wrecks4All Action Plan

Municipality of Vlore

Underwater Cultural Heritage (UCH) Sites Selection

Selection Criteria and Analysis

Underwater Cultural Heritage Overview of Vlora

Albania is endowed with a natural heritage as rich as its cultural heritage. The country's future is dependent on the wise use of its natural resources. The Marine Protected Area of Sazan-Kazan is designated on the sites of Karaburun peninsula and Sazan Island being the central element for nature conservation and the city of Vlora being the central element for development. The marine environment is characterized by many diversified ecosystems and a diverse range of marine species with ecological and economic importance.

Karaburun Peninsula is situated in the middle of Albania, in front of the city of Vlora, sharing sea waters of Adriatic and Ionian seas. Karaburun Peninsula (more precisely Llogora area) was declared a natural reserve in February 22, 1966, but has been heavily impacted by fires, overgrazing, intensive hunting and military trainings. Protection has been reactivated in 1986 when the area was declared a "Natural Managed Reserve" of Fourth Category. It includes Natural Recreational Zones (among which one in the inner part of the Karaburun peninsula and Rrëza e Kanalit), two Natural Monument Zone (Haji Ali's cave at the tip of the peninsula, at cape of Galloveci and at Grama Bay and Cave, Grama Beach) and the presence of exceptional coralligenous, e.g., "Gryka e Djallit", a Buffer Zone (Mali i Karaburunit, Ravana, Orikum and an area extending to Dukat) and two Natural Recreational/Touristic Zone (Brisanit and the inner part of Karaburun Peninsula, within Vlora gulf). The National Park of Llogara (Kampi i Pushimit, a strictly protected zone) and the Cika Mountain (Mbihipja e Çikës, a Natural Monument Zone) are included in this unit.

The rocky coast with, in some places, important calcareous limestone cliffs covered by typical Mediterranean vegetation and locally along the coast, pocket beaches of pebbles and sands represents exceptional scenic quality especially by boat when visiting caves, canyons and small bays, e.g., Haji Ali's and Duk Gjonit's caves. The underwater landscape is also of exceptional quality with cliffs, submarine caves and associated fauna and flora, and in some places archaeological remains. This area is certainly by the best and most impressive part of Albanian coast for the development of nautical activities such as scuba diving which is under development in Albania.

The Island of Sazan (16 km long and 3-5 km wide), in front of Vlora and north of Karaburun Peninsula, has an ellipsoid form oriented NNW-SSE and culminates at 345 m with Gryka e Djallit. Sazan island separated from the northern tip of Karaburun Peninsula by the Mezokanali strait. This island is a Natural Recreational/ Touristic Zone with remarkable cliffs, landscapes and diving areas. On summer 2015 Sazan Island is opened for public visits as relic of Cold War and natural site.

Orikum Lagoon covers around 130 ha with a maximal depth of 3 m and is permanently in communication with the sea by a channel 50 m long. It has a limited input of freshwater southwards. It is located in a restricted military area. Orikum is an archaeological site of prime importance.

Along the southwestern coast of Karaburun it is situated the bay of Grama, a famous harbor built in antiquity. The Karaburun area owns precious archaeological, historical and cultural values. On the rocks of Grama Bay, numerous ancient inscriptions in the old Greek and Latin languages can be found, that have made this bay the richest “rocky diary” in the Mediterranean. In the south-eastern part of Karaburun peninsula, in the underwater habitats of Karaburun, a considerable number of wrecked ships and many archaeological objects bear witness to the relations of this area with other civilizations during the Greek and Roman periods. Divers can also see traces of the two World Wars.

National Park of Llogara is of historical interest as it has been recorded that Julius Caesar passed at “Qafa e Llogarase” at 1 025 m altitude.

In Orikum lagoon is located the ancient Orikos which has been founded in the 5C BC by settlers from Euboea. The ancient town of Orikos was one of the most important Illyrian ports, founded in the 5th century BC and mentioned as an important economic and cultural center in the Mediterranean during the ancient Greek and Roman periods until the Middle Ages. During the Roman period, it was a strategic naval base taking part in the wars between Caesar and Pompey.

Numerous shipwrecks of that period are supposed to lie in the bay and lagoon where most of ancient Orikos is still submerged. The archaeological importance of the remains (which are mostly still underwater) is assessed to be of great value. Numerous shipwrecks (mainly on the western coast), amphora close to cape St. Nicholas on the eastern coast of Sazan Island are attractive for underwater explorers. Three shipwrecks are signaled in Vlora gulf and two ancient quarries (one located north of Pasha Liman has sculptured red heads from the classical period) on the eastern coast have been reported in the area, these historical remains are also attractions from the tourist point of view of underwater explorers.

The presence of three very important ancient medieval naval centers such as Triporti, Kanina and Orikumi along the bay of Vlora is indicative of the great role played by trade routes and maritime economic resources for the development of these centers. This is evidenced not only by archaeological ruins found on land, but especially by the **underwater archaeological findings**.

Archaeological research about underwater remains in Albania, and specifically in the waters near Vlora has not been very much developed. Initially, the bay of Vlora was explored in an underwater archaeological expedition in 1989 by archaeologists Moikom Zeqo and Neritan Ceka. During 2000-2011

another expedition was made by the Albanian and Italian archeologist, the “Liburna” expedition. The result of the archaeological research by these two expeditions have been important to understand the underwater archaeological potential of the Bay of Vlora, but also the dynamics of attendance of underwater sites in different periods. The main archaeological remains in the bay of Vlora are from the Triport area, and a large number of archeological remains come from the small bays along the Karaburun-Sazan Maritime Park. Vlora Bay and Karaburun-Sazan Area, are well known for their cultural and historical values. Historical and archaeological values of the area are unique and are very relevant for tourism and diving sports. The underwater landscape in the area is of exceptional quality including here underwater cliffs, submarine caves, and in some places with archaeological remains, such as shipwrecks and archaeological objects. A baseline assessment of underwater archaeological remains and its monitoring is necessary for the preservation of these values.

Western sides of the Karaburun Peninsula and Sazani Island are characterized by high vertical cliffs that continue in the underwater depths. On the Eastern sides of both Karaburuni and Sazani the coastline is lower and more accessible. It is very important to preserve these aesthetic values of the landscape, as it is the landscape that makes this area different from other areas. Public institutions responsible for the preservation of the area work to prevent illegal constructions, and they monitor the territory for any illegal activity.

So, there are plenty of underwater treasures to be explored in the Vlora Bay, and by treasures, we mean old wrecks. There are at least 20 shipwrecks and 7 unidentified objects along this bay¹, but among the most significant are the famous *Hospital Ship “Po”*, an Italian hospital ship from WWII (18 m long ship, 36m under water) that sunk in 1941. Other remarkable wrecks include the *Italian Royal Navy destroyers “Interpido” and “Andromeda”*, both relics of World War II naval activity, as well as the *cargo ship “Luciano”*, which adds to the maritime commercial history of the region. Adding to this underwater narrative is the *British submarine HMS “Sickle”*, believed to have sunk near the deeper parts of Vlora Bay in 1944, an elusive and valuable site linked to the strategic naval operations of WWII. Another important relic is the *steam tugboat “Skenderbeg”*, a vessel used by Albania’s coastal fleet in the mid-20th century, offering a unique perspective on the country’s Cold War maritime legacy. Together, these wrecks form a submerged museum of the 20th century, waiting to be studied in depth, preserved, and experienced by divers and history enthusiasts alike. Each site represents a modern shipwreck, contributing to the underwater cultural heritage of the area.

The most developed and accessible site is the *Hospital Ship “Po”*, situated 2.5 kilometers from the coast in Vlora Bay at a depth of 36 meters. It is currently the only site open for diving activities. Dives are conducted from a boat and take place seasonally. The site is actively used, with approximately 200 dives per year. Divers can expect a typical dive duration of 40 to 50 minutes in an environment

¹ Underwater Naval History and Cultural Heritage in Vlora Bay, Navy Captain (Ret). PhD Artur Meçollari, January, 2022.

featuring sandy seabed, a rich array of marine flora and fauna, and the presence of red coralligenous. Visibility ranges between 5 and 15 meters, making it a favorable site for underwater exploration. Although it is not located within a marine protected area and lacks formal site surveillance, it is promoted through both local and national media, as well as by diving centers operating in Vlora. The thematic focus of the site is underwater cultural heritage, and the physical extent of the wreck is estimated at 150 meters. The closest harbor is identified as P. VL, located 5 nautical miles away.

In contrast, the other three sites are not currently accessible for diving and offer limited to no services. The *Italian Royal Navy Destroyer "Interpido"*, also located in Vlora Bay at a depth of 30 meters, has been extracted and dismantled for scrap, eliminating its potential as a diving destination. Consequently, there are no operational diving services, tours, or promotional activities associated with it.

The *Italian Royal Navy Destroyer "Andromeda"* lies deeper, at 53 meters below sea level in Vlora Bay, making it too deep for recreational diving. Like "Interpido", it is not promoted, offers no diving services, and does not currently contribute to tourism or educational activities. However, it remains thematically significant for underwater cultural heritage, although its inaccessibility poses a barrier to development.

The fourth site, the cargo ship "*Luciano*", is located within the Pashaliman Naval Base area near the Karaburun Peninsula, at a shallower depth of 24 meters. Despite its proximity and thematic relevance to underwater cultural heritage, diving is prohibited due to safety concerns arising from the suspected presence of ammunition onboard. In addition, the site falls within a restricted area under the surveillance of the military base, which imposes further limitations on public access. Like the other non-diving sites, it is not currently promoted or developed for tourism purposes.

The fifth site, the British submarine HMS **Sickle**, is believed to have sunk in 1944 during World War II in the deeper waters of Vlora Bay. Though its exact location has not yet been confirmed, sonar imagery and historical data suggest that it may lie beyond standard recreational diving depths, potentially between 50 and 70 meters. As a result, the site remains inaccessible to the public, and no diving activities, promotional efforts, or interpretive materials are currently available. Nonetheless, the *Sickle* is thematically significant, representing the presence and operations of Allied naval forces in the Adriatic during WWII. If precisely identified and documented, it could serve as a valuable site for advanced or technical diving and historical tourism, but further archaeological work and safety assessment would be necessary to open it for any level of public access.

The sixth site, the steam tugboat *Skenderbeg*, is believed to have sunk during the mid-20th century, likely in the 1950s or 60s. The wreck lies near the coastline, possibly between the Zverec area and the western shallows of Vlora Bay, at an estimated depth of 18 to 22 meters. Though relatively shallow and suitable for recreational diving, the site remains undeveloped and unpromoted, with no current diving access, interpretive signage, or conservation monitoring. The exact coordinates have not yet been officially verified through archaeological mapping. Additionally, there are concerns that structural instability and debris on the site may pose risks to divers unless stabilization or clearance measures are taken. Despite these challenges, the *Skenderbeg* has potential as a training site or

educational wreck due to its moderate depth and symbolic link to Albania's post-war maritime industry. Its development could be feasible with coordinated heritage and tourism investment, particularly if paired with youth training or community-led initiatives.

In summary, while all six sites possess cultural and historical value as modern shipwrecks, only the Hospital Ship "Po" currently functions as a viable, accessible, and promoted underwater tourism destination in Vlora Bay. The remaining five sites face substantial barriers that prevent their integration into the region's dive tourism offer. The destroyer *Interpido* has been dismantled and no longer exists in situ, eliminating any potential for dive-related development. The destroyer *Andromeda*, resting at a depth of 53 meters, is beyond recreational diving limits and lacks promotion, services, or infrastructure. The cargo ship *Luciano* lies within a restricted military zone near Pashaliman Naval Base and remains off-limits due to safety concerns linked to suspected munitions on board. Similarly, the British submarine *HMS Sickle*, while thematically significant, has yet to be confirmed in location and lies at technical dive depths, requiring further survey and verification. The steam tugboat *Skenderbeg*, despite its relatively shallow position and interpretive potential, remains unmapped and undeveloped, and is not currently accessible for diving activities.

This comprehensive overview highlights both the remarkable potential and the considerable limitations currently shaping underwater cultural heritage tourism in Vlora Bay. With focused investment in site identification, legal access, promotion, and infrastructure, several of these wrecks could eventually be transformed into valuable dive experiences. For now, however, Vlora's underwater tourism is centered solely on the "Po" site, underscoring the need for strategic planning to expand and responsibly manage this unique heritage resource.

The Bay of Vlora and the Karaburun-Sazan Marine Protected Area are the main tourist attractions of the city with the highest influx of tourists during the summer season, with their number to increase each year, except for the year of the pandemic where there was a decline of foreign tourists, offset by an increase in domestic visitors. There are two departure points for boats and speedboats in the direction of the Marine Park, one near the Vlora Seaport in the area of Skela, and the other one near the port in the area of Radhima. Since 2010, this Marine Park has been declared a protected area being guarded and monitored by the National Agency of Protected Area in Albania

According to the latest statistical data available to the Municipality of Vlore, for the year 2024 the number of foreign tourists was 156,737 and domestic tourists 223,175, totaling 379,912 tourists who have chosen Vlora as a tourist destination.

Selection Criteria for the selection of the site

The selection criteria used in the document to assess and compare the UCH sites in Vlora Bay considered suitable for a cross-border cultural route are derived from the structure and indicators

listed below. These criteria reflect both the physical, environmental, and tourism development potential of each site. Based on the content, the key selection criteria are:

1. Name and Type of Site
 - Identification and classification as a modern shipwreck, relevant to underwater cultural heritage.
2. Location
 - Proximity to Vlora Bay and notable areas like the Pashaliman Naval Base.
3. Depth
 - Critical for determining accessibility and safety for diving activities.
4. Accessibility for Divers
 - Whether the site is accessible, has been extracted, is too deep, or unsafe due to unexploded ordnance.
5. Operational Period
 - Information on whether the site is seasonally available for diving or not in use.
6. Services Offered
 - Availability of underwater tours or other tourism/diving services.
7. Thematic Relevance
 - Whether the site contributes to the narrative of underwater cultural heritage.
8. Extent of the Site
 - Physical size of the wreck (when available), indicating how immersive or extensive the dive could be.
9. Typical Duration of Dive
 - Important for planning and logistics of dive tours.
10. Distance from the Coast
 - Influences access logistics, especially for boat diving.
11. Proximity to Harbor
 - Includes name and nautical distance to the nearest harbor, relevant for operational feasibility.
12. Mode of Access
 - How divers reach the site (e.g., boat).
13. Annual Number of Dives
 - Indicator of popularity, safety, and operational status.
14. Visibility Conditions
 - Ranges given in meters, important for diver experience and safety.
15. Environmental Description
 - Includes seabed type, biodiversity, and presence of features like coral.
16. Marine Protection or Restrictions
 - Whether the site is inside a Marine Protected Area or under military restriction.
17. Surveillance
 - Indicates oversight, which may affect accessibility and preservation.
18. Promotion and Visibility
 - Whether the site is promoted through media or dive centers, indicating tourism readiness.

These criteria collectively aim to evaluate each site's heritage value, dive safety, accessibility, infrastructure needs, and tourism potential.

Legislative Framework

Two EU directives that are relevant for the marine environment are the EU Directive Establishing a Framework for The Community Action in the Field of Water Policy (Water Framework Directive 2000/60/EC) and Marine Strategy Framework Directive (Marine Directive 2008/56/C). The Water Framework Directive commits EU member states to achieve good qualitative and quantitative status of all water bodies (including marine waters up to one nautical mile from shore) by 2015. The aim of the Marine Directive is to protect more effectively the marine environment across the EU. It aims to achieve Good Environmental Status (GES) of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. In order to achieve its goal, the Directive establishes European marine regions and sub-regions on the basis of geographical and environmental criteria.

Also on March 19, 2009, Albania deposited an Instrument of Ratification of the Underwater Cultural Heritage Convention (Paris, 2 November 2001). This convention has entered into force in Albania since June 19, 2009.

National legislation regulating the protection and promotion of Marine and Protected Areas is divided into strategic documents, laws, decisions, orders, regulation as in the table below.

Table 1: Overview of the regulation framework for UCT in Albania.

National Legislation	Year	Objectives and implication relevant to the Protected Areas Management
Strategic documents		
National Biodiversity Strategy and Action Plan (NSAP), 2000 and Action Plans for Conservation of Cetaceans (2007), Posidonia oceanica meadows (2007) and Marine turtles and their natural habitats (2012)	2000 2007-2012	Valid for the period 2000-2015; The most significant progress achieved in PA coverage
Working plan and the strategy for increasing the surface and strengthening the administration of	2007	Provided details for improving the coverage of PA and laid the grounds for the establishment of the first Marine Protected area in Albania.

protected areas in Albania, in Biodiversity enabling Activity, 2007.		
Strategic Plan for Marine and Coastal Protected Areas (SPMCPAs), April 2013	2013	Includes situation analysis related to MCPAs, reviews criteria to identify MCPAs and identifies MCPAs, as well as proposes activities for the implementation of the SPMCPAs
National Strategy for the Sustainable Development of Tourism 2018-2022, January 2018 (Updated in “ <i>National Strategy for the Sustainable Development of Tourism 2019-2023</i> ”, Updated in “ <i>National Tourism Strategy 2024-2030</i> ”	2018, Updated in May 2019, Updated in October 2024	The document is compiled on strict principles that ensure sustainable development of the sector, appreciating it tourism as a strategic and priority sector of the economy, with high social and community impact, as well as establishing protection and respect for the environment as non-negotiable criteria of whatever planning and development in the tourism sector.
National Strategy for Culture 2019-2025, January 2019	2019	The document is compiled on strict principles that ensure the creation of a favorable environment for the development of cultural and creative services and products in the public and private sector, in order to increase attention to cultural heritage, art and culture.
Laws		
Law no.8906, dated 06.06.2002 “On protected areas” amended by Law no.9868, dated 04.02.2008	2002 (2008 amendments)	Establishes the legal framework for the declaration, planning, administration, management and use of protected areas and their natural and biological resources
Law No.9587, dated 20.07.2006, “On biodiversity protection”, amended by Law No.37/2013	2006 (2013 amendments)	Aims at preserving and protecting biological diversity by regulating the sustainable use of its elements through the integration of the main elements of biodiversity in the strategies, plans, programs and all levels of decision-making.

Law No.10006, dated 23.10.2008, "On wild fauna protection" amended by Law No.41/2013	2008 (2013 amendments)	Aims to protect, manage and control wild fauna to ensuring the conservation of species, populations and their habitats.
Law No. 10440 dated 7.7.2011, "On Environmental Impact Assessment" (EIA)	2011	Ensures that projects are evaluated for their impact on ecosystems and heritage. May apply to larger-scale dive infrastructure projects (e.g., dive resorts, underwater parks).
Law No. 64/2012, dated 31.05.2012, "On Fisheries"	2012	Regulates fisheries, its managements, provides protection for marine life and internal waters, and regulates "fishing protected areas"
Law No.43/2020 , dated 23.04.2020, "On Maritime Tourism Activities"	2020	Aims to determine rules, conditions and criteria for the activities of maritime tourism, vessels, for tourist and entertainment purposes, infrastructures necessary for the exercise and determination of institutional responsibilities for this field in the Republic of Albania.
Additional legislation related to protected areas		
Decision no.266, dated 24.04.2003 "Concerning the administration of Protected Areas"	2003	Specifies the tasks and functions of the PA administrations, especially for national parks and managed natural reserves/areas of habitat and species management (IUCN PA categories II and IV)
Decisions No.267 concerning procedures regulation proposal and declaration of protected and buffer zones, dated 24.04.2003	2003	Regulates procedure for the declaration of protected and buffer areas.
National Legislation		
Decision No.897, dated 21.12.2011 approving the rules for the proclamation of the special protected areas	2011	Proclamation of the special protected areas is done according to the Law on Protected Areas. SPAs are related to Pas that have Ramsar status as wetland of

		international importance, or the Bern status as areas of great importance for the flora and fauna protection.
Regulation No.86, dated 11.02.2005, "For the Establishment of Management Committees for Protected Areas"	2005	Regulates the creation, functions and operation of the PA management committees.
Order No.148, dated 21.02.2013, "On approval of Standardized Structure of Management Plan for the Protected Area"	2014	Establishes the contents of the management plans of protected areas.
Order No.1280, dated 20.11.2013, "On approval the Red List of Wild Fauna and Flora"	2013	Review and updated of the existing Red List complied for the first time in Albania in 2007.
Regulation No.1, dated 29.03.2005, "For application of the legislation on fishery and aquaculture"	2005	Prohibits fishing around river mouths, fishing and aquaculture in the outer part of Karaburuni (up to 1 nm or up to 50 m depth), trawl and pelagic trail nets in Vlora bay, fishing in the lagoon channels.
Regulation No.8, dated 11.11.2009, "Concerning management measures for the sustainable exploitation of fishery resources in the Sea"	2009	Prohibits use of bottom gears within 3 nm from the coast or up to 50 m depth, towed gears within 1.5 nm from the coast, hydraulic dredges 0.3 nm from the coast, and gillnets/purse seine 300 m from the coast.
Regulations related the NMP Karaburun-Sazan		
Decision No.289, dated 28.04.2010, proclaiming Natural Park the natural marine ecosystem at the Sazan Island Park and the Karaburun Peninsula, amended by Decision No.444, dated 28.04.2010.	2010	Declare the maritime natural ecosystem of Sazan Island and Karaburun Peninsula as Marine National Park
Order No.446, dated 16.08.2012, on the Establishment of the Management Committee of the National Park Llogara, Marine National Park Karaburun-Sazan and Natural Complex	2012	Defines members of the Management Committee based of the Regulation for the Establishment of Management Committees for Protected Areas.

Karaburun-Rreza e Kanalit-Orikum- Tragjas-Dukat		
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Albania is strategically positioned to meet the growing expectations for a sustainable tourism market, oriented by nature and culture. In this regard, Albania has also advanced the legal/regulatory framework to support sustainable tourism. Sport and adventure tourism, part of the group of products considered “increasingly influential”, are important tourism products that have a high potential to have an increasing and influential trend in the future. This tourist product, also includes diving, where the latter, according to some tour operators, is growing by 30% per year.

Tourism is considered one of the most potential sectors to achieve higher and more economic growth positive in increasing employment and real income. This assessment of the impact of tourism on the Albanian economy is also based on international studies in which it is written that despite the fluctuations in the world economy, tourism has shown a stable balance to economic and social change.

The promotion of UCH sites, *in line with the National Tourism Strategy 2024-2030*, contributes to two socio-economic objectives for tourism in the Vlora Region:

1. Development of sustainable tourism in the region to contribute to economic development and employment, through increasing attitudes towards internationals and modest growth of emigrants and ethnic Albanians; increasing the direct contribution of tourism to GDP and increasing the direct contribution of tourism to employment.
2. Creating an integrated model of tourism, with cultural, coastal and natural dimensions for the creation of new cultural, nature and costal products.

One of the most prominent examples of successful dive tourism integrated with underwater cultural heritage protection in the EU is the **Underwater Archaeological Park of Alonissos** in Greece. Located around the island of Alonissos in the Northern Sporades, the park is centered on the ancient Peristera shipwreck, a 5th century BC merchant vessel lying at a depth accessible to recreational divers. This site was the first officially designated underwater museum in Greece and stands as a European benchmark for responsible and sustainable dive tourism. The site operates under a robust legal and institutional framework established by the Hellenic Ministry of Culture and Sports in compliance with the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage. Access to the wreck is carefully regulated—only certified divers accompanied by licensed guides are allowed, with daily quotas enforced to minimize impact. The wreck is protected by non-invasive infrastructure such as mooring buoys and underwater interpretive signage, while ongoing monitoring is conducted by marine archaeologists to preserve site integrity.

An outstanding aspect of Alonissos is its dual approach to access—both physical and digital. Onshore, a Virtual Reality (VR) center has been established where non-divers and visitors with

limited mobility can explore 3D reconstructions of the wreck, making heritage inclusive and educational. This has proven valuable not only for awareness-raising but also for divers preparing their visit and for promoting off-season cultural tourism. The project has significantly contributed to the local economy, creating jobs in diving services, guiding, interpretation, and hospitality, while fostering community engagement. Locals have become active participants in managing and promoting the site, which has helped build a sense of ownership and pride in maritime heritage.

This model has received EU funding through programs such as BlueMed and national structural funds for regional competitiveness. Its success lies in the holistic integration of heritage conservation, tourism infrastructure, digital innovation, and community benefit. Other EU examples following similar paths include the Baron Gautsch shipwreck in Croatia, the ArcheoSub underwater heritage trails in Apulia, Italy, and digitally enhanced dive trails in Malta. These cases highlight the importance of combining heritage site management with advanced interpretation tools, public-private cooperation, and training of local dive professionals.

For Vlora Bay, these models illustrate the essential components of developing a sustainable dive destination: establishing a clear legal framework for UCH protection, zoning and regulating dive access, investing in digital storytelling and VR experiences, and actively involving coastal communities in the tourism value chain. By drawing inspiration from Alonissos and similar EU efforts, Vlora can position itself as a regional leader in underwater heritage tourism that protects its maritime past while generating future economic opportunities.

Sustainable Tourism Assessment

Tourism Assesment

For the city of Vlora, tourism is a priority sector of sustainable economic and social development. It also generates higher revenue in a range of economic activities related to it, as well as guarantees work and self-employment opportunities. With natural and historical assets and with a wealth of cultural resources Vlora bay is a very attractive destination for recreation. For years, as a result of infrastructure investments and tourism development, is considered “The Queen of the Albanian Riviera”. The territory of Vlora, has benefited this “price” as a result of the coastal resources and nature like wonderful beaches, lagoon, island and peninsula, mountains, untouched bays and underwater sources. Also, there are historical and cultural sources as Vlora is the city where was declared Independence on November 28, 1912 and is also the city where fascist, ottoman and communist regime left their mark on the city. There is no doubt that Vlora is a city that carries Albanian traditions. Traditional food and traditional annual events are also a tourist resource for the city. Favorable climate with 270 sunny days and Albanian hospitality are also factors that influence successful tourism.

The most popular attractions to visit in Vlora are:

1. The Muradie Mosque
2. The Ancient City walls
3. The Monument of Independence
4. The museums of Vlora
5. The beaches of Vlore
6. Sazan Island
7. Haxhi Ali Cave
8. Grama Bay
9. Bristani Bay
10. Underwater trails
11. Llogara National Park
12. Mount Cika
13. The natural terrace of Kuz Baba
14. The Monastery of Zvernec
15. The Nartas Lagoon
16. Kanina Castle
17. Folk Festival of Traditional Dance
18. Folk Song Marathon
19. Radhima Banquet of Fresh Seafood
20. Old Historical Area

Most of the tourists can visit almost all the the aforementioned attractions. The proximity of Zverneci Monastery to Narta Lagoon, the proximity of Sazan Island to the various Bays of the Karaburun Peninsula or the Cave of Haxhi Ali helps tourist to visit at once different attractions that are close to each other.

Of course, the beaches of Vlora are the main destination visited. Llogara National Park which is located 40 minutes by car away from the beaches of Vlora is not only a natural attraction, but also a culinary one. The historical area of Vlore, the Independence Monument, the Historical Museum and the Muradie Mosque are 2-3 minutes of walk from each other.

During the last years, Vlora region offers all typologies of accommodation structures including hotels, motels, resorts, tourist villages, BB, houses or rooms for rent to meet all the tourists demand during the summer months. Many hospitalities service structures have been built in the recent years along the whole eastern coast of Vlora bay, including Vlora town and the traditional tourist villages of Jonufra, Radhima and Orikumi. They are offering accommodation and food, but also other services associated to leisure and recreational activities.

Most of the tourists choose the summer period to visit Vlora as they are attracted by coastal tourism. Vlora's coastal tourism includes not only beautiful beaches and excellent seafood but also boat and speedboat trips to Karaburun-Sazan and water sports such as swimming, jet skiing, canoeing, cliff diving and scuba diving. If tourists come to Vlore for sure they will make a cruise trip. They prefer both medium-sized boat trips but also speedboats. They prefer this form of tourism to access the Island of Sazan, the Bays and Caves of Karaburun, but also as a fun tourist activity with music and food on boat cruises.

There are guides tours and tour operators that facilitate access to all tourist attractions or enable companionship for interested tourists. The variety for each tourist service is high, for this reason we accept the quality of services as good or very good, especially food and accommodation.

Public transport within Vlora is provided through bus lines and vans. Unfortunately, with the fall of the communist regime, the railway lines were damaged and are out of order for the people. Tourist access Vlora by sea in the Port of Vlora, through Tirana Airport which is 2 hours away from the city of Vlora, but also changes in infrastructure in recent years have improved national roads making the road to the South of Albania faster. On November 28, 2021 the works for the Vlora Airport started and are expected to finish at the end of 2025, located on the outskirts of the city, 15 minutes away from the center.

For years the tourism developments in this area (Karaburun-Sazan area), which was a closed area for visitors, were unplanned and tourist activities were uncontrolled, causing serious damages to natural habitats and biodiversity. Due to the lack of road access, tourist pressure in Sazani Island and Karaburuni Peninsula, especially in its western side, has been relatively low. In 2015, with a decision of the government for the Marina Park, the area of Sazani as the part of historical-cultural nature was opened for visitors, adding the range of attractions that tourists can visit in the Karaburun-Sazan Marine Park.

There are plenty of underwater treasures to be explored along Vlora Bay, and treasures, mean wrecks. There are more than 4 main wrecks in along this bay only, including the famous "Po Shipwreck", an Italian hospital ship from WWII (18 m long ship, 36m under water) that sunk here in 1941. Other famous shipwrecks: Piroscrafo Luciano Wreck; Andromeda Wreck; Intrepido Wreck. Vlora Bay offers some quite shallow wrecks for beginner divers. Other attractions to explore are the coral and marine life that thrives in the area, as well as old relics from WWI and WWII. After a dive, divers can easily go back to enjoy the onshore adventures that the area offers.

On the other hand, Karaburun-Sazan is the only National Marine Park in Albania, it covers a sea area of 1.9 km and lies along the coast of the Karaburun Peninsula and the island of Sazan. In the

Karaburun-Sazan Marine Park are the ruins of ancient Greek, Roman and World War II ships. This area testifies to the rich underwater ecosystem, with its limestone cliffs, giant caves and secluded beaches, also boasting ancient seafront inscriptions. An ultimate attraction of the area are coralligenous communities and other vulnerable marine habitats. Coral outcrops house some of the protected and commercially valued species, such as red coral. Due to its diversity, coralligen is considered one of the most attractive scuba diving seascapes in the world. The most frequented activities in this part, often associated with damages of habitats, are diving and spear gun fishing.

A large number of diving sites are offered in the Sazan-Karaburun Underwater Protected Area. With all kinds of reliefs, compositions, depths, clear water, wildlife, various unique physical phenomena, such as mass migrations, caves, etc. The area offers suitable diving sites for all levels of divers.

Although part of the same National Marine Park, the island and peninsula offer different diving experiences. For example, in the north and northwest of the island it is possible to witness a volcanic geological phenomenon with streams of sulfur-containing gases and waters that can be observed and enjoyed by divers. In the western part it appears an underwater rock that rises from 45 m depth to 6 m. Another indispensable diving experience around the island is the "Gorge of Hell", an extraordinary underwater cave.

While the Karaburun Peninsula is about exploring the numerous diving sites along the coast. Some of the diving sites are: Gjuheze Cape, Dafina Bay, Bristan Bay, Englez Bay, Grama Bay, etc.

As described above, this national park is really special, offering a diverse experience in the assets located inside it such as caves, reefs, relics, historical remains, crystal clear waters, rich fauna and flora, unexpected physical phenomena and more. In the framework of its protection, in this Marine Park, no construction is allowed, for this reason various services as beach infrastructures and food and beverage are offered in seasonal mobile structures. As the Park is composed of the Karaburun Peninsula and the Island of Sazani is accessible mainly by boats and speedboat. Rarely is the Peninsula visited via hiking or accessed by vehicles for which a permit must be available. The main port where the boats and speedboats depart is located in the center of the city, in the most populated part of it, at the beginning of the promenade, easily accessible by public transport or cars. Farther away is the second port of departure of boats in the area of Radhima which is an area accessible by car or van, but not by bus.

During the peak tourist season, July – August, the small beaches in the Eastern coast of Karaburuni (Raguza, Shen Vasili, Shen Jani) are regularly frequented, including excursion boats. Beaches in the western side of Karaburuni (Bristani, Dafina, Grama), despite being clean, quiet and very attractive are very little frequented, due to the lack of road access. Considering the whole area in general, the

number of visitors is highly increasing every year. About 60% of visitors are Albanian, while the remaining are foreigners, mainly from Kosovo, FYROM and Ukraine.

Dive Tourism and Services Assessment

Vlora Bay possesses considerable potential for the development of dive tourism due to its rich underwater cultural heritage, ecological assets, and strategic geographic location along the southern Adriatic and Ionian seas. However, despite this potential, dive tourism in Vlora remains underdeveloped and fragmented. This evaluation addresses the current status across several dimensions: service provision, safety and quality standards, marketing and promotion, connectivity with broader destination management structures, and alignment with EU best practices.

Service Providers and Capacity

Currently, Vlora hosts only one operational and certified dive center, established in 2004. This center offers internationally accredited training and certification (PADI, CMAS, SSI) and provides services ranging from Open Water Diver to Instructor-level programs. While the presence of such a center reflects foundational capacity, it also highlights a critical limitation: the lack of alternative providers reduces competition, diversity of experiences, and resilience in the sector. With only one center serving the region, the capacity for scaling or responding to increased demand is limited. Seasonal operation further narrows the availability of services.

Safety and Quality of Customer Experience

The certified dive center operates according to international standards and ensures safety through qualified instructors and regulated training modules. Dives are conducted primarily by boat with standard procedures in place. However, infrastructure at the dive sites—such as mooring buoys, underwater trails, interpretive signage, or safety zones—is almost entirely lacking. Emergency response infrastructure (e.g., recompression chambers, coordination with marine rescue services) is also limited or absent. While the existing services are professional, the broader safety ecosystem requires enhancement to meet best-practice benchmarks.

Promotion and Market Visibility

Dive tourism in Vlora suffers from low visibility in both domestic and international markets. Promotion is largely conducted by the dive center itself, with some exposure through local tourism networks. National or regional tourism strategies have not fully integrated dive tourism as a niche product. Unlike well-known dive destinations in Greece, Croatia, or Malta, Vlora lacks targeted marketing campaigns, multilingual platforms, or presence in global diving directories and forums. There is limited digital content (videos, VR, 3D maps) to attract and inform divers in advance.

Integration with Destination Management and Networks

There is currently limited integration of dive tourism within Vlorë's broader destination management system. Collaboration between the dive sector, municipal tourism bodies, cultural heritage institutions, and hospitality providers remains informal and sporadic. There is no structured local or regional dive tourism cluster, nor are there destination management organizations (DMOs) that incorporate dive heritage into the planning of coastal and marine tourism. The result is weak coordination in product development, event promotion, funding access, and policy alignment.

Comparative Analysis with EU Best Practices

In contrast, leading EU dive destinations such as Alonissos (Greece), Gozo (Malta), and Rovinj (Croatia) offer integrated models for underwater cultural heritage tourism. These destinations have implemented underwater archaeological parks, controlled site access, high-quality interpretation (including VR and underwater signage), and robust stakeholder networks. Dive centers in these areas benefit from EU funding, certification programs, and inclusion in national heritage strategies. They also feature in international dive shows, directories, and travel publications. Vlorë lacks these key enabling elements and would benefit from adopting a structured, phased development model similar to those applied in EU best-practice cases.

SWOT Analysis

Strengths:

- Unique and authentic underwater heritage (e.g., shipwrecks, amphora fields, WWII relics)
- Professional and internationally certified dive center
- Favorable water conditions and scenic coastline
- Strategic location along the Adriatic-Ionian corridor

Weaknesses:

- Only one service provider with seasonal operation
- Lack of diving infrastructure at sites (safety, signage, trails)
- Low visibility and weak international promotion
- Absence of local dive tourism networks or DMO integration
- Limited emergency response and rescue coordination

Opportunities:

- Development of new dive sites (e.g., Skenderbeg, Luciano, HMS Sickle)
- Use of digital technologies (3D mapping, VR, dive trail apps)
- Participation in EU projects and regional dive tourism networks
- Training programs and job creation for local youth

- Year-round tourism diversification through heritage and eco-tourism

Threats:

- Environmental degradation and lack of site protection
- Risk of site looting or anchor damage to wrecks
- Competition from better-established regional dive destinations
- Institutional delays or lack of coordinated policy support

Strategic Pathways Toward Sustainable Dive Tourism in Vlora

To transition Vlora Bay into a sustainable and competitive dive tourism destination, a coordinated, multi-level approach is needed. First, local and national authorities should support the development of a legal and policy framework for underwater heritage access, protection, and tourism. Second, investments must be made in diving infrastructure, including site mapping, installation of mooring buoys, creation of underwater trails, and onshore interpretation centers. Third, promotional efforts must be modernized, including digital storytelling, international partnerships, and participation in dive expos and networks.

Moreover, the establishment of a Dive Tourism Stakeholder Platform or Working Group involving the dive center, municipality, Ministry of Culture, tourism bodies, and NGOs would enable joint planning and coordination. Vlora should pursue EU funding opportunities (e.g., Interreg, Horizon Europe, Creative Europe) to finance infrastructure, training, and marketing. Finally, capacity building for dive guides, youth trainees, and local tourism operators will ensure that economic benefits reach the broader community.

By adopting a phased development model grounded in best practices and tailored to Vlora's unique assets, the region can position itself as a regional leader in underwater cultural heritage tourism, contributing to both economic development and heritage conservation.

Legislative and Operational Framework

The regulatory framework that legally supports the dive tourism activity consists of:

- Law no. 27/2018 "On Cultural Heritage and Museums"
- Law no. 10 027, dated 11.12.2008 "On the accession of the Republic of Albania to the Convention for the Safeguarding of the Underwater Cultural Heritage, Paris 2001"
- Draft Law "On Integrated Coastal Zone Management"
- Law no. 107/2014 "On territorial planning and development"

In Albania, within the Law no. 27/2018 "On Cultural Heritage and Museums", Chapter II is dedicated to underwater archaeological assets, where Article 152 specifies that marine cultural assets are all the layers, sunken ships, ruins, or, in general, any object that, presenting ethnographic, archaeological or historical interest, found underwater, at the bottom of the sea or in all underwater layers. This chapter also specifies how underwater archeological sites are defined, ownership of underwater cultural assets, underwater archeological activities, development of underwater archeological projects, licenses for underwater archeological activities, marine finds and reward for those who have discovered and declared a random marine finds. Thus, there is a possibility of realizing a request initiated by the local government body to realize the proclamation of the protected and accessible underwater cultural heritage site.

The interested parties interested to be involved in the process of initializing the request for declaring a site, an underwater and accessible cultural heritage, are:

1. The Municipality of Vlora
2. The Ministry of Culture, Vlora Regional Directorate of Cultural Heritage
3. The Ministry of Tourism and Environment, Regional Administration of Vlora Protected Areas
4. The National Inspectorate of Cultural Heritage
5. The National Institute of Cultural Heritage
6. The National Archaeological Institute
7. National Institute for the Registration of Cultural Heritage

The request for UCH site declaration is initiated at the local level by the Municipality to the Ministry of Culture, to be finalized with a decision of the Council of Ministers. For this reason, the Municipality is the responsible body that request the initiation of archaeological, environmental and biodiversity scientific research to support the arguments that will be presented to the Government for the announcement of the site of access to the marine protected area.

This should follow the declaration by the relevant authorities of the UCH site, being the first step towards the creation of the UCH construction site. According to Law no. 27/2018 "On Cultural Heritage and Museums", archaeological areas and parks are declared such by decision of the Council of Ministers, according to the proposal made by the Minister responsible for Cultural Heritage. Also, state institutions, specialized in the field of cultural heritage and local government bodies have the right to propose the proclamation of a facility "Cultural Heritage", a proposal which is addressed to the minister responsible for cultural heritage. Article 14 specifies that local self-government units cooperate with state institutions specialized in the preservation and protection of cultural heritage objects, located in the territories in their jurisdictions. The Ministry of Culture determines the ways of cooperation. This law specifies that cultural monuments can be networked for administrative and socio-cultural purposes, provided that the new function does not damage the value of the

monument. Preliminary conditions and criteria for networking and use of cultural monuments are approved by the Institute of Cultural Monuments. In any case, the exploitation of cultural heritage is done only after the approval of the National Council of Restorations for the conclusion of the exploitation contract between the parties. The exploitation contract is concluded between the minister responsible for cultural heritage and the user of the m. In case the user violates the terms and criteria of the contract, then the Regional Directorate of Cultural Heritage proposes to the responsible ministry for cultural heritage to terminate the contract unilaterally.

Article 20 specifies that funds for research, documentation, selection, protection, conservation, restoration, administration, display, presentation, and dissemination of cultural heritage are provided through the state budget, the budget of local self-government units, and any other lawful source from legal or physical person, domestic or foreign, obtained in the form of donations or sponsorships. The National Council for the Management of Cultural Assets evaluates the proposed projects, submitted by the institutions of the respective fields, while the ministry responsible for cultural heritage is responsible for the approval and implementation of these projects, on a proportional basis, from its budget.

According to Article 26, the national system for care of cultural heritage includes central state authorities, local self-government authorities, for the properties they own and administer, specialized institutions, according to the provisions of this law, as well as religious communities registered by law. The two above-mentioned authorities carry out their activities in cooperation with the Academy of Sciences of the Republic of Albania, the Academy of Albanological Studies, institutions responsible for higher education, trade unions, professional associations and other non-profit organizations.

The National Inspectorate for the Protection of Cultural Heritage is a central public, budgetary institution, subordinate to the minister responsible for cultural heritage. This institution is responsible for the inspection and progress of archaeological excavations on land and underwater, to implement safeguards on immovable cultural property throughout the national territory, to implement the provisions of contracts signed by various state authorities, in terms of this law, administration, revitalization, use and any other form of agreement of the ministry responsible for cultural heritage with public and private institutions.

The National Institute of Cultural Heritage is a national specialized scientific institution, subordinated to the minister responsible for cultural heritage. NICH extends its competence in the field of preventive underwater archeology in the Republic of Albania, pursuant to this law. The Sector for Preventive Underwater Archeology is established at NICH, in accordance with its function. NICH, in fulfilling its functions, monitors and coordinates the work with the regional directorates of cultural

heritage, cooperates with local self-government units, public and private entities, local or foreign, in the field of material cultural heritage.

The Regional Directorates of Cultural Heritage are specialized regional institutions, technical-administrative, under the minister responsible for cultural heritage. RDCH exercise their activity in the field of cultural heritage, in order to trace, design, conserve, restore, supervise, test, promote, publish cultural heritage, in the territory they administer. They cooperate and coordinate work with institutions of self-government local, natural or legal persons, public and private, Albanian or foreign in the field of cultural heritage.

The mission of the **National Institute for the Registration of Cultural Heritage** is to create, preserve and update the National Register of Cultural Heritage, in electronic and written form. NIRCH in order to fulfill its mission, cooperates with the institutions of the Albanian state, police bodies, customs institutions and international institutions in the fight against trafficking in cultural assets. It has the task of registering, cataloging information, documenting, evaluating, promoting, supervising and monitoring the respect of property rights and the movement of national cultural assets. NIRCH monitors and coordinates the work with territorial units in the field of cultural assets. NIRCH provides services to central state administration bodies, local government, scientific, cultural or religious institutions, private individuals and legal entities for the identification, registration and cataloging of cultural assets.

Proposed Measures to Accelerate Sustainable Dive Tourism in Vlora

To support the sustainable development of dive tourism and enhance the regulatory framework:

- i) *Simplify and Standardize Procedures*: Clarify and streamline the administrative process for AUWCH designation to reduce bureaucracy and facilitate local authority involvement.
- ii) *Establish National Guidelines for Dive Tourism Development*: Develop official standards and criteria for the sustainable use of underwater sites, including safety, conservation, and community engagement protocols.
- iii) *Create a National Register of Dive Sites*: Integrate underwater cultural heritage sites into the national tourism and cultural databases for better visibility, planning, and monitoring.
- iv) *Introduce Tiered Access Management*: Define zones of access for different types of diving (recreational, technical, research) with associated safety and conservation regulations.
- v) *Develop Multi-Stakeholder AUWCH Task Forces*: Institutionalize cooperation between municipalities, cultural agencies, and tourism bodies through formal working groups that guide site development and management.
- vi) *Enable Public-Private Partnerships (PPPs)*: Encourage investment through heritage-based PPPs that respect preservation while generating revenue from guided dives, interpretation, and educational activities.

- vii) *Digital Transformation of Site Access and Monitoring*: Employ technologies such as underwater cameras, GIS, VR, and apps to monitor sites, support virtual access, and attract a broader audience.
- viii) *Funding and Capacity Building*: Establish grant programs and capacity-building initiatives for dive operators, heritage professionals, and municipal staff to improve expertise and promote entrepreneurship in the sector.
- ix) *Legal Instruments for Site Protection and Enforcement*: Strengthen enforcement capacity to prevent looting, unauthorized dives, and environmental degradation through improved surveillance and penalties.
- x) *Integration into National Tourism Strategy*: Position underwater heritage tourism as a strategic niche within Albania's broader tourism framework, with clear links to coastal development, conservation, and international cooperation.

These proposals aim to bridge the gap between Albania's rich underwater heritage potential and the current limitations of the regulatory and institutional environment, paving the way for sustainable, community-driven dive tourism development.

Cooperation Framework

Stakeholder Mapping

The effective development and sustainable management of underwater cultural heritage (UCH) and dive tourism in Vlora require the involvement of a diverse group of stakeholders across public, private, academic, and civil society sectors. Identifying and understanding the roles, interests, and influence of these stakeholders enables more strategic planning, reduces conflict, and ensures that development benefits are widely shared. Below is an analysis of key actors in the value chain of underwater heritage tourism in Vlora, categorized into functional groups.

Categorization of Stakeholders

1. Governmental and Regulatory Bodies

Ministry of Culture: Responsible for legal designation and oversight of cultural heritage. Key in policy development, licensing, site designation, and approval of exploitation contracts. High influence.

Municipality of Vlora: Initiates site designation processes, supports infrastructure development, coordinates with national institutions. Medium to high influence and a central local driver.

Vlora Regional Directorate of Cultural Heritage: Executes on-the-ground cultural heritage management, including site monitoring, documentation, and coordination. Medium influence.

National Institute of Cultural Heritage: Leads preventive underwater archaeology and national policy implementation. Coordinates scientific work and heritage standards. High influence.

National Archaeological Institute: Conducts archaeological research and underwater exploration. Medium influence, especially in early-stage site assessment.

Ministry of Tourism and Environment / Vlora Protected Areas Administration: Coordinates marine and coastal environmental protection. Engaged in permitting, conservation, and ecotourism integration. Medium influence.

2. Private Sector and Dive Industry

Local Dive Center (Oazi Blu): Currently the only certified dive operator. Provides training, excursions, and site monitoring. High operational importance but low strategic influence unless supported by broader networks.

Tourism Agencies and Tour Operators: Potential promoters of dive tourism, linking dive experiences with cultural and coastal tourism packages. Currently underdeveloped in Vlora.

Hospitality Sector (hotels, guesthouses, transport services): Indirect beneficiaries and partners in destination marketing and package development.

Potential Investors / PPP Actors: National or international investors in marine tourism infrastructure, conservation technology, or training centers. Strategic but underutilized.

3. Academic and Research Institutions

Universities (e.g., University of Vlora, University of Tirana): Engage in marine archaeology, biodiversity research, and training. Offer scientific support for site designation and environmental monitoring.

Academy of Albanological Studies / Academy of Sciences: Provide historical and cultural expertise. Contribute to interpretation, education, and heritage dissemination.

4. Civil Society and Local Communities

NGOs and Cultural Associations: Can support awareness campaigns, citizen science, youth engagement, and responsible tourism practices. Variable influence.

Local Fishermen and Maritime Users: Direct users of the marine space. Their buy-in is critical for site protection and sustainable use.

Community-Based Organizations (CBOs): Can act as stewards or monitors of underwater heritage and help integrate dive tourism into local livelihoods.

Media and Influencers: Essential for awareness raising, marketing, and storytelling about underwater heritage and responsible diving.

WRECKS4ALL 2.0 Collaborative Approach

The collaborative approach has been a top-down approach (Municipality as initiator). Underwater cultural tourism and underwater cultural heritage are developing trails in the city of Vlora. Although with great desire, recognizing a high development potential for this sector in the territory of Vlora, the Municipality sought the support of the project to achieve something more in this field. The launch of the WRECKS4ALL 2.0 project consolidated the bridges of cooperation with stakeholders, with which in the framework of the local tourism strategy the Municipality cooperates, to do something good to diversify the tourism offer.

Thus, at the start of the project, the institutional working group in the Municipality, organized the project presentation meeting with all the potential stakeholders to present the WRECKS4ALL 2.0 project and its relevance. In the introductory meeting, central and local government institutions, businesses working in the tourism industry, organizations that focus on nature and tourism, researcher and experts in the field were invited and a cooperative relationship was agreed with the mostly of them.

The list of stakeholders involved is presented below:

1. Prefecture of Vlora County
2. Vlora Port Authority
3. Alb Navy National Diving Center
4. Regional Administration of Protected Areas
5. Regional Directorate of Cultural Heritage
6. Albanian Diving Federation
7. OAZI BLU Diving Center
8. Albanian Adventure
9. Hello Travel Agency
10. Regina Group Hotels
11. Association of Tour Operators for Southern Albania
12. SEEP (Social, Education&Environment Protection Organization)
13. Green Vision
14. CELIM Albania (Centro Laici Italiani per le Missioni)
15. Vlora Tourism Laboratory. SET-TOUR LAB
16. Scientific Research Center. University of Vlora "Ismael Qemali"

Ongoing communications with stakeholders are realized in the form of round tables as well as face-to-face meeting to clarify the role of each stakeholder and the expected benefits that the project brings to sustainable tourism as well as to them. Their role in data generation was essential, as they were the only ones who could dispose of this data and interested in contributing to the further development of diving tourism, considered elite tourism and which should be promoted even better to see the impact it gives on the economy. Their willingness to provide input through questionnaires regarding available information and relevant opinions to positively influence the development of diving as a sport, the management of diving sites and the use of diving technology.

An important moment of the cooperation of stakeholders in this field was the participation and presentation of works and projects in the conference "The Perspective of the Adriatic and Ionian Underwater Heritage to Promote a Diversified Tourist Offer", on December 6, in Vlore. This conference brought together project partners to share experiences but also discussed institutional and cross-border cooperation to promote the value of underwater assets in the tourist offer. Of equal importance was the B2B Meeting "Dive Into Heritage- Building a Future for Underwater Tourism in Vlorë Bay, realized on June 30, 2025 with a wider participation of representatives of local businesses and tourist activities representatives.

Local Community and Stakeholder Engagement

The Communication and Visibility Plan is a project itself, as such it aims at:

- Promoting and advocating the new UCH sites among project beneficiaries, stakeholders, and a wider audience, thereby increasing impact and visibility for the project itself, the EU as the donor agency and the Municipality of Vlorë as an implementer strategy;
- Disseminating information on the UCH sites on time, and build synergies with other projects and initiatives when is possible in the Vlorë Region;
- Facilitating coordination among stakeholders; this includes communications related to the operational aspects of the project and its day-to-day management, as well as planning, strategic guidance, and navigation.

The Municipality of Vlorë will manage the overall project communication and visibility in cooperation with the local stakeholder's network and the Regional Directorate of Cultural Heritage.

Main channels of communication & visibility and dissemination will be:

- Website and other social media pages - Municipality of Vlorë website and Facebook and Instagram pages will be used as main communication tools because they are already an important source of information in different issued related to tourism. A tourism subpage will

be created under the Municipality website that will include a collection of information relevant to the UCH site.

- Social Media - The world of social networks and digital communication have changed consumer behavior. Official channels are important, but individuals are very interested to read also the opinion of people like them. For this reason, blogs, influencers and other followed social media profiles will be used to promote the UCH site.
- Local Events – the UCH will be promoted in the local events that are organized during the year by the Municipality.
- Newsletters, leaflets and other printed or online publications about tourism promotion in the Municipality of Vlora and in the wider region.
- Cooperation with the local media and the city's Mega Ledscreen as strong tools of information for the general public.

Collaboration with different groups of stakeholders in the field of tourism promotion. Direct contact with the tourism industry is important for effective communication and to maintain constant dialogue with the industry. The financial support of the EU will be highlighted in all the project communications. Communications on specific project activities and events, will manage by the Municipality according to its responsibilities.

Cross-Border Integration

To strengthen Vlora's role in a wider cross-border dive tourism network, it is essential to identify key stakeholders in neighboring countries—especially those along the South Adriatic and Ionian coasts—and foster cooperation toward shared goals. The integration of underwater cultural heritage (UCH) tourism into a regional model can enhance visibility, diversify offerings, and build trust through shared standards and narratives.

In Albania, key partners include the municipalities of Himara and Saranda, both of which possess diving potential and rich cultural heritage that could complement Vlora's offerings. At the national level, the Ministry of Tourism and Environment plays a vital role in overseeing cross-border cooperation efforts. The Albanian Diving Federation provides regulatory oversight and supports training and certification, while national tourism associations like the Albanian National Tourism Agency support branding and promotion. Academic institutions such as the University of Vlora can contribute through joint research and underwater monitoring.

In Montenegro, relevant stakeholders include the National Tourism Organization, which leads tourism promotion and cooperation in the Adriatic. The coastal municipalities of Ulcinj and Bar are notable for their dive centers and wreck sites. Institutions such as the Montenegro Underwater Federation and certified dive schools in Budva and Kotor play an important role in training and tourism services. Additionally, the Center for Conservation and Archaeology of Montenegro is responsible for managing and protecting underwater cultural heritage. The University of

Financial and strategic alignment with EU funding mechanisms such as Interreg IPA, Horizon Europe, and Creative Europe could provide the necessary resources to implement these initiatives. These programs would support training, interpretation, infrastructure development, and digital transformation efforts essential for cross-border tourism integration.

Ultimately, linking Vlora's dive tourism assets to a broader Adriatic-Ionian network will result in increased tourist arrivals and spending, more resilient local economies, improved heritage conservation outcomes, and stronger transnational cooperation. A unified approach based on shared values, mutual benefit, and sustainable development principles will position the South Adriatic as a premier and trusted destination for dive tourism in Europe.

Funding sources

For the Municipality of Vlora, the promotion of sustainable tourism is a priority. In this perspective, the focus on promoting underwater cultural heritage has been assessed as potentially important for expanding the tourist offer. Finding funding sources is a challenge. Better cooperation and coordination between the central government and local self-government units (Municipalities) in the framework of finding funding and co-financing opportunities helps in this regard. The Municipality of Vlora is part of several projects focused on tourism which over the years have helped not only in capacity building but also in the necessary infrastructural interventions.

A critical component for the long-term development and financial sustainability of dive tourism in Vlora is access to suitable funding sources. Multiple national and international programs are available to support initiatives in this sector, particularly those focusing on the valorization of underwater cultural heritage, sustainable tourism infrastructure, and cross-border collaboration.

At the international level, the European Union offers several funding mechanisms that are particularly well-suited for dive tourism development. Interreg IPA CBC (Cross-Border Cooperation) programs support joint projects between Albania and neighboring countries, aiming to strengthen regional integration and shared tourism products. Horizon Europe funds research and innovation projects and can be applied to technological solutions in underwater exploration, conservation, and digital interpretation. Creative Europe supports initiatives in culture and heritage, particularly those that promote cultural access and audience development through digital innovation.

The EU4Culture and Interreg Euro-MED programs are also relevant, with a strong focus on Mediterranean identity, sustainable tourism, and creative economies. These programs provide opportunities for municipalities, academic institutions, NGOs, and private enterprises to form consortia for collaborative initiatives. Other mechanisms such as the UNDP's small grants programs or the BlueMed and BlueMed Plus initiatives may offer opportunities through strategic partnerships focused on the sustainable use of marine and coastal resources.

On the national level, the Ministry of Tourism and Environment in Albania offers annual calls for tourism development projects. Eligible activities include destination branding, digital promotion, and creation of new tourism products, all of which are critical to advancing dive tourism. Additionally, the Ministry of Culture funds projects that promote cultural heritage, with a strong emphasis on digitalization and creative presentation. These national calls are open to public bodies, NGOs, and private operators, providing a valuable co-financing source for locally-led initiatives.

To successfully access and benefit from these funding programs, it is essential for the Municipality of Vlora and local stakeholders to align project proposals with both national strategies and EU priorities. Building strong partnerships—with academia, civil society, and international institutions—can enhance proposal competitiveness. Importantly, the development of a comprehensive and long-term funding strategy that leverages multiple sources is key to ensuring continuity, sustainability, and impactful investment in the dive tourism sector.

Optimal Destination Management Model

A comprehensive destination management model is essential for positioning Vlora as a leading dive tourism and underwater cultural heritage (UCH) destination in the South Adriatic region. This model aims to integrate UCH with the broader tourism strategies of the region, prioritizing legal reform, product diversification, sustainability, stakeholder cooperation, effective promotion and long-term economic viability.

Legislative Framework Adjustment: Currently, the regulatory framework surrounding UCH and dive tourism in Albania is complex and fragmented. The model proposes harmonizing local and national legislation with EU directives and UNESCO conventions to create a transparent and supportive environment for dive tourism. Legal provisions must facilitate the declaration of underwater heritage sites as accessible and protected areas, establish clear protocols for licensing and operations, and encourage responsible site use through conservation-oriented diving policies.

Connectivity with Broader Tourism Services: The model advocates for embedding dive tourism within broader cultural, adventure, and eco-tourism offerings. This includes linking underwater attractions with land-based heritage sites, marine biodiversity zones, traditional villages, and gastronomy trails. Creating multi-day thematic itineraries and cross-promotional packages will help enhance the visitor experience while distributing tourism benefits across a wider geographic and service area.

Sustainability: Environmental and cultural sustainability are foundational pillars of the model. Site-specific management plans should be developed, based on environmental assessments and carrying capacity studies. Dive operations must adhere to strict environmental protocols to prevent damage to sensitive ecosystems. Revenues from dive permits or guided experiences should be reinvested into conservation and local development. Education programs for divers and tourism staff will ensure adherence to sustainability principles.

Promotion and Branding: The model emphasizes a unified branding and promotional strategy for Vlora as a destination of emerging significance in UCH. A digital-first approach should be used, leveraging immersive storytelling, virtual dive experiences, and interactive content. Partnerships with international tourism fairs, digital platforms, and social media influencers can amplify visibility. Cross-border marketing campaigns with neighboring countries can present the South Adriatic as a connected dive corridor.

Stakeholder Engagement: Strong public-private and inter-institutional cooperation is a prerequisite for successful implementation. The model recommends the establishment of a Vlora Dive Tourism Stakeholder Council, involving the Municipality, ministries, dive centers, cultural heritage institutions, local businesses, and civil society. This council will provide a platform for coordinated planning, monitoring, capacity building, and conflict resolution. Clear roles and responsibilities will ensure accountability and continuity.

Economic Viability: To ensure the financial sustainability of dive tourism, the model encourages the development of diversified revenue streams. These may include dive tourism services, merchandising, educational programs, co-branded experiences, and digital content. Supporting small and medium-sized enterprises (SMEs), particularly those led by youth and women, can promote inclusive growth. The model also calls for a long-term funding strategy, utilizing national funding mechanisms and EU programs such as Interreg, Horizon Europe, and Creative Europe.

This destination management model is designed to align with EU best practices and regional tourism development frameworks. Specifically, it reflects the priorities of the EU Blue Growth Strategy, the European Agenda for Tourism 2030, the EU Strategy for the Adriatic and Ionian Region (EUSAIR), and the UNESCO 2001 Convention on the Protection of Underwater Cultural Heritage. It also complements smart specialization and innovation priorities identified under EU Cohesion Policy and Interreg programs. As such, it ensures regional compatibility, promotes sustainable maritime tourism, and supports the preservation of cultural and natural heritage through innovation, stakeholder engagement, and cross-border cooperation.

While the model presents a comprehensive strategic framework, it has not yet been officially verified or endorsed by Destination Management Companies (DMCs) or Destination Management Organizations (DMOs). The next phase should involve structured consultation with these entities to validate the model, assess its practical feasibility, and adapt it to operational realities. Their endorsement will be crucial for integrating the model into broader tourism governance structures and ensuring alignment with regional and national destination management strategies.

To ensure this alignment, we propose that the model to be officially submitted to DMOs operating at the regional and national level—such as the National Tourism Agency of Albania and regional tourism boards—for review and co-development. The model should be tested through pilot activities, workshops, and strategic dialogues, engaging DMCs and DMOs as active partners in refinement and implementation. This process would allow for operational feedback, foster institutional ownership, and provide the necessary legitimacy and endorsement for the model to be adopted as a standard for dive tourism development in Vlora and beyond.

Innovation Framework

Digital Technologies for Promotion

The implementation of novel digital technologies presents a transformative opportunity for enhancing the visibility, accessibility, and educational value of underwater cultural heritage (UCH) and dive tourism in Vlorë Bay. The development of digital tourism products such as virtual reality (VR), augmented reality (AR), mobile applications, and interactive digital platforms can offer immersive and inclusive experiences, making UCH more engaging and widely accessible to both divers and non-divers.

Virtual reality experiences allow users to explore sunken shipwrecks and underwater archaeological sites in high-resolution, three-dimensional environments. By using VR headsets at visitor centers, museums, schools, or tourism fairs, users can “dive” virtually to visit otherwise inaccessible or restricted underwater sites. This not only supports heritage preservation by reducing physical visitation pressure but also extends the appeal of UCH to audiences unable to physically dive, including older adults, children, and persons with disabilities.

Augmented reality applications can enrich on-site visits by overlaying digital reconstructions and interpretive content onto real-world environments through smartphones or AR glasses. Tourists visiting the Vlorë coastline, for example, could use an AR app to visualize what a shipwreck looked like before it sank, view animations of maritime trade routes, or receive real-time information about marine biodiversity in the area. Such enhancements deepen the storytelling dimension of tourism and foster a stronger emotional and educational connection with the cultural landscape.

Mobile applications can serve as comprehensive digital guides, integrating information on dive sites, cultural narratives, safety instructions, booking services, and environmental guidelines. These apps can include GPS-enabled features that direct users to dive spots, provide offline maps, and offer in-app rewards for completing educational modules or eco-friendly behaviors. For divers, real-time weather, sea conditions, and safety checklists can be integrated into the user experience, improving both enjoyment and safety.

Interactive and virtual maps—hosted on digital platforms or physical installations in tourism hubs—can present a unified view of Vlorë Bay’s underwater assets, including protected wreck sites, marine biodiversity zones, and related cultural heritage points of interest. These tools are instrumental in planning dive trips, educational tours, or thematic itineraries that combine underwater and land-based cultural attractions. Virtual maps can be regularly updated and linked to other platforms such as regional tourism portals, UNESCO heritage databases, or local business directories.

For the cultural heritage sector, these digital tools offer innovative ways to document, archive, and interpret underwater sites. They can assist in scientific research, public engagement, and heritage management, especially in situations where in-person site monitoring is limited. 3D

photogrammetry and digital reconstructions of wrecks can be integrated into heritage databases, educational materials, and global networks such as European or Time Machine.

For the tourism sector, digital technologies unlock new business models based on experience-driven tourism. Dive operators can differentiate their offerings through digitally enriched dives and attract broader customer bases, including cultural tourists, students, and virtual travelers. Local businesses like hotels, guides, artisans can also be featured on digital platforms, promoting local economic development.

For the general public, these technologies democratize access to cultural heritage, raise awareness about marine conservation, and create meaningful, interactive learning experiences. They contribute to heritage education in schools, support citizen science programs, and cultivate a sense of pride and ownership over local heritage.

However, the realization of such digital innovations requires significant financial investment and technical expertise. The Municipality of Vlora currently lacks the necessary infrastructure and funding to independently implement these technologies at scale. Therefore, the development of partnerships with academic institutions, technology providers, cultural organizations, and international donors is essential.

Accessing European Union funds, such as through Interreg, Creative Europe, or Horizon Europe programs, and collaborating with regional stakeholders will be key to enabling the digital transformation of UCH promotion in Vlora. These partnerships will not only provide the required resources but also ensure that digital initiatives align with best practices and regional tourism strategies.

WRECKS4ALL 2.0 VR Showroom Establishment

In the territory of the Municipality of Vlora there is no Museum or Exhibition Space dedicated only to marine beauties or underwater natural or cultural assets, however, inside one of the buildings owned by the Municipality there is a Vision Multimedia Center, which, although it started with few materials in quantity to offer to visitors, over time these materials are increasing, presenting a part of the natural and underwater beauties of the territory of Vlora, but also in Europe.

The location of this center is very favorable, in a very accessible position accompanied by a picturesque view as it is located on the main promenade of the city, a road axis where every tourist who visits Vlora passes.



Figure 1: Tourism Laboratory Building

So, location and space of the WRECKS4ALL 2.0 VR Showroom will be an existing building owned by the Municipality such as the Tourism Laboratory “SET-TOUR LAB”. The Tourism Laboratory is a professional academy that aims to educate professional in support of sustainable tourism and tourism promotion. The Vision Multimedia Center which is a virtual multimedia gallery that promotes cultural heritage and natural resources by combining innovation and technology with traditional elements. This Center, which is located at the entrance of the Tourism Laboratory on the right, occupies an area of 34-meter square it was created thanks to the benefit of a project in which the Municipality of Vlorë has been part.



Figure 2: Projector Views of Multi Media Vision Center

The MultiMedia Vision Center will be the selected location to offer immersive experiences of UCH for at least 12 visitors at the same time. The center is equipped with 12 Meta Quest 3 VR Headsets, projector and some videos from the cultural and underwater heritage of the coast of Vlora. Also, the center offered 3D experiences and videos made along Ustica (Italy), Alonissos (Greece) and Gozo (Malta) where international artists took inspiration from beautiful natural environments, ancient maritime traditions and interaction with local communities to create digital and physical artworks realized thanks to the ART4SEA project of the Creative Europe Programme in which the Municipality of Vlora is partner. We emphasize these as a great example of cross-border cooperation in the field of Underwater Cultural Heritage (UCH) tourism, showcasing how shared artistic and technological initiatives can promote sustainable cultural experiences across Europe.



Figure 3: Virtual experience with VR Headsets of Multi Media Vision Center

The Laboratory building, as a building of a professional academy, is a building created for the realization of various trainings in the field of tourism sector, for this reason it has a class where lectures, trainings or workshops can be best conducted, by made possible the combination of visits to the Multimedia Center with the development of workshops or trainings with a focus on the preservation of underwater cultural heritage, protection of marine assets and the environment in general.

The laboratory, which maintains constant contact with tourism businesses, to supply them with specialists in the field of tourism, maintains contact with them for the realization of tourist visits to the Multimedia Center, increasing the network of collaborators who promote this laboratory. This center will perform not only the role of Multimedia Room that offers 3D experiences and video experiences, but also will realize the info center and the center of realization of trainings or events that have in focus tourism, environment and cultural heritage.



Figure 4: Classroom inside the Tourism Laboratory

The managerial organizational structure is predetermined from the beginning of the operation of the Laboratory, so the Director of the Laboratory has under his responsibility the Vision Multimedia Center, also the receptionist also serves the Multimedia Center as responsible for hospitality. The Center started its operation in November 2021, where for financial reasons it is missing a Cultural Heritage Archaeologist and a marketing expert to carry out a promotion dedicated to the Center, as an innovation center which is not found in another city in the South of Albania.

As mentioned above in this document, underwater cultural tourism is a developing sector in Albania and Vlora, this is also one of the main reasons why in the South of Albania operates only one diving center. However, the potential of the development of this sector, as a result of the diverse underwater resources and underwater cultural heritage of antiquity is impressing. Every season, the Municipality, encourages tourists to try this typology experience and supports the diving center by promoting it, considering it as an asset for the development of underwater tourism.

On the Albanian coast, government with the DCM nr.321 dt. 28.05.2014 has defined a total 9 diving areas, 6 of which on the coast of Vlora. Recently, the Albanian Diving Federation has made a request for changes in the DCM nr.321 mainly to add other diving areas and to evaluate these areas by the Archaeological Service Agency and the National Directorate of Cultural Heritage.

So, the central government is also aware of the potential of diving tourism, starting with the regulation of the legal framework. In these conditions, where the market is underdeveloped and not competitive, the most important phase of the Marketing Plan is the phase of recognizing the UCH sites and the VR Showroom and promoting them with year-round and well-thought-out marketing campaigns.

In short, the main lines of the proposed marketing plan are presented as follows:

Vision

We envision a community in which all people value their culture and history, and other's culture and history too. We join UNESCO in the belief that the protection and promotion of cultural heritage contributes to the development of societies and the building of peace.

Slogan

Conserve your underwater cultural heritage, preserve it for future identities.

Target group

People interested on recreation activities, scientific researchers and passionate about diving.

Objectives of the Marketing Plan

Objective nr.1

Develop and implement a comprehensive marketing plan that addresses a variety of market segments, including but not limited to passionate about diving or cultural heritage.

Objective nr.2

Implement a plan and develop promotional activities to win more costumers every year.

Objective nr.3

Develop a marketing plan to promote the site using local media, social media and a website.

Objective nr.4

Encourage visitors to advertise the site and share their experiences.

Channels

National and local TV, national and local radios, national newspapers, online platforms, social media of the Municipality, Social Media networks of the Diving Center, Tourist Info Points, Billboards in the territory of Vlora and promotion on the Lcd Screen in the City Center.

Dive Destination Development Plan

Roadmap

Vlora Bay, nestled between the Adriatic and Ionian Seas, possesses exceptional potential as a dive tourism destination due to its abundance of underwater cultural heritage (UCH), including ancient shipwrecks, Roman ruins, Cold War naval remnants, and unique ecological formations. This area, particularly within the boundaries of the Karaburun-Sazan Marine Protected Area, combines historical richness with environmental diversity. Recognizing this, the development of an integrated and strategic operational plan is crucial. Such a plan ensures that the area's submerged cultural resources are protected, while also allowing them to be responsibly developed and promoted as part of a sustainable tourism offering that benefits both local communities and the broader region.

The vision behind this operational plan is to establish Vlora as a leading example of sustainable dive tourism in the Adriatic region where environmental protection, cultural heritage conservation, and economic development coexist harmoniously. To accomplish this, the plan sets forth a number of guiding principles including stakeholder inclusion, public-private partnerships, digital transformation, and heritage-led development. These principles ensure that tourism growth is balanced and supports local identity and livelihoods.

The implementation of the operational plan is structured into five sequential phases. **The first phase** focuses on identifying and evaluating submerged heritage sites. Through comprehensive archaeological mapping and ecological surveys, potential dive sites such as the hospital ship "Po," the tugboat "Skenderbeg," and the cargo vessel "Luciano" are assessed for accessibility, safety, and thematic value. This step forms the foundation for informed and responsible site development.

Following this, the **second phase** addresses the legal designation and planning of selected dive sites. Here, collaboration with the Ministry of Culture and relevant cultural heritage bodies is essential to officially designate these locations as Accessible Underwater Cultural Heritage (AUWCH) sites. Simultaneously, environmental impact assessments and site management plans are developed to ensure long-term conservation and safe use. This phase aligns national legislation with international conventions, particularly the UNESCO 2001 Convention on UCH.

The third phase introduces the construction and deployment of tourism infrastructure. This includes installing underwater interpretive trails, safety buoys, signage, and creating digital experiences such as virtual and augmented reality tours. On land, the construction of a Dive Interpretation and Visitor Center in Vlora will serve as an educational and logistical hub. Emergency systems, including dive safety protocols and recompression facilities, will also be developed during this period.

In parallel with infrastructure development, **the fourth phase** is dedicated to building the capacity of local stakeholders. Training programs will be launched to certify local youth as dive guides and heritage interpreters, while small and medium enterprises (SMEs) will be supported through grants and technical assistance. A Dive Tourism Council will be established to coordinate efforts between local government, civil society, academia, and the private sector. This participatory model ensures that tourism development reflects the community's values and aspirations.

The final phase of the operational plan focuses on marketing and cross-border integration. The branding of Vlora as a dive destination will be launched under the "Dive Vlora" identity, supported by a robust digital platform featuring multilingual content and immersive experiences. Regional partnerships with Italy, Greece, and Montenegro will facilitate the creation of cross-border dive routes, such as World War II shipwreck trails or ancient maritime trade routes. Vlora will participate in international tourism fairs and diving expos to gain global visibility and attract niche markets.

To support this holistic model, an optimal destination management structure will be established under the Vlora Dive Tourism Management Authority (VDTMA). This entity will be responsible for governance coordination, licensing, safety regulation, and stakeholder engagement. Financial sustainability will be pursued through EU funds, national grants, and private investment, with revenue reinvested into site maintenance, conservation, and community development. Environmental and cultural protection will be ensured by enforcing diver conduct rules, regular site monitoring, and scientific assessments.

Crucially, the plan emphasizes community inclusion. Local residents, particularly women and youth, will be encouraged to participate in guiding, hospitality, and cultural programming. Concepts like "diver-friendly villages" will be piloted in nearby areas such as Orikum and Radhima, allowing residents to offer accommodations, food, and services tailored to divers.

Monitoring and evaluation are built into the plan through key performance indicators such as visitor numbers, site health metrics, job creation rates, and community satisfaction. Annual progress reports will be published, and strategies will be updated based on new data and stakeholder feedback.

Nonetheless, the plan acknowledges potential risks such as environmental degradation, conflicts of interest, legal bottlenecks, and funding shortages. These will be mitigated through early stakeholder engagement, diversified funding sources, and adaptive governance mechanisms.

This operational plan outlines a comprehensive, phased, and inclusive approach to transforming

Vlora into a sustainable and competitive dive tourism destination. Through careful planning, strategic investment, community engagement, and regional cooperation, Vlora has the potential to become a leader in underwater cultural heritage tourism in the South Adriatic, serving as a benchmark for other coastal regions aiming to balance conservation with economic growth.

Draft Time Plan for Implementation (2025–2030)

Phase / Year	2025	2026	2027	2028	2029-30
Site Identification & Assessment	✓				
Legal Designation & Planning	✓	✓			
Infrastructure Development		✓	✓		
Capacity Building & Stakeholder Engagement		✓	✓	✓	
Marketing & Cross-Border Integration			✓	✓	✓
Monitoring & Evaluation				✓	✓

Risks, Mitigation Measures and Key Performers Indicators

Underwater cultural heritage (UWCH) is a very valuable asset for every country, but during the last years its preservation and promotion has been challenged by different risks that are associated with the new trend of blue growth and the growing interest for the development of maritime economic activities and the specific required infrastructure that can result directed or indirectly of several risks of UCH.

Below are categorized and briefly present, the identified risks that are related to the operation of the UCH sites:

Technological risks – these risks come from the use spaces for of marine activities, because due to the new technologies, nowadays it is easier to exploit underwater spaces at greater distance from shores and at greater depths. Sea is now being used for economic activities, and there are built several infrastructure and facilities. So, the sea apart from traditional activities, such as transport, fisheries, etc. is being used for new activities such as: extraction of hydrocarbons and aggregates, aquaculture, tourism and leisure, energy production, military uses, etc. and these developments (with the help of the new technologies) that are planned accordingly are threatening the marine natural resources and underwater cultural heritage.

In the area of Vlora Bay these risks may come from the new constructions of the new Marina Port and the Port of Vlora. Both these areas are now under constructions, and the technologies used need a close supervision from the UWCH experts with a detailed mapping of the UWCHs of the area. Technological risks in these cases come from the use of different machineries and technological solutions that are used by construction companies.

Economic risks are also a threat that needs not to be underestimated. There risks can be listed in two areas: risks coming from not having the necessary economic budget to make operational the AUWHC and KAC, such as low net revenues, high operating costs, low number of visitors, etc.

The second area of the economic risks are the exploitation of the marine underwater areas for economic activities that destroy these protected areas and UCH protection and preservation is less prioritized, compared to other marine economic activities and resources. Construction activities in the seabed for mining of fossils and metals, drilling, etc. use of the seabed for pipelines and cables, and also some fishing techniques are economic activities that may risk the situation of the UCH, and Albania and Vlora is not excluded from these risks.

Environmental risks – with regard to these risks it has to be emphasized the pollution of maritime areas directly affecting marine litter and water quality, species abundance and habitat distribution. An identified environmental risk are the damages due to the illegal fishing and illegal underwater diving. According to the specific regulations and legislation in Albania, in this area it is prohibited fishing around river mouths, fishing and aquaculture in the outer part of Karaburun (up to 1 nm or up to 50 m depth), trawl and pelagic trail nets in Vlora bay, fishing in the lagoon channels, but these regulations are not followed, and there are cases of damages from these practices in the environment.

Regulations prohibit also the use of bottom gears within 3 nm from the coast or up to 50 m depth, towed gears within 1.5 nm from the coast, hydraulic dredges 0.3 nm from the coast, and gillnets/purse seine 300 m from the coast. But, also these practices continue to being used and they are an identified environmental risk that bring damages of habitats and cultural and natural heritage.

Sociotechnical risks – part of these risks is the site perception, how do community, citizens and visitors perceive the safety and security of the area. Low information and knowledge is delivered to the stakeholders' so they know, promote and preserve the area and archeological and cultural artifacts. The site development should ensure that all visits are monitored and controlled in terms of protection of the remains. Lack of human resources and their training and professional capacities meet the needs of the site.

Mitigation measures

- Close cooperation and partnership between the interested institutions and stakeholder with clear roles and responsibilities. The activation of naturalistic-cultural routes, guided tours and virtual restitution projects for landscapes and archaeological evidence should be realized in cooperation with responsible authorities.
- Find a balance between the greatest challenge for UCH, to reconcile blue growth trends with UCH preservation and promotion,
- Use of new technologies for preservation and protection project, use of video surveillance system and use of protection interventions, if it is possible with metal grids to cover the entire sites and prevent the damages that might be caused by the passage of trawling fishing equipment.
- Use of ICT with interactive installation, animations, videos, virtual and augmented reality and digital tools that could share the heritage more effectively, especially to new generations, in Museums or KACs,
- Ensure the accessibility for people with disabilities which is practically nonexistent;

- More information and communication especially online, and make the public aware of the challenges and problems in sustaining underwater cultural heritage and protecting them from traditional and new threats.
- More trainings and qualification of archaeological guides and diving centers.

Key Performance Indicators (KPIs) are a quantifiable measure of performance over time for a specific objective. KPIs provide targets for teams to shoot for, milestones to gauge progress, and insights that help people across the organization make better decisions. From finance and HR to marketing and sales, key performance indicators help to move forward at the strategic level. Indicative KPIs for measuring the sustainability of the new site of the Municipality of Vlora can be divided into four main groups:

1. Environmental KPIs

- ✓ Water pollution in the site caused in the last decade
- ✓ Marine debris accumulated in the last decade
- ✓ Characteristics and quality of the water in the site
- ✓ Characteristics and changes of underwater habitat in the last decade

2. Social KPIs

- ✓ Level of cooperation between managers and stakeholders
- ✓ Understanding of stakeholders
- ✓ Dissemination of information for stakeholder involvement
- ✓ Stakeholder evaluation regarding the site
- ✓ Evaluation of visitors and divers for the site
- ✓ Involvement of scientific research institutions
- ✓ Creation of UWCH site management plan
- ✓ Existence and adaptation of legislation for UWCH sites
- ✓ Promoting and disseminating information about the new site
- ✓ Use of various instruments for dissemination of communication activities

3. Cultural KPIs

- ✓ Introducing the public to the underwater natural and cultural history of the site
- ✓ Raising public awareness of the importance of underwater cultural heritage
- ✓ Impact of the ticket mechanism to generate revenue in favor of site maintenance
- ✓ Awareness of the degradation of cultural assets as a result of human misconduct

4. Financial KPIs

- ✓ Number of visitors per year (divided into domestic and foreign)

- ✓ Number of annual dives (divided into domestic and foreign)
- ✓ Revenue generated from site visit
- ✓ Necessary expenses for the operation and maintenance of the site
- ✓ Total cash flow movement (inflow and outflow) during site activity

Economic Impact on Coastal Communities and Strategic Assessment

Underwater heritage tourism has a significant and multifaceted impact on the coastal economy of Vlorë and its surrounding communities. By leveraging the unique value of submerged cultural assets, this form of tourism stimulates economic growth through job creation, small business development, and increased visitor spending. Dive tourism, being a niche yet high-value market, attracts tourists who typically spend more than average visitors, particularly on specialized services such as diving instruction, equipment rentals, guided excursions, and boat transportation. These expenditures generate direct income for local entrepreneurs and service providers, while also supporting indirect employment in sectors such as food and beverage, accommodation, transport, and local crafts.

One of the most transformative aspects of dive tourism is its potential to provide year-round income, helping mitigate the seasonality of traditional beach tourism. For instance, dive experiences, cultural storytelling, and VR-enabled interpretation centers can attract visitors beyond the summer months, thereby stabilizing earnings for coastal businesses. Additionally, the development of diver-friendly villages and heritage-linked tourism packages fosters inclusive economic participation, particularly for youth and women. Training local residents as certified dive guides, underwater site custodians, and heritage interpreters empowers communities, builds skills, and strengthens social cohesion.

Strategically, the local economy benefits from the clustering of services around dive tourism nodes—such as Orikum, Radhima, and the city center of Vlorë—transforming these areas into vibrant economic hubs. The reinvestment of dive permit fees and tourism revenues into conservation, public services, and SME support further enhances the sustainability and resilience of coastal communities. Ultimately, underwater heritage tourism becomes not only a tool for preservation but also a catalyst for inclusive, place-based economic development.

To support this development pathway, a clear understanding of the strengths, weaknesses, and opportunities is essential. Vlorë's primary strengths include its authentic and diverse underwater heritage (ranging from ancient amphora to WWII shipwrecks), a certified dive center operating according to international standards, and a highly scenic coastal environment. The region also benefits from a strategic location along the Adriatic-Ionian tourism corridor and recent

infrastructure improvements including port facilities and the future Vlora Airport.

However, several weaknesses hinder full realization of this potential. Chief among them are the lack of structured destination management, underdeveloped site infrastructure, and limited marketing reach. The current reliance on a single dive operator restricts scalability and diversity of services. Additionally, many wrecks remain inaccessible or insufficiently mapped, and emergency response systems are not yet fully developed. Institutional coordination is fragmented, and there is insufficient integration of dive tourism within national and regional tourism strategies.

On the opportunity side, Vlora is well-positioned to tap into EU funding instruments and capitalize on growing international demand for adventure and cultural tourism. Digital technologies such as VR, underwater cameras, and interactive apps can significantly enhance accessibility and interpretation of underwater sites. Cross-border collaboration with Montenegro, Italy, and Greece opens the door to creating integrated dive routes that span multiple countries and periods of history, appealing to enthusiasts worldwide. Furthermore, developing training programs and offering support for new dive-related businesses can generate employment and economic diversification.

Moving forward, the path to success lies in strengthening local capacities, formalizing governance structures, and aligning dive tourism initiatives with both heritage conservation and economic development goals. A phased, community-based approach—focused on pilot projects, stakeholder coordination, and marketing innovation—can gradually build a robust and sustainable dive tourism sector in Vlora. Institutional support, combined with community buy-in and cross-border cooperation, will be key to turning the region’s submerged heritage into a source of lasting prosperity and cultural pride.

JOINT COMMITMENT LETTER

On the Follow-up and Implementation of the WRECKS4ALL Action Plan in the South Adriatic

This Joint Commitment Letter (hereinafter: “the Letter”) is concluded between the partners of the project **WRECKS4ALL 2.0 – Capitalization by transferring to new territories the WRECKS4ALL model for the protection of underwater heritage through its digitalization and valorization as a novel touristic offer (Project ID: SA-0100146).**

The undersigned institutions, acting in full partnership and in accordance with their respective legal frameworks, express their joint commitment to ensure the follow-up, further development, and implementation of the **WRECKS4ALL Action Plan**, adapted to the South Adriatic territories.

Article 1 – Purpose of the Commitment

The purpose of this Letter is to formalize the partners’ intent to:

1. Jointly pursue the implementation of the WRECKS4ALL Action Plan in their respective territories.
2. Cooperate in the preparation and submission of future project proposals that will secure funding for its implementation.
3. Strengthen institutional and stakeholder capacities for sustainable underwater cultural heritage (UCH) management.
4. Promote transnational cultural routes and innovative tourism products based on UCH and immersive digital technologies.
5. Engage local communities, authorities, and tourism operators in order to ensure long-term social, cultural, and economic benefits.

Article 2 – Areas of Cooperation

The partners shall, in particular, cooperate in:

- **Destination management** and sustainable dive tourism development.
- **Innovation and digitalization**, including the use of VR/AR technologies and digital platforms.
- **Stakeholder and community engagement**, with special focus on capacity-building.
- **Cross-border cooperation**, including the creation of unified tourism products and integrated promotional strategies.
- **Resource mobilization**, through identification and application to national and international funding schemes.

Wrecks4All 2.0

Article 3 – Principles

The cooperation shall be guided by the following principles:

- Respect for the **UNESCO 2001 Convention** on the Protection of the Underwater Cultural Heritage.
- Alignment with **European Union tourism and cultural heritage policies**.
- Transparency, accountability, and mutual benefit.
- Sustainability and innovation as cross-cutting objectives.

Article 4 – Duration

This Letter expresses the partners' long-term commitment beyond the lifetime of the WRECKS4ALL 2.0 project. It shall serve as a framework for continuous collaboration, without prejudice to additional bilateral or multilateral agreements that may be concluded in the future.

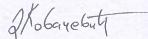
Article 5 – Final Provisions

This Letter does not create legally binding obligations. However, the undersigned institutions commit themselves to make every effort to operationalize the WRECKS4ALL Action Plan and to cooperate in future joint initiatives.

Signatories

Lead Partner
University of Montenegro

Signature: Darko Kovacevic, LP project coordinator



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