

# D 2.1.4 KICK OFF MEETING MINUTES

10-11 April 2019

April 10th 2019, starting time: 14.00

Mrs. Anna del Bianco, ERPAC General Director, greets the participants and thanks Mr. Urbinati from the Interreg Italy Croatia JS to be present and to support the project's implementation. She explains how UnderwaterMuse has in fact gone beyond the traditional activities of protecting and promoting cultural heritage answering to the EU Faro Convention that promotes a wider understanding of heritage and its relationship to communities and society. As a matter of fact, the Project conceives the cross border cultural and natural heritage of underwater archaeological sites as a key point for the enhancement and improvement of the cross border local touristic offer and flow. She also expresses all its trust and appreciation towards the partnership expertise. Before giving the floor to Mr. Urbinati she informs the participant that the day before the kick off she has received a note from the EEIG Marco Polo System with which she has been informed that the EEIG could not attend to the kick off due to a pending position of its associate members (Municipality of Venezia and KEDE) on the possibility of the EEIG to take part into the project itself.

Mr. Urbinati takes the floor and presents the main and relevant issues related to the project's implementation as well as to the financial and reporting activities (PPT1).

Mr. Urbinati says that at the moment there are no news about the subsidy contract's signature but hopefully it will be signed soon. The JS is still waiting for the Veneto Region Decree. He also informs the partners that in May a lead partner seminar will be organised and it is addressed to the project's staff: project manager, financial manager and communication manager. During this event the staff will be trained and then the staff itself will train the project's partners. To this regard he kindly ask to send as soon as possible the filled table with the data related to the project's staff. He informs the participant that the project's can be prolonged up to 36 months and he suggest to wait the second half of the project's implementation to proceed with any budget change. With reference to specific partners' request, Mr. Urbinati invites to send an email. Regarding the expenditure forecast, he is very well aware that the project's activities face the seasonability issue. Mr. Beltrame points out that it is very important to start working

underwater from this season, postponing would be a big issue for the projects activities and for the spending forecast. Mrs. Del Bianco clearly says that she is very concerned that without a signed subsidy contract we cannot start the activity and we cannot go to the competent authorities (e.g. Italian Soprintendenza) to ask for the excavation permission etc.

Mrs. Del Bianco says that she will try to contact Veneto Region to ask for some more information about this pending situation.

Mrs. Del Bianco invites the partners to present themselves and after that gives the floor to Mrs. Auriemma.

Mrs. Auriemma gives a precise and deep overview of the project's background, Work Packages, results and outcomes. She describes the background that strongly explains the best option of in situ preservation and enhancement: convention on the protection of underwater cultural heritage 2001, Faro convention and other references in Italian Legislations aimed at the full enjoyment and fruition of Underwater Cultural Heritage by the "Heritage Communities" in addition she underlines the sustainability of the underwater tourism today. She also shows to the participants' best practices taken from different projects and/or areas in the Adriatic and Mediterranean sea (PPT2).

The floor goes to Ms. Sanson that presents the WP1 activities (PPT3). Partners will be receiving together with the minutes: SC and TC rules, SC and TC table to be filled in with the staff names.

Partners agree to schedule the next meeting in October in Kastel Municipality (HR) a doodle survey will be done for identifying the most suitable date. Partners also agree that the internal virtual meetings will be done through skype conference call. To this regard a skype contact table will be drafted and a doodle will be organised each month for deciding the exact date.

Mr. Beltrame present the activities related to the WP3 - Status quo of underwater cultural heritage valorisation and stakeholders involvement. He also shows the participant best practices carried out by the University Cà Foscari with virtual and augmented reality in underwater cultural-archaeological heritages (PPT4).

Meeting ends at: 17.15

Il day – April 10<sup>th</sup> 2019 Meeting starts at: 9.30

Mrs. Sodini opens the meeting inviting the partner RERA to present the WP2 on communication activities.

Mr. Dumanic presents to the participant the activities related to the WP2 (PPT5). According to Mr. Urbinati information, the webpage is not ready yet and we do not have any precise information on the opening date. He will take care of the project's poster personalisation, he will share it with the partners and then each partner will print out and display in its office a copy of it.

Databases will be also drafted for: communication staff details, communication partners' channels, journalist-media list and target groups. All these info will be uploaded on google drive in order to be always updatable.

Partners share information on events outside the eligibility area: Zagreb (May2019) and Finland (June2020). A calendar of events will be drafted and one request will be sent to the JS for outside area events expenditures' eligibility.

Story tellings and underwater videos are also foresee by the projects. All the partners agree on the importance of good quality and videos' creativity. To this regard partners are open to search for best economic offers also in their territory together with RERA that will check in Croatia the average cost for recording such videos. Partners agree that the video has a maximum duration of 10 min and the teaser should be max 3 min.

The most relevant issue is the contract's signature for starting with subcontracting and expenditures, without it partners' are stuck.

Ms. Introna presents the WP4 (PPT6) Testing underwater heritage valorisation methods with stakeholder involvement. The WP4 aims to validate the innovative tools developed jointly by the partnership in WP3 and integrate them into action plans, which are finalised in WP5. Three types of action plans are tested: capacity building, underwater museum and training. Ms. Introna presents also some best practices carried out by Puglia Region in these fields.

Considering that the EEIG Marco Polo System is not present also today and that Ms. Auriemma gave a brief overview of the WP5, no presentation is held today.

Partners discuss on the next activities to be undertaken. Activities will start depending on the date of the subsidy contract. The first underwater activity season is very at risk. WP3 is the first Work Package that should immediately start. Cà Foscari University would like to stress its competences on augmented reality more than on GIS system. The Lead Partner could therefore be more focused on the GIS system, considering ERPAC experience on this issue having the SIRPAC GIS archive, that has more than 200.000 images available to the community. Some mistakes in the application form with numbering the PP are found out. Partners will read carefully again the AF to find if they are any other similar mistake. While Cà Foscari will start planning the training on action planning and joint WEB GIS development for the entire partnership and stakeholder; the Lead Partner will start drafting a shared methodology for the baseline study, demand surveys and result synthesis to make a comparable status quo assessment by the six partners involved. A cross-border thematic meeting is organised by the LP and is held in Split in conjunction with the first SG and TG meetings, therefore strong coordination will be established with RERA. RERA will meeting with Kastela municipality and Museum in order to better coordinate and implement the activities.

Meeting ends at 12:30

## KICK-OFF MEETING

**Trieste, 10-11 April 2019**

Chamber of Commerce - Trieste

Piazza della Borsa 14 - Trieste

### Wednesday 10th April afternoon session

14.00	Official opening of the UnderwaterMuse kick off meeting and welcome speech by Lead Partner	ERPAC <b>Anna Del Bianco</b>
14.15	Interreg VA Italy - Croatia Programme General Overview of the Programme	Joint Secretariat INTERREG VA Italy Croatia Emilio Urbinati
14.45	Presentation of the partners: who is who ?!	All PPs
15.00	Presentation of the project "UnderwaterMuse" <i>General overview on the project, main objectives, outputs, background</i>	ERPAC with the support of <b>Rita Auriemma</b>
16.00	WP1 Presentation: Management Guidelines, SC and TC members, Partners staff and Management Unit, scheduling of the internal communication and next project's meetings	ERPAC/Informest
16.30	WP3 Presentation	CA'FOSCARI
20.00	Networking dinner	

### Thursday, 11<sup>th</sup> Morning session

09.30	WP2 Presentation	RERA EEIG MARCO POLO SYSTEM
10.00	WP4 Presentation	PUGLIA REGION
10.30	Coffee Break	
10.45	WP5 Presentation	EEIG MARCO POLO SYSTEM
11.15	Next steps, questions and conclusions	Lead partner/Informest With the support of <b>Rita Auriemma</b>
12:30	Buffet Lunch	

# WP1 Project management and coordinations of activities

Kick off Meeting | Trieste, 10 April 2019

UnderwaterMuse | ERPAC - Informest | Vanessa Sanson

## WP1 will ensure a smooth project coordination and implementation





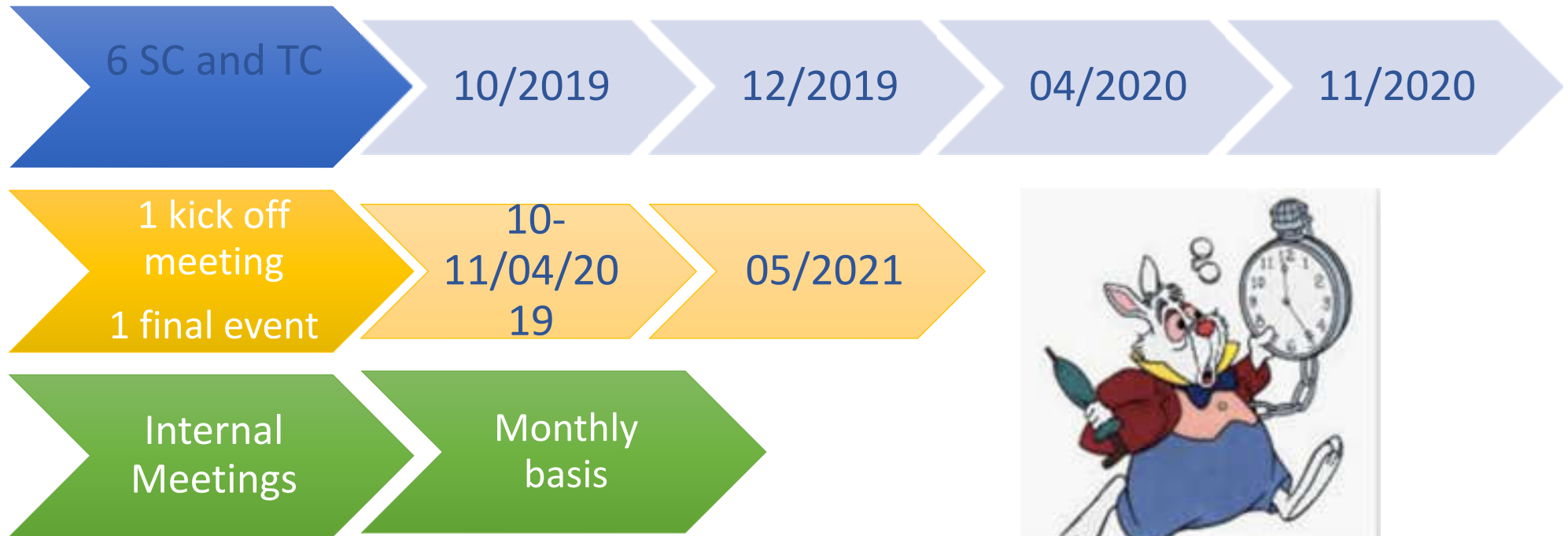
# Project team management for each partner

Project manager

Financial manager

Communication Manager

# Project team meetings' schedule



# Internal meetings

on monthly basis

How would you like to organise them?



Mid term review for assessing the project's activities

# Committees

## Steering Committee

In charge of implementing the project's contents

1 representative per Partner for SC

## Technical Committee

In charge of the technicalities of the project

1 representative per Partner for TC



# Progress reports

The first step in the reporting procedure is the information made available at partner level on the progress made in the delivery of activities and the relevant expenditure.

A specific report template called “**Partner Report**” is made available by the Programme. This is to be filled in by each PP individually. Each PP (including the LP) reports on the progress made in the relevant reporting period compared to what was planned in the AF.

The **eligibility of activities** and **costs** is confirmed by the FLC of each partner. The supporting documents needed by the FLC to perform its checks (such as original invoices, proofs of payments, deliverables, etc.) will have to be provided to the FLC separately and individually by each LP/PP. Specifically, the following supporting documents have to be uploaded in SIU and will be verified there by FLCs: Invoices or equivalent probative valued documents (including payslips); Proofs of payments; Awarding administrative document or equivalent related to subcontracting of suppliers; Contract of subcontracted suppliers.

# Progress reports

The following documents have to be issued by the FLC, provided to the PP in original (electronic and, if relevant, paper format) and then submitted by the PP to LP in digital (scanned documents):

- Certificate of Verified Expenditure (CoVE): the document certifying the compliance of the expenditure verified by the controller with the principles of eligibility, legality and relevance as listed above. The certificate of expenditure must be signed by the designated controller. A Programme model of CoVE is made available to all beneficiaries;
- Control checklist: the document in which the controller gives evidence of the verifications performed. Programme checklists are made available to FLCs;
- Control report: the document in which the controller describes the methodology used for the verifications. If applicable, the ineligible expenditure found during the verifications also needs to be described, including the reasons leading to this judgment.

# For any support please contact


INFORMEST


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# WP2 | COMMUNICATION

UnderwaterMuse | PI RERA | MARJAN DUMANIĆ

Kick Off Meeting | Trieste / Gorizia | 9 - 10 April 2019.



# WP2 COMMUNICATION | ACTIVITIES

## 2.1 Start-up activities

Communication strategy

## 2.2 Media relation and publications

press conferences, transnational toolkit, presentation in scientific magazines

## 2.3 Digital activities, social media campaign and video portrait

## 2.4 Public events – local dissemination, participation on thematic events, final event

## 2.5 Targeted events and promotional material – pilot result sharing events, local events, CBC events, leaflet

# 2.1 Start-up activities

## Setting up Communication team

- Each PP had **appointed** a communication manager, to keep alive the project Story telling
- The communication manager of the LP will be appointed and oversee communication with other Programme and EU projects.
- All partners will decide jointly on digital communication activities and outreach activities through online collaborative tools and at meetings of the SC and TC.

D.2.1.1 - Communication Strategy elaborated

D.2.1.2 - Project website integrated into ITA-CRO CBC Programme webplatform

D.2.1.3 - UnderwaterMuse project poster produced by all partners:

## 2.2 Media relation and publications

D.2.2.1 - Press conference linked to pilot sharing event (Grado, Kaštela): Press release for the dissemination of results linked to the WP4 pilot sharing events. Includes press release report. Representatives of local, regional, national and EU press are invited **(1 hour event, cca. 25 participants)**.

D.2.2.2 - Press conference linked to final event in Villa Manin (UD): Press release for the dissemination of project results, particularly the transnational ToolKit and photographic exhibition, linked to the final event in Villa Manin (UD). Includes response to media requests and press release report. **Representatives of local, regional, national and EU press are invited (1 hour event, cca. 30 participants)**.

D.2.2.3 - Simplified, user-friendly version of the transnational ToolKit: Simplified version of the ToolKit developed in WP3 to be color-printed on a joint in-design template in a transnational version **(100 copies each in Italian, Croatian and English)**.

D.2.2.4 – Media relations and scientific publication in international magazine: At least 2 publication describing the scientific relevance/results of the Pilot Actions and status quo analysis implemented are foreseen. This will appear in the form of publications in English in renowned specialist magazine, allowing scholars and experts in the field (archaeologists, underwater researchers, marine biologists, historians, curators) to learn about the project's findings.

## 2.3 Digital activities

D.2.3.1 - UnderwaterMuse Facebook, Twitter profiles

D.2.3.2 - Short video portrait of the project presented at final event: The video summarizes the process "from start to end"

## 2.4 Public events

D.2.4.1 - Local dissemination events documentation: Participation to local events linked to tourist fairs/festivals and travel exhibitions. Production of local promotional material, setting up of promotion stands, workshops, presentations targeting particularly youngsters and schools, seeking their involvement in the photographic exhibition. Each partner participates to at least one such local event

D.2.4.2 - Reports on participation to thematic events: Participation to events in the fields of cultural heritage, tourism, product marketability, networking and employment. Each partner participates to at least one such event within the Programme area and elsewhere in the EU with either a presentation or a stand.

D.2.4.3 - Final event documentation: A major final event is to be held in Villa Manin (UD) to disseminate the project's results, outputs and the transnational ToolKit to stakeholders and the general public. To maximise visibility, a photographic exhibition on the theme of "Underwater man-made landscapes" will accompany the event and will see awards given to youth and professional categories. Invitees include partnership, EU representatives, decision and policy makers, thematic experts (archaeologists, marine biologists, historians) and diving professionals (1 day event, cca. 100 participants).

## 2.5 Targeted events and promotional material

D.2.5.1 - Documentation on pilot result sharing events: An event linked to inauguration of underwater Grado and Kaštela museum exhibition will be organised to promote all partners' pilot results. Includes two 1-day events with 100 local participants plus entire partnership (130 people in tot) to be held on consecutive days at 2 participating sites.

D.2.5.2 - Documentation on local events linked to the demand survey: Local events are organised in each region to discuss the sustainable economic development of the areas with local communities that participated in the demand survey (WP3). Includes 1 1-day event per partner region, with cca. 25 participants.

D.2.5.3 - Reports on CBC Programme and other ETC events: Presentation and contribution at external events involving the community of Interreg V CBC projects, H2020 or other ERDF-supported projects. Participation of each partner to at least one such event is foreseen either in the form of a presentation, demo or stand. Production of at least one short portrait of the project (flyer and video) presenting best practices related to underwater heritage management, to be used as promotional material in conjunction with other EU-financed projects on sustainable tourism.

D.2.5.4 - Leaflet summarising UnderwaterMuse's pilot results: Leaflet presents project's Results/outputs in brief and offers links to web-based resources (colour-printed, local version in Italian / Croatian 250 copies, transnational version in English 250 copies).

# Target groups envisaged in the AF

Target group	General public
Target value	3000
Description	Local communities, children, visitors, particularly “green” and “experience-based” tourists, divers, boaters, kayakers, sport fishermen, tourist guides and activity guides as targets of knowledge impact.

Target group	Local, regional and national public authorities
Target value	45
Description	Municipalities, provinces and networks of municipalities, especially their tourism and natural/cultural heritage, development or planning departments as targets of knowledge and political impact. Regional councils, especially their environment, tourism and natural/cultural heritage, development or planning, and economic development departments as targets of political impact. Ministries for culture, environment, tourism, and national park authorities as targets of knowledge and political impact.

# Target groups envisaged in the AF

Target group	Public service providers
Target value	6
Description	Public service provides usually working in-house at the municipalities or regional assets providing natural / heritage services of public interest. Requiring a high level of competences this target group is crucial for the tourist well being.

Target group	Cultural and natural heritage management bodies
Target value	100
Description	Archaeological parks at partner level or from further away in the PP regions and even in the wider EUSAIR/Mediterranean area. These can be run by local, regional or national authorities. UnderwaterMuse is geared particularly towards managers with the desire to improve their skills at managing/promoting underwater cultural heritage in the context of wider activities, cross-border networks/routes and a sustainable experience-based tourist offer.



# Target groups envisaged in the AF

<b>Target group</b>	<b>Regional and local development agencies, enterprises (in particular SMEs within the cultural and creative industry as well as the environmental and tourism sector)</b>
Target value	40
Description	Start-up incubators, regional development agencies, environmental agencies, cultural heritage agencies as targets of knowledge impact and clusters of creative industries/ICT developers at a local level. At least one per PP. Business support organisations can help promote the project focus, relying on their members to expand the communication objectives.

<b>Target group</b>	<b>Associations, regional innovation agencies</b>
Target value	8
Description	ICT developers with specific competences in AR. The variety of knowledge sources used on regional as well as international levels are identified as key factors for innovation in the ICT-sector that UnderwaterMuse targets.

# Target groups envisaged in the AF


Target group	NGOs
Target value	15
Description	Tourist & cultural associations and other organisations in the field of tourism and culture. Research centres (NGO) involved in implementation of customised solutions adopting the common models and tools. NGOs promoting tourism development.

Target group	Education and training organisations as well as universities and research institutes
Target value	15
Description	Educational centers devoted to natural/heritage promotion. Scholars, teachers and students of the humanities and archaeology.


# CONTACT

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# The invisible heritage: why UnderwaterMuse now?

UNDERWATERMUSE | Rita Auriemma

Kick off Meeting | Trieste | 10-11 April 2019

# UNDERWATERMUSE

## The invisible heritage: why UnderwaterMuse now?

*Through interpretation, understanding;  
through understanding, appreciation;  
through appreciation, protection*

Freeman Tilden  
Interpreting our Heritage

# UNDERWATERMUSE

*Underwater archaeology, waterscapes archaeology.  
In situ preservation and enhancement: the first option*

the key steps

## 1. Convention on the Protection of Underwater Cultural Heritage 2001

## 2. Faro Convention

the key goals

- ✓ Building an archaeology community, building awareness
- ✓ Cultural heritage as common good and economic resource
- ✓ Archaeology for the territory, archeology for the environment
- ✓ Research, conservation, protection, management and valorization as links of the same chain

## A forward-looking premise:

# Unesco's Convention on the Protection of the Underwater Cultural Heritage 2001

**Rule 1.** In situ preservation as first option

**Rule 7.** Public access to in situ underwater cultural heritage shall be promoted, except where such access is incompatible with protection and management.

### Public access . Economy, tourism and leisure diving

Access, is not only an important aim in itself; it also contributes to awareness and to joint support for protective approaches.

Experiencing the past under water is rapidly becoming a big asset in the leisure industry and the 'experience economy' > risks and opportunities for protection

(UCH Manual; Recommendation 3/STAB 5)

### Involving diving operators

with a measure of responsibility and custodianship is an attractive option to solve the issue of supervision and control.

(UCH Manual)

Marzamemi wreck I  
or «delle colonne»

ph. Soprintendenza del Mare





## Building awareness

Education, information and public awareness building are important aspects.

### Active management: the actors

- the official agencies in charge of protecting the national cultural heritage (on land and under water);
- the official agencies in charge of protecting the environment and natural resources;
- the official agencies responsible for safe navigation;
- universities and research institutions;
- groups and stakeholders that identify with underwater cultural heritage;
- groups and stakeholders that are likely to profit from the proper management of the underwater cultural heritage;
- groups and stakeholders that are likely to affect underwater cultural heritage and its management through their regular activities: **diving centers, sailing centers, beach kiosk operators.**



## UNESCO Code of Ethics for Diving on Submerged Archaeological Sites

- Protect underwater cultural heritage for future generations.
- Leave wrecks and submerged ruins untouched.
- Obey legal protection of archaeological sites.
- Seek permission to dive on designated sites.
- Only archaeologists may remove objects.
- Do not take souvenirs.
- Respect measures that protect sites.
- Report discoveries to the responsible authorities.
- Hand over objects that you took.
- Do not sell our common heritage.
- Document discovered sites.
- Be careful when taking photographs.
- Stay safe.
- Be a role model.
- Support ratification and compliance with the UNESCO 2001 Convention



Convenzione quadro  
del Consiglio d'Europa  
sul valore  
dell'eredità culturale  
per la società



## The new stage that strengthens the process: the Faro Convention

Council of Europe Framework Convention on the Value of Cultural Heritage for Society \* Faro, 27.X.2005

### Preamble:

Convinced of the need to involve everyone in society in the ongoing process of defining and managing cultural heritage

### Article 1 –Aims of the Convention

Goals of the conservation of cultural heritage and its sustainable use:

human development and quality of life  
construction of a peaceful and democratic society  
sustainable development  
promotion of cultural diversity  
greater synergy of competencies among all the public,  
institutional and private actors concerned.

### Article 10 –Cultural heritage and economic activity

raise awareness and utilise the economic potential  
of the cultural heritage  
ensure that economic policies respect the integrity of  
the cultural heritage without compromising its inherent  
values



# Archaeology and environment, “waterscapes” archaeology the best practice of the in situ preservation and enhancement



natural target of the global landscapes archaeology, in our case “waterscapes”, “an integrated way of understanding humans in dynamic landscapes”



The submerged archaeological site or park is a perfect mix between nature and culture.



“eco-museum” or “widespread museum”



the landscape becomes museum, as system in which goods and objects are in connection and, because of this, understandable; a widespread museum, where the cultural heritage is preserved in the environment of which it is an integral part.

# Archaeology and environment

## In situ preservation and enhancement: legislations and regulations

- **Codice Urbani/framework Law on the Cultural Heritage:** the archaeological park is a territory characterized by important archaeological evidences and by the joined presence of historical, landscape and environmental values, equipped as an open-air museum;
- **framework law 394/1991 on the protected areas** aims at safeguarding together anthropological, archaeological, historical, architectural values;

- **Faro Convention:**

Art. 2 - definition of cultural heritage: a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. **It includes all aspects of the environment resulting from the interaction between people and places through time;**

Art. 8 – Environment, heritage and quality of life

promote an integrated approach to policies concerning cultural, biological, geological and landscape diversity to achieve a balance between these elements;

reinforce social cohesion by fostering a sense of shared responsibility towards the places in which people live;

promote the objective of quality in contemporary additions to the environment without endangering its cultural values.

# Archaeology and environment .

## In situ preservation and enhancement: underwater tourism

### The underwater tourism

- combines in a single activity leisure, sport, culture and ecology
- is highly sustainable, low or zero environmental impact
- is a “programmed alternative tourism”, at high regulation and low intensity of flows
- needs a local touristic system integrated, effective, diversified
- needs areas provided of a status of juridic protection of environmental type (MPA) and/or archaeological type (Parks) > “culture of the territory”,
- needs investment in protection policies and in making the territory more attractive with specific environmental brands (MPA),
- is very profitable

### On the other side, the underwater archaeological tourism

- implies elevated costs for the users
- limits the fruition > “gentrification”.

*Is it a tourism for all?  
Is the UCH really an heritage for all?*

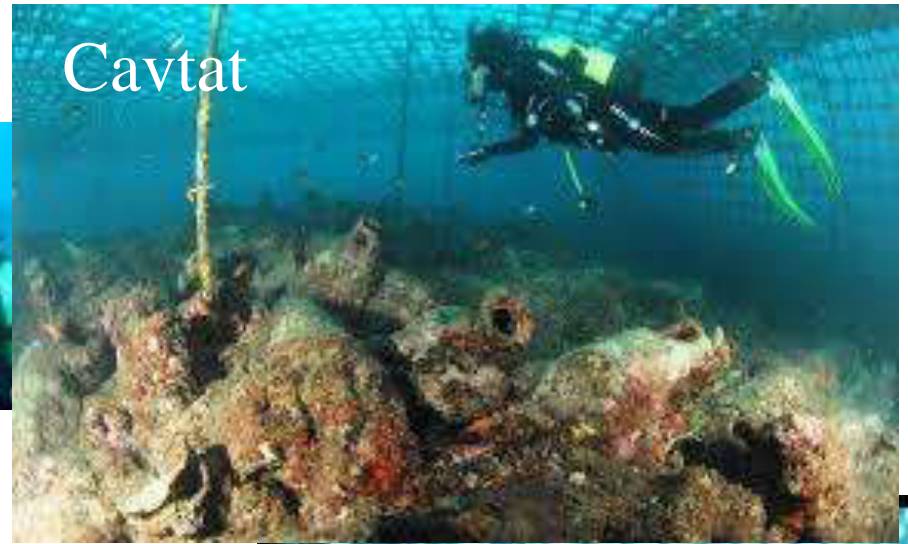
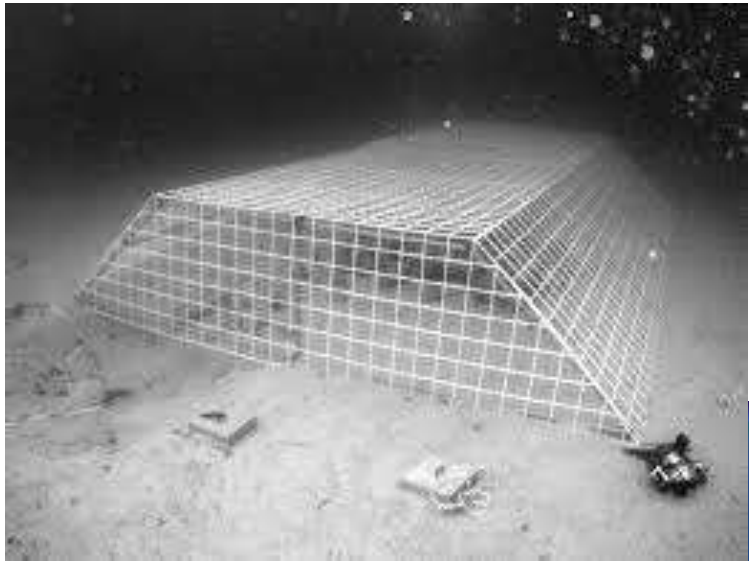


# The Croatian experience.

## Map of sites with protective cages



# The Croatian experience.







**SITES THAT CAN'T BE VISITED WITHOUT EXPERT SUPERVISION:**

1. SHIPWRECK "CORIOLANUS"
2. SHIPWRECK "BARON GAUTSCH"
3. SHIPWRECK "SZENT ISTVAN"
4. PROTECTION ZONE ISLAND JABUKA
5. PROTECTION ZONE ISLAND LASTOVO
6. PROTECTION ZONE ISLAND VIS
7. PROTECTION ZONE ISLAND PALAGRUŽA
8. PROTECTION ZONE ISLAND MLJET
9. SHIPWRECK "S57"
10. SITE CAVTAT
11. SITE ŽIRJE

**ARCHAEOLOGICAL UNDERWATER SITES**

## ROMAN ROUTE THROUGH THE ADRIATIC



## SITE ISLAND RAB

ARCHAEOLOGICAL UNDERWATER SITES



## ROMAN ROUTE THROUGH THE ADRIATIC



## SITE ISLAND PAG

ARCHAEOLOGICAL UNDERWATER SITES

## EAST MEDITERRAN ROUTE TROUGH THE ADRIATIC



### SITE CAVTAT

ARCHAEOLOGICAL UNDERWATER SITES



# Koromasna, Žirje island



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SHIPWRECK "BARON GAUTSCH"

PROTECTION ZONE  
ISLAND VIS

SHIPWRECK "CORIOLANUS"

SITE CAVTAT



7 000

6 000

3 000

3 000

VISITORS

ARCHAEOLOGICAL UNDERWATER SITES-VISITORS

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Around the Mediterranean.  
Caesarea: underwater archaeological park





Around the Mediterranean.

## The first Greece underwater museum: the Alonissos wreck





## *The Italian experiences*

Some marine parks and underwater trails, such the positive experiences of Baia and the Sicilian trails, contrast with the tens of coastal, intertidal and submerged sites literally abandoned, encircled by abusive urban speculations and wild moorings, whose access is totally uncontrolled with all the risks and possible damage that this situation brings with it.

In **Pozzuoli and Baia, in the Gulf of Naples**, villas, mosaics, baths, streets, houses and harbour structures of the Roman period were submerged by the sea, as a result of the volcanism. This unique environment, severely looted over the years, has been included in a Marine Protected Area since 2001.

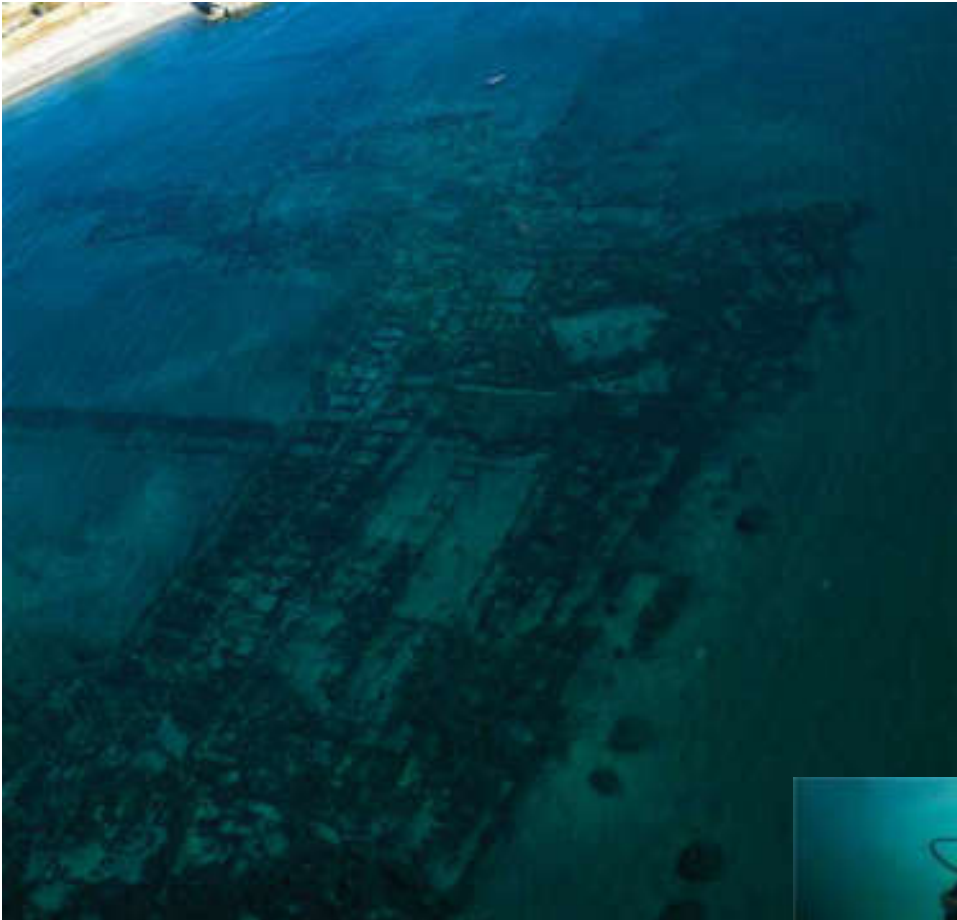
Since then, the Soprintendenza Archeologica has carried out some research and documentation works, while the Istituto Superiore per la Conservazione ed il Restauro has experimented with **new techniques for the conservation** of the underwater structures.

The public access has been made possible with the opening of underwater archaeological trails, and through the involvement of the diving instructors active in the area, appropriately trained.



Ancient and current view of Phlegraen Fields

# Phlegraean Fields: Baia MPA - underwater park





# Phlegraean Fields: Baia MPA - underwater park



## Decreto Interministeriale 7 agosto 2002 n. 304

Istituzione del Parco sommerso ubicato nelle acque di "Baia", nel golfo di Pozzuoli

### Articolo 3

1. Nell'ambito delle finalità di cui all'articolo 114, comma 10 della legge 23 dicembre 2000, n. 388 il Parco sommerso di Baia, in particolare, persegue:

la **tutela ambientale e archeologica** dell'area interessata;

la **valorizzazione, anche per finalità sociali e occupazionali, delle risorse ambientali, storiche, archeologiche e culturali della zona;**

la **diffusione e la divulgazione della conoscenza dell'ecologia e della biologia degli ambienti marini e costieri e del patrimonio archeologico sommerso dell'area;**

l'effettuazione di **programmi di carattere educativo** per il miglioramento della cultura generale nel campo dell'ecologia, della biologia marina e dell'archeologia;

la realizzazione di **programmi di studio e ricerca scientifica** nei settori dell'ecologia, della biologia marina, della tutela ambientale e dell'archeologia al fine di assicurare la conoscenza sistematica dell'area;

la promozione di uno sviluppo socio-economico compatibile con le rilevanze storico naturalisticopaesaggistiche dell'area, anche privilegiando attività tradizionali locali già presenti.

Nell'ambito dell'azione di promozione di uno sviluppo compatibile con le predette finalità, la disciplina delle attività relative alla canalizzazione dei flussi turistici, alle visite guidate e ai mezzi di trasporto collettivi, potrà prevedere che **le predette attività vengano svolte prioritariamente dai cittadini residenti e da imprese avente sede nei Comuni ricadenti nell'area.**



# Phlegraean Fields: Gaiola MPA - underwater park

**Collina di Posillipo**

Parco Semmerso di Gaiola

— Limite Zona "A"  
— Limite Zona "B"

© Centro Studi Interdisciplinari Gaiola

- 1. Palazzo Donn'Anna
- 2. Villa Pierce
- 3. Villa Volpicelli
- 4. Marechiaro
- 5. Casa degli Spiriti

- 6. Isolotti della Gaiola
- 7. Mura romane sommerse (Gaiola)
- 8. *Parazoanthus axinellae* (Secca Cavallara)
- 9. Grotte di Trentaremi

- 10. Baia di Trentaremi
- 11. Grotta di Seiano
- 12. Pausilypon: teatro romano
- 13. *Larus cachinnans michahellis* (Nisida)

































# Phlegraean Fields: Gaiola MPA - underwater park


















Sui fondali del Parco è possibile osservare i resti di approdi, camminamenti, ninfei e peschiere attualmente sommersi a causa del bradisismo, in gran parte afferenti alla Villa Imperiale di Pausilypon, affiancata dai resti dell'imponente Teatro, appartenuti al liberto romano Publio Vedio Pollione (I secolo a.C.); dopo la sua morte questo lussuoso complesso entrò a far parte dei possedimenti imperiali.





# Sicily underwater trails

	Ustica - Punta Falconiera	
	Ustica Punta Giovanni	
	Aspra - Mongerbino	
	Cefalù - Kalura	
	Filicudi - Capo Graziano	
	Panarea - Basiluzzo	
	Taormina - Relitto delle colonne	
	Acitrezza - Isole dei Ciclogi	
	Noto - Relitto delle anfore	
	Martanesei - Relitto delle colonne	
	Capo Passero - Relitto dei Marmi	
	Pantelleria - Cala Gadir	
	Pantelleria - Cala Tramoniana	
	Pantelleria - Punta Li Marti	
	Pantelleria - Punta Tracino	

	Pantelleria - Punta Tre Pietre	
	Marsala - Capo Boeo	
	Marettimo - Relitto dei Cannoni	
	Levanzo - Cala Minnola	
	San Vito Lo Capo - Relitto delle Anfore	
	San Vito Lo Capo - Relitto delle Macine	
	San Vito Lo Capo - Relitto del Kent	
	Scopello - Faraglioni	
	<b>ELENCO DIVING AUTORIZZATI</b>	





# Sicily underwater trails

Cala Gadir,  
Pantelleria



Ustica





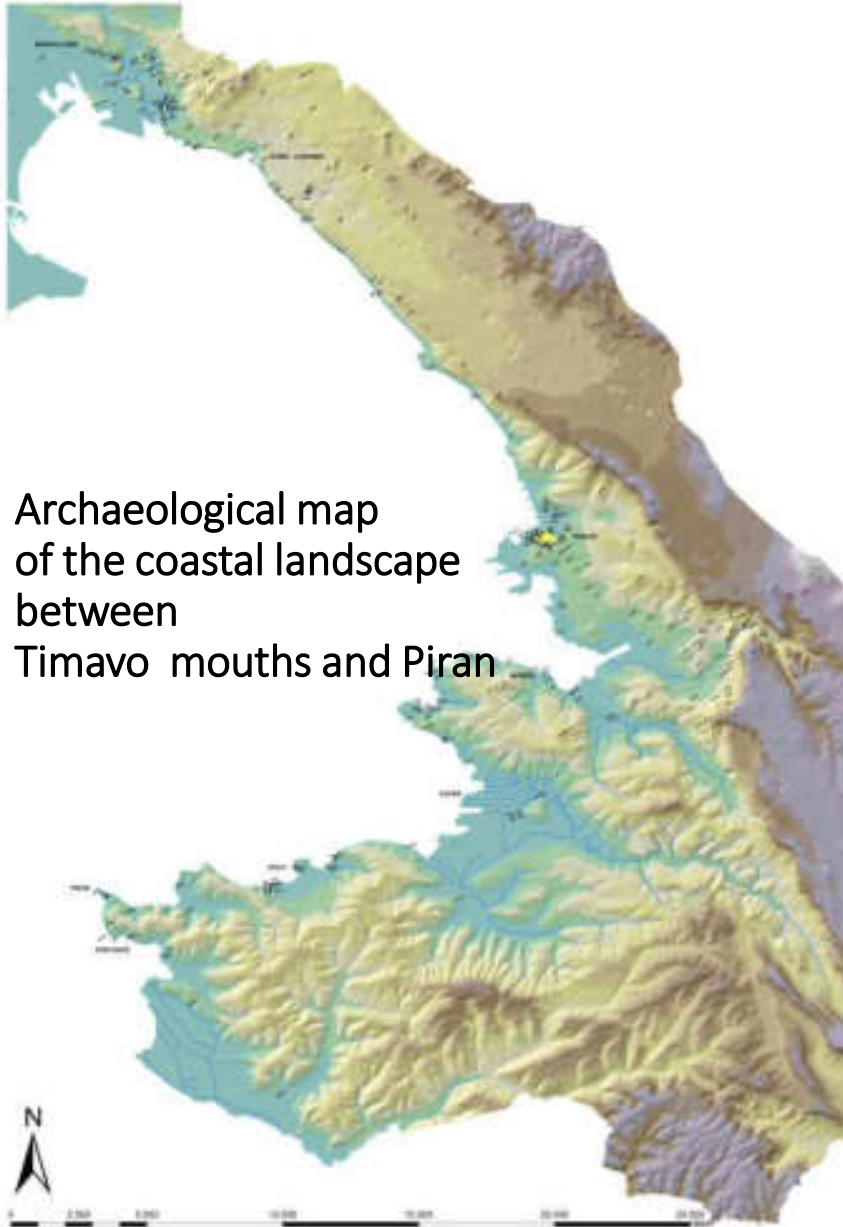


*Case studies and projects in the Adriatic and Ionian sea*

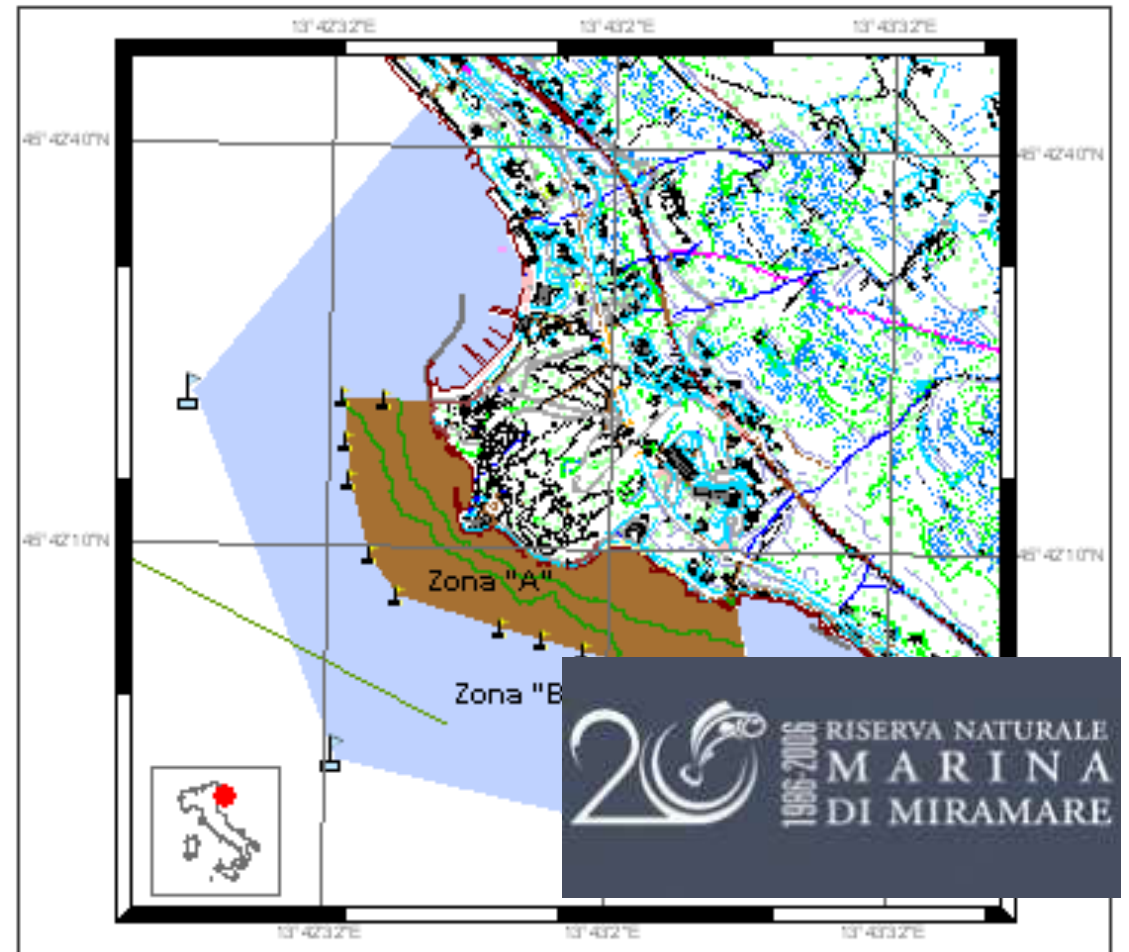


# The Alto Adriatico case study.

Previous researches in MPA/CPA:  
Project Interreg IIIa Italia – Slovenia  
Altoadriatico



Archaeological map  
of the coastal landscape  
between  
Timavo mouths and Piran

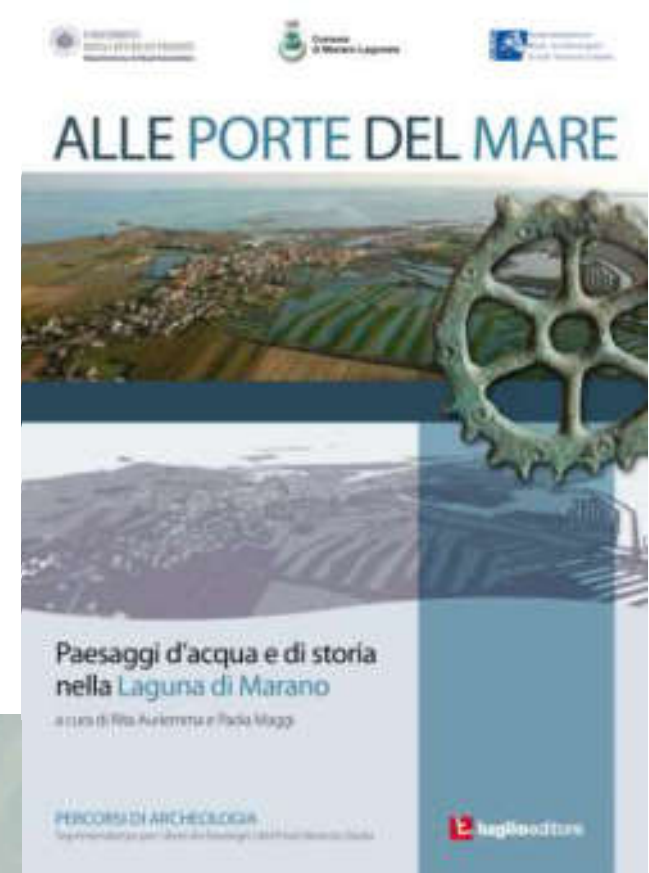






Regional Project  
*Alle porte del  
mare*

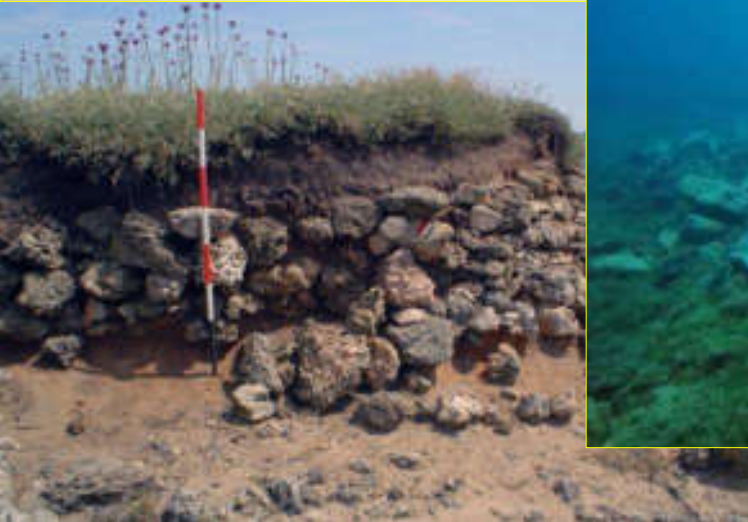
*Marano Lagoon*





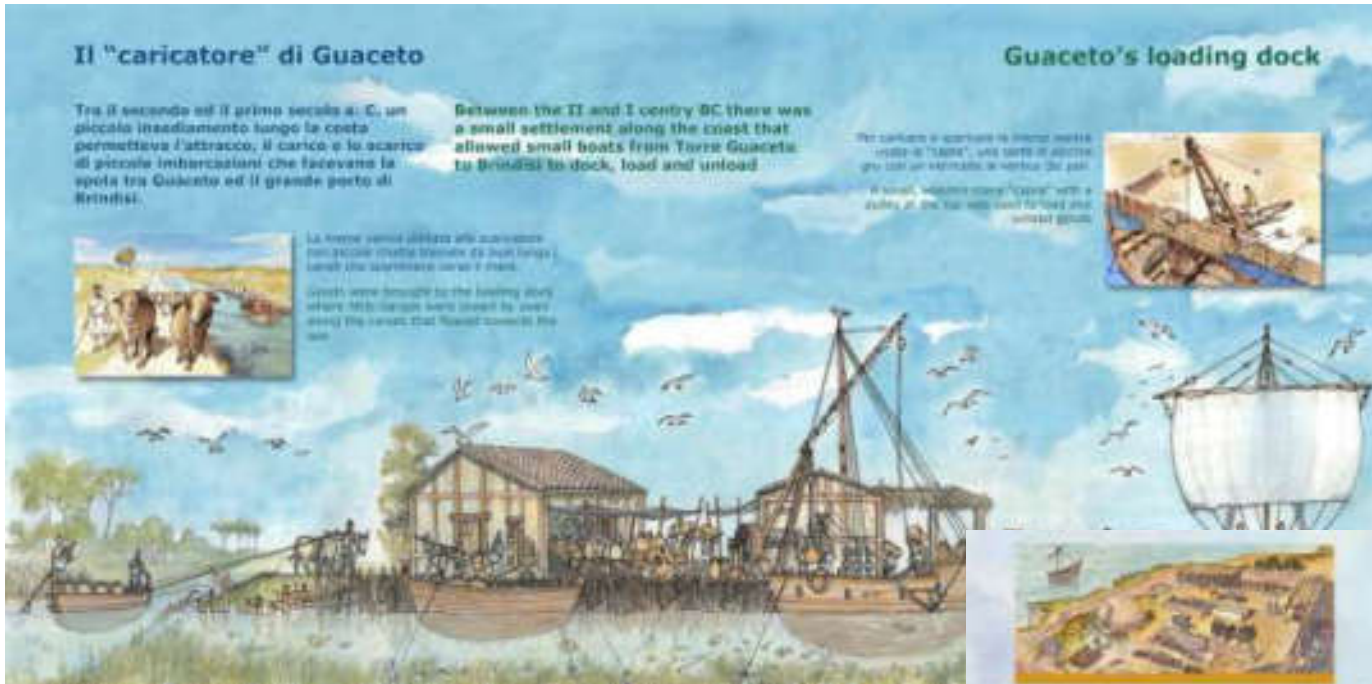
# The Salento case study.

## Previous researches in MPA/CPA : Torre Guaceto





# In situ preservation and enhancement project: Torre Guaceto permanent exhibition inside the Tower and VR





# In situ preservation and enhancement project: Torre Guaceto

archaeological and naturalistic trails with reproductions of archaeological artefacts (amphoras, anchors, other cargo remains, etc.).

**PERCORSI BLU NELLA RISERVA NATURALE DI TORRE GUACETO**

6. Piccoli nuclei dispersi di riproduzioni di anfore e di altra ceramica di varia cronologia

5. Piccoli nuclei dispersi di riproduzioni di anfore e di altra ceramica di varia cronologia

4. Piccoli nuclei dispersi di riproduzioni di anfore e di altra ceramica di varia cronologia

3. Ceppo e cantoniera di ancora lignea

2. Relitto con carico nordafricano, comprendente quindi varie riproduzioni di anfore tardoantiche di produzione tunisina, integre e frammentate

1. Relitto Torre Guaceto I con un centinaio di anfore, varie riproduzioni di anfore tardoantiche integre e frammentate e di macine rotatorie manuali

Centro visite Torre Guaceto

Partenza per il percorso blu.





Porto Cesareo MPA:  
proposal  
of in situ preservation  
and enhancement .  
The Project  
MareMuseoSalento  
Salento University –  
Regione Puglia



3D model – reconstructive hypothesis

Porto Cesareo marble columns cargo  
2nd – 3rd cent. AD



# In situ preservation and enhancement: the project MareMuseoSalento

Salento University – Regione Puglia





# The educational Maritime Museum of Nardò





The Museum-Aquarium  
of S. Maria al Bagno  
(Nardò)





www.visitaugento.it  
www.parcollitoralediugento.it



Situata all'estrema punta del Sarcotto, il litorale di Ugento rappresenta una delle zone più suggestive da un punto di vista naturalistico, paesaggistico e storico-archeologico.

Fiorisce all'orizzonte dell'intera area è sicuramente il Parco Naturale Regionale, istituito nel 2007, che, con i suoi circa 1500 ettari di estensione contribuisce a preservare la straordinaria biodiversità presente.

La fascia costiera ugentina presenta numerose evidenze archeologiche che coprono un arco cronologico molto ampio dall'età del Bronzo fino ai nostri giorni.

Ciò che caratterizza però il mare di Ugento sia dal punto di vista naturalistico che storico-archeologico sono le "areche", cioè i basalti frastagliati che si estendono per molte miglia dalla costa.

Ancilluso a scoprire nel cuore più profondo dei misteriosi spazi sommersi le preziosità nascoste in questo mare.

	Lingua	Audio	
43	Italiano Inglese Tedesco	 Newton	 PAL

Responsabili scientifici

Carlo Del Vecchio (Università del Salento)  
Maurizio Gagliardi  
Piero Gagliardi  
Tiziana Scattolon - Università del Salento  
Maurizio Scattolon - Università del Salento

Testi

video e r.l.  
operativa Ugento  
ed  
Goffredo (italiano)  
Irene Zuberova (inglese)  
Stefano Russo (tedesco)  
Claudio Gargali (tedesco)

Regia video

Devia Puggiar

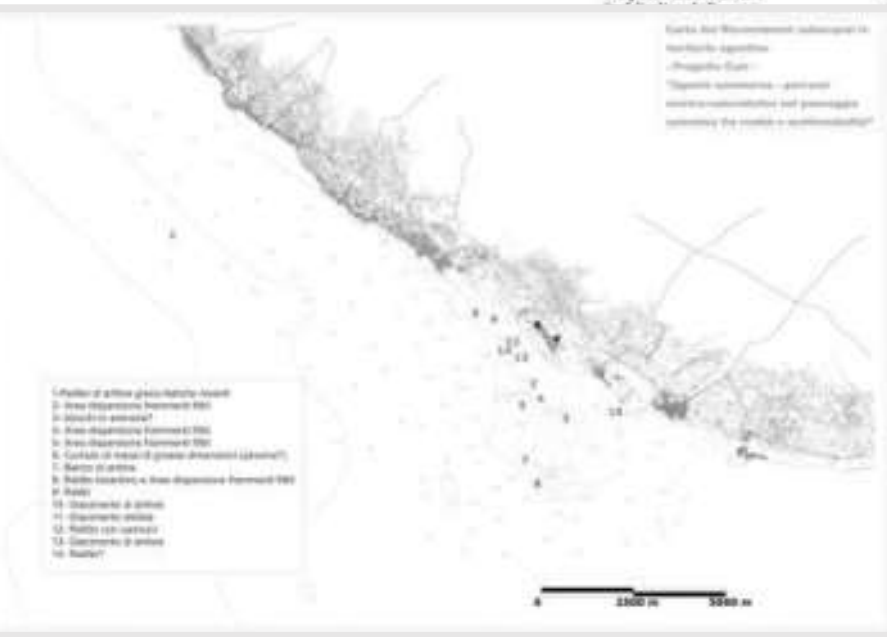
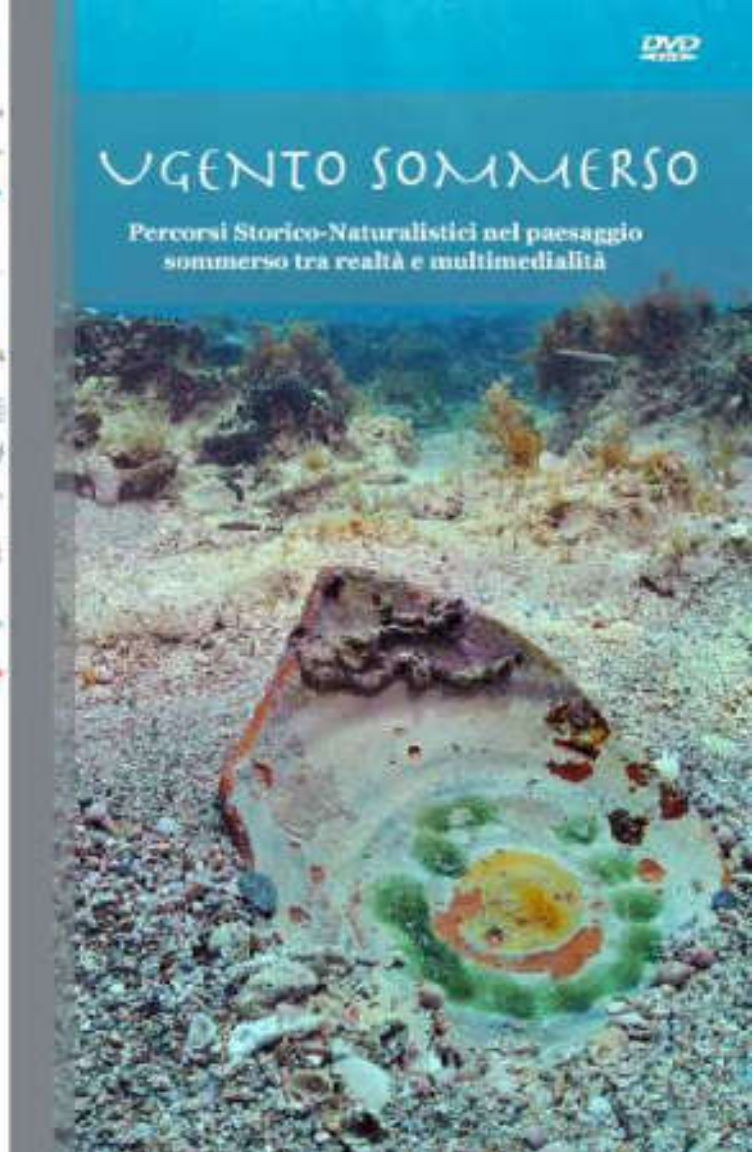
Produzione operativa  
Gemma IV

Supporto logistico  
Costa del Sud - Diving service

Finanziato con fondi CUB

coordinato e il Parco Nazionale del Gargano per il supporto tecnico.

Ugento sommerso - Percorsi Storico-Naturalistici nel paesaggio sommerso tra realtà e multimedialità



- 1. Capello di grotta preistorica-avanti
- 2. Area dipartimentale Sommerso 1981
- 3. Area di grotta preistorica
- 4. Area dipartimentale Sommerso 1981
- 5. Area dipartimentale Sommerso 1981
- 6. Cimitero di epoca romana (Sarcofagi)
- 7. Sarcofagi di epoca romana
- 8. Sarcofagi di epoca romana (Sarcofagi)
- 9. Sarcofagi di epoca romana
- 10. Sarcofagi di epoca romana
- 11. Sarcofagi di epoca romana
- 12. Sarcofagi di epoca romana
- 13. Sarcofagi di epoca romana
- 14. Sarcofagi di epoca romana

Ugento sommerso project  
naturalistic and archaeological trails  
multilingual video  
other information and communication materials



In situ preservation and enhancement:  
the project MareMuseoSalento  
Salento University – Regione Puglia





*In situ preservation and enhancement: the project MareMuseoSalento*

*Salento University – Regione Puglia*

Gallipoli harbour: Roman cargo remains



Mortaria and basins cargo

1 st. cent. AD

proposal of underwater trail

In situ preservation and enhancement: the project MareMuseoSalento  
Salento University – Regione Puglia

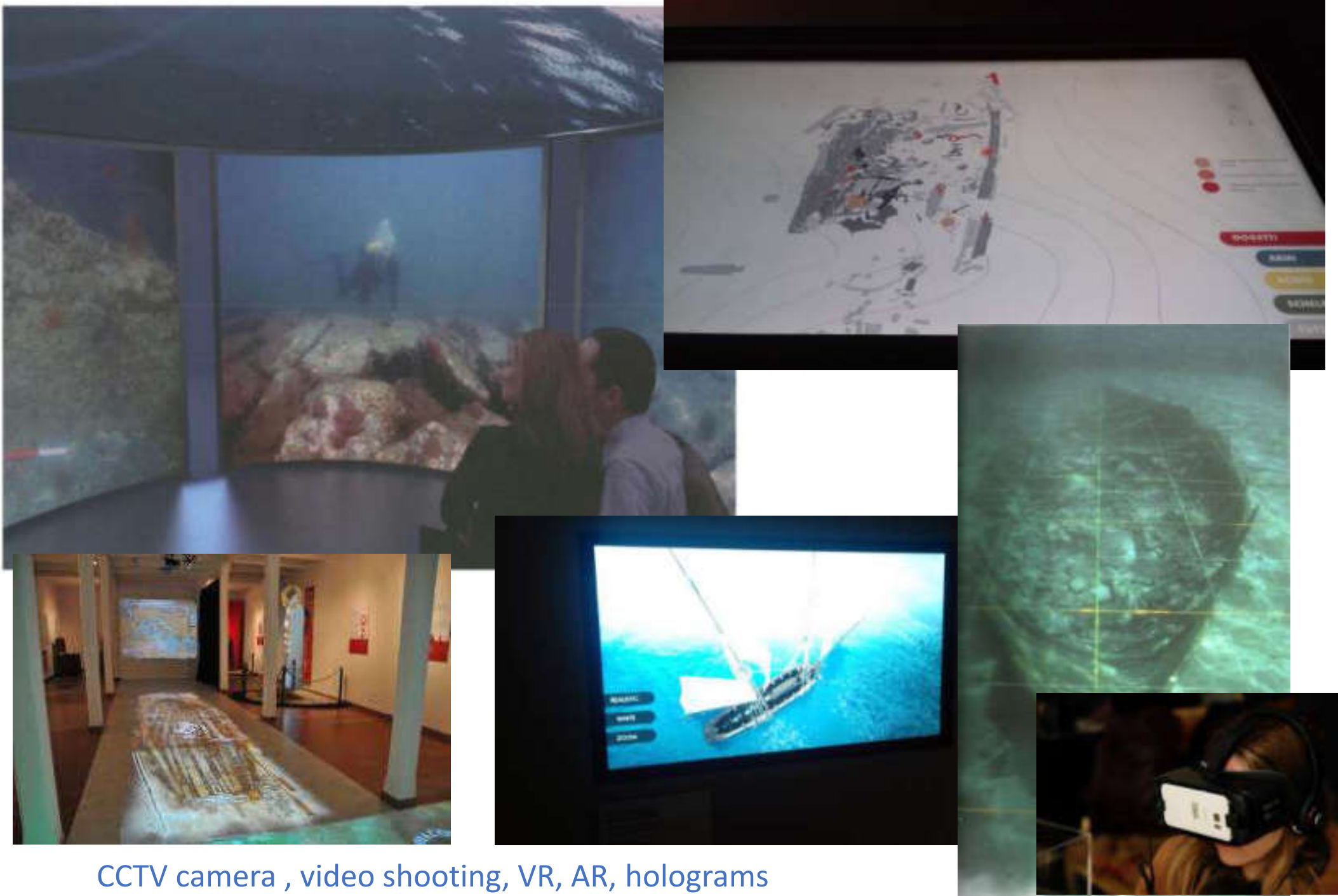


**Torre Sinfonò wreck** (ph CC Sub Bari)  
proposal of in situ preservation with metallic cage



And for non-divers?

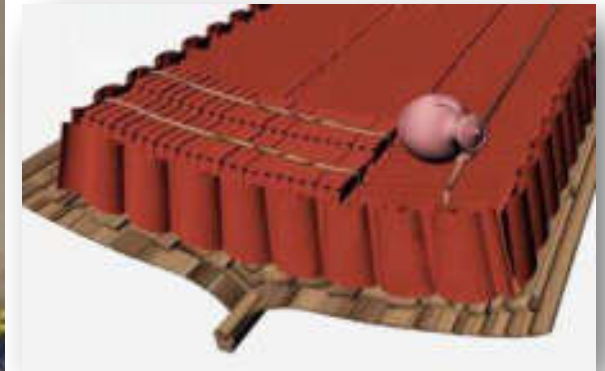
Not only in situ enhancement: the ICT for an alternative fruition



CCTV camera , video shooting, VR, AR, holograms



Not only in situ enhancement:  
Museums' setup, installations,  
exhibitions.  
Roman ships replicas





# The dissemination and storytelling through cooperation: international exhibitions

*...The Atlantic and the Pacific are the seas of distance, the Mediterranean the sea of propinquity, the Adriatic the sea of intimacy...*



# UNDERWATERMUSE

<b>WP 1</b>	<b>PROJECT MANAGEMENT AND COORDINATION OF ACTIVITIES</b>
<b>A.1.1</b>	Start-up activities
<b>A.1.2</b>	Day-to-day project management, coordination and internal communication
<b>A.1.3</b>	Steering and monitoring of the project implementation
<b>A.1.4</b>	Financial management

Space for Logos

# UNDERWATERMUSE

WP 2	COMMUNICATION
A.2.1	Start-up activities
A.2.2	Media relation and publications
A.2.3	Digital activities
A.2.4	Public events
A.2.5	Targeted events and promotional material

Space for Logos



# UNDERWATERMUSE

## WP 3:

### ➤ 2 main activities

#### 1. Status quo of underwater cultural heritage valorisation

- Development of methodologies for analysing problems of underwater heritage valorisation
- Preparing status quo analyses
- Summary comparative study (1 for each region) based on the overall status quo analyses incl. the baseline studies and demand surveys

#### 2. Stakeholders involvement

- involvement of local actors: diving guides, aspiring diving guides, tourist associations, museum curators, beach establishments owners, sailing clubs, local government representatives, MPA or CPA representatives.
- adaptation of underwater cultural heritage tools for the whole partnership and stakeholders.
- Training focuses on the use of AR tools to recreate the experience of visiting underwater archaeological sites for people who are unable to access the site on their own (children, people with physical disabilities or those who cannot afford diving equipment / tours).
- Training on action planning and joint WEB GIS development for the entire partnership and stakeholders

# UNDERWATERMUSE

## WP 3:

- **1 main output:** training on action planning and joint WEB GIS development for the entire partnership and stakeholders
- Development of a preliminary regional WEB GIS Underwater sites MAP
- Primary selection of sites identified by partners jointly with their RSGs based on joint methodology to be further developed on trans-national level to respond to regional gaps;
- study of interoperability with **SIRPAC FVG** and **SIRPAC PUGLIA** (involvement of INSIEL and INNOVA Puglia).



# UNDERWATERMUSE

## *The Apulia Region Cultural Heritage Map*

### *The Geographic Information System of the Cultural Heritage – SIRPAC Puglia*

Regional Landscape Planning (PPTR) instrument; it has evolved since 2007 until now, reaching the third final phase

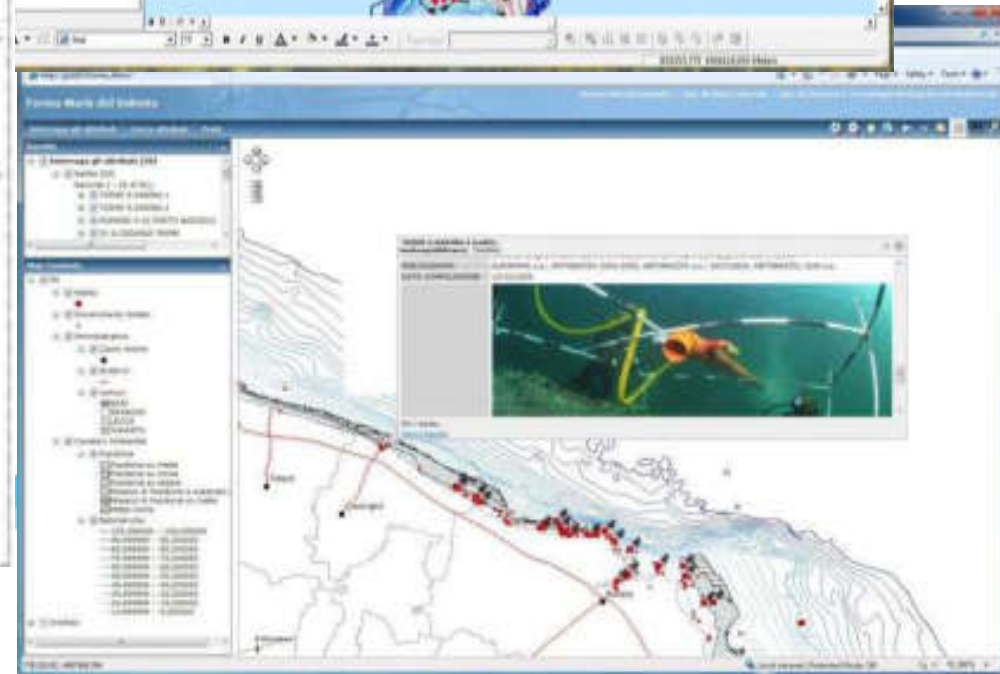
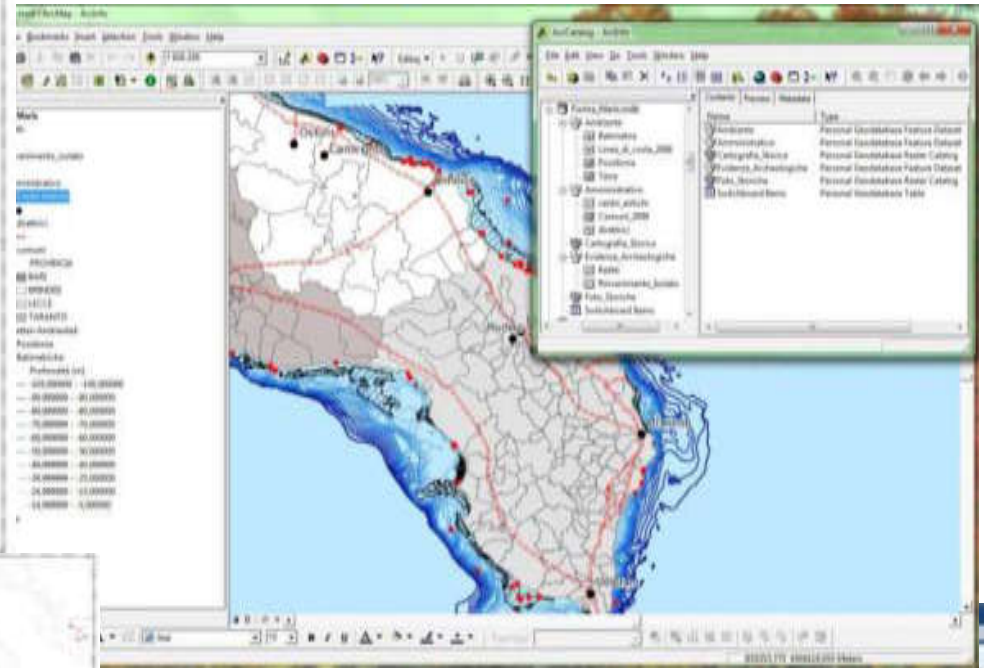
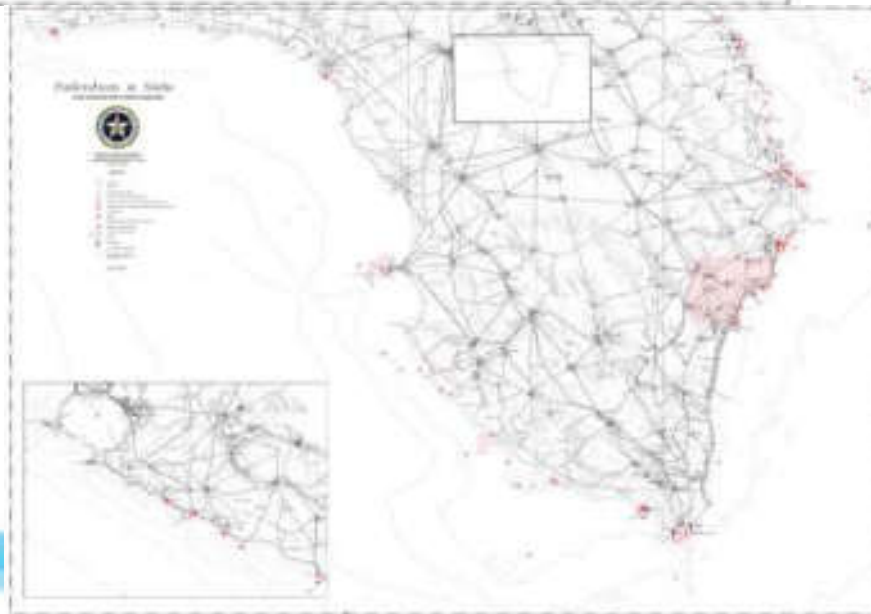
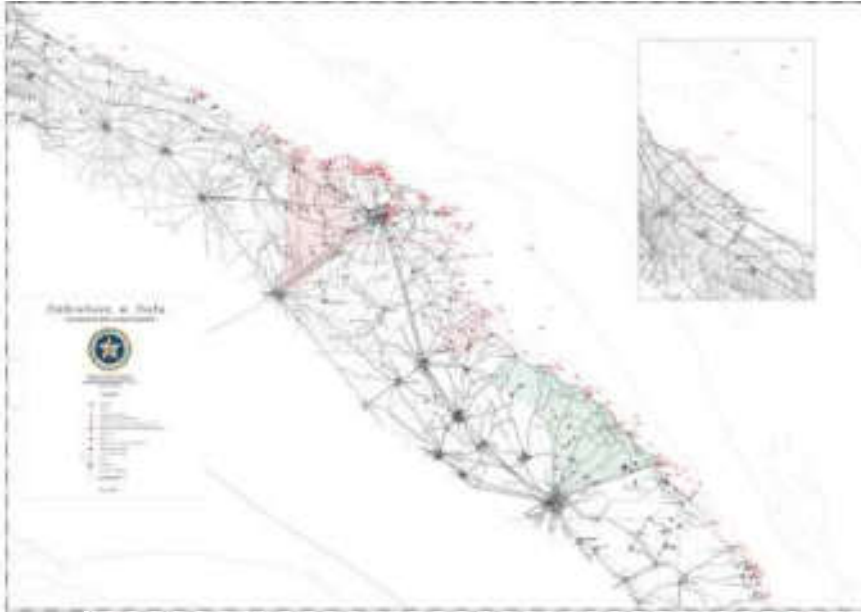
Integrated information System that aims at representing and re-tracing through an interpretative attempt based on scientific data, the complexity and historical depth of the Apulian landscapes.

Coherent with the spirit of the PPTR, since its inception the Map has been characterized by a holistic, stratigraphic and contextual approach to the cultural heritage, surpassing the traditional cataloguing models based on fragmentary and sectorial concepts.





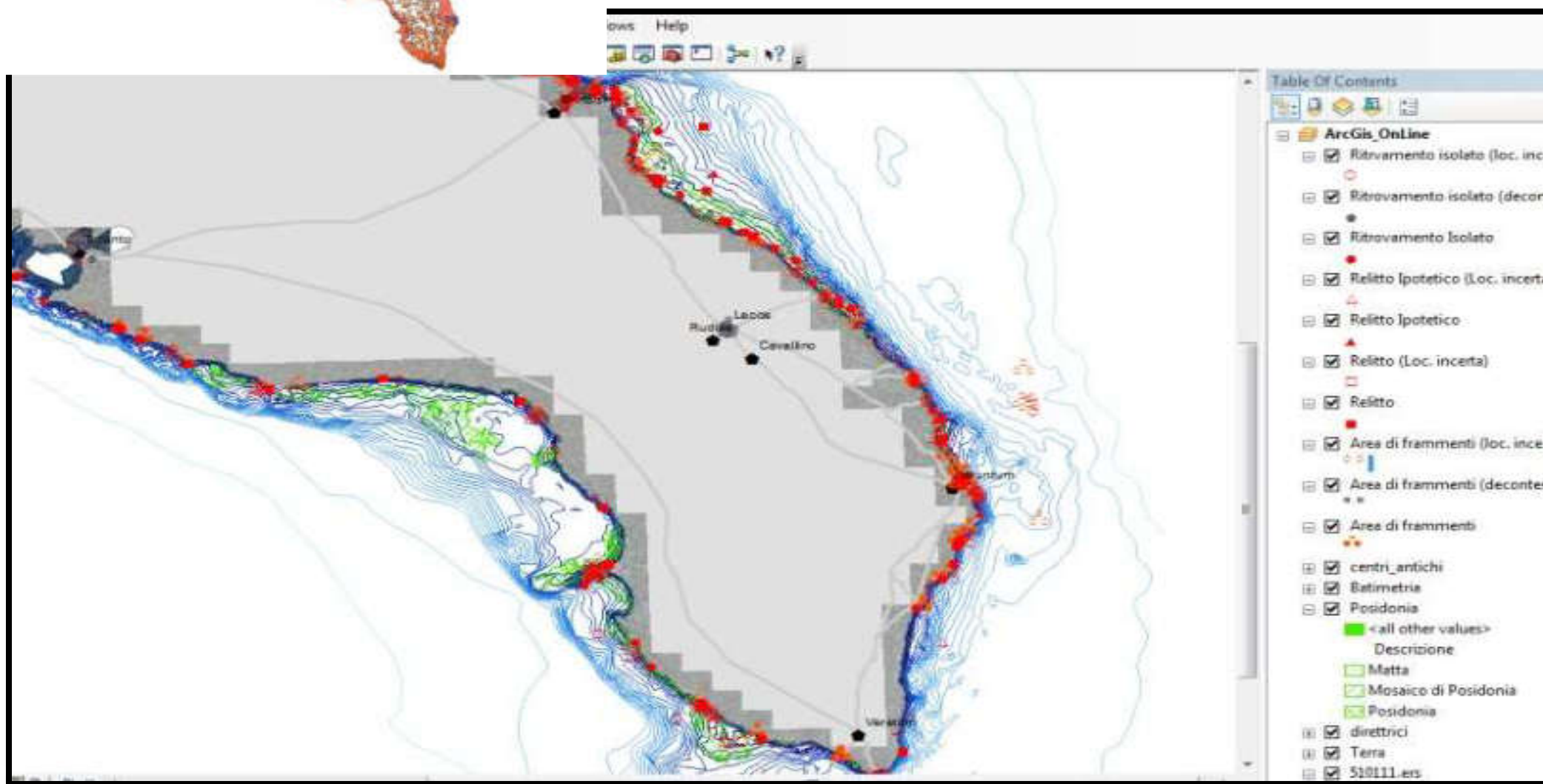
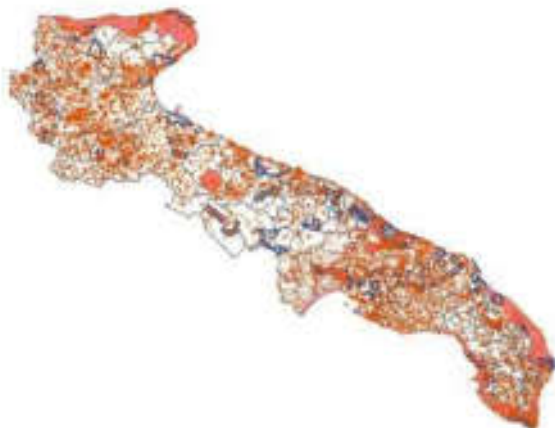
# Southern Puglia underwater archaeological map, Forma Maris of Salento Project



# Southern Puglia underwater archaeological map

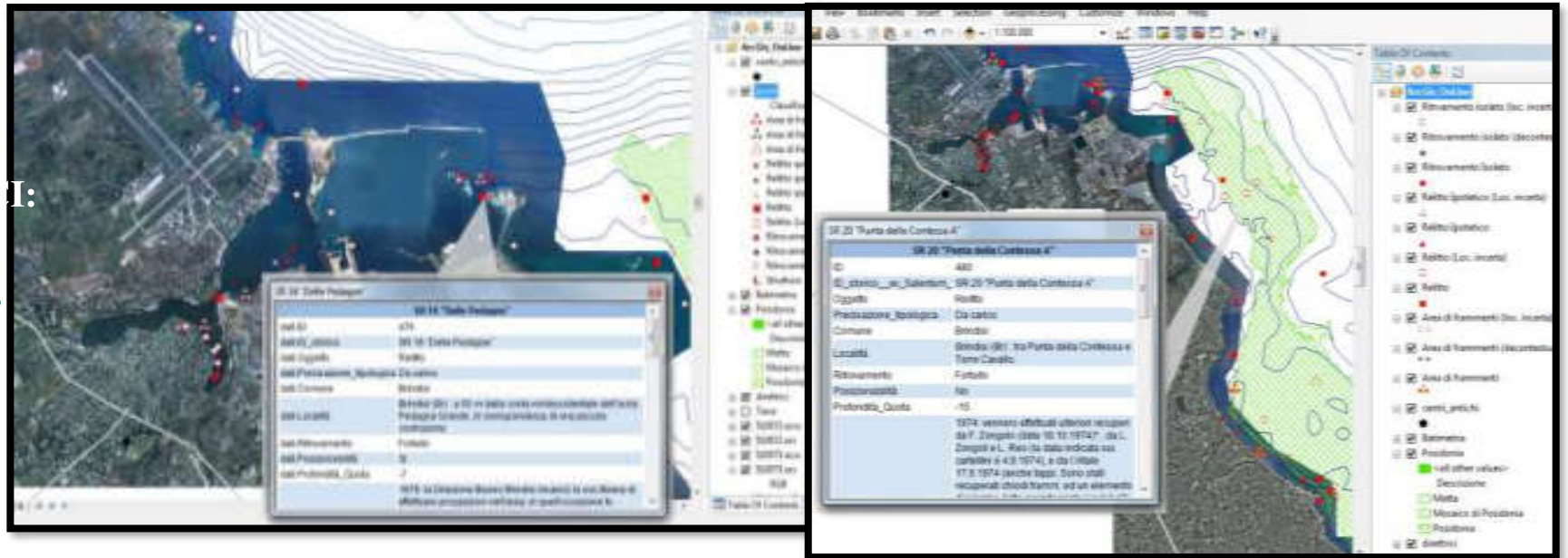
## 3rd phase: data implementation

### The underwater records





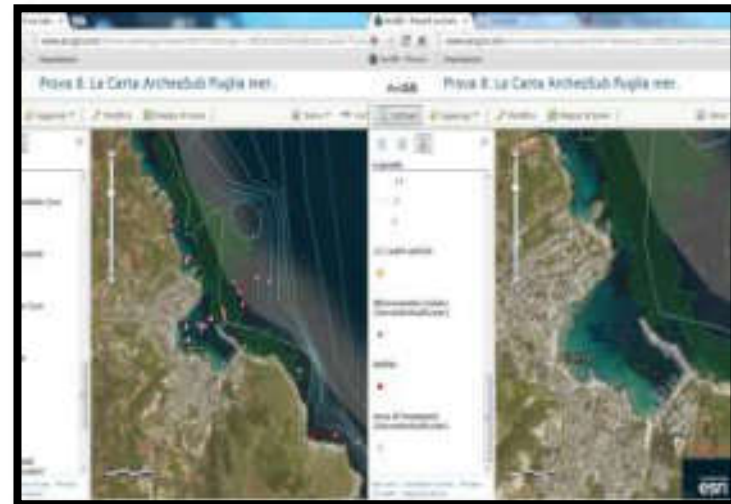
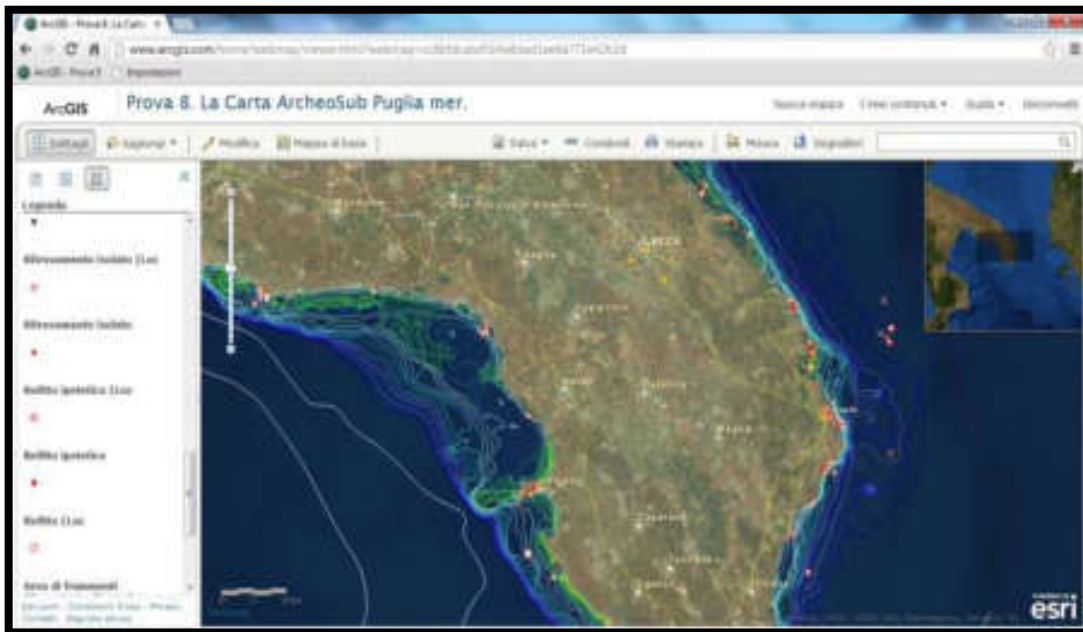
Graphic interface.



Discriminant positioning; solid symbols (certain position) and empty (uncertain position).

web version

[http://www.arcgis.com/apps/OnePane/storytelling\\_basic/index.html?appid=edb2b5022b3a4d4abb1b6f4abc95a2c7](http://www.arcgis.com/apps/OnePane/storytelling_basic/index.html?appid=edb2b5022b3a4d4abb1b6f4abc95a2c7)





# Southern Puglia underwater archaeological map data integrated in the Apulia Cultural Heritage Map



**OGRAFICO**  
*ore Assetto del Territorio*

**SR 3 "Romano A di Porto Badisco"**  
 SR 3 "ROMANO A DI PORTO BADISCO"

ID	463
ID_storico_ex_Salernum_SR 3 "Romano A di Porto Badisco"	
Oggetto	Rilitta
Preclassazione_topologica	Da carico
Comune	Chianò
Località	Pietra Mesola - Porto Badisco - S. Cesare (LX): a poca distanza dalla riva
Ritrovamento	Fortuito
Posizionabilità	Si
Profondità_Gusta	-35

Scoperto nel 1971, ad opera di E. Bugli e G. Ciccarese, che lo segnalavano alla Soprintendenza per i Beni Archeologici della Puglia (benché fosse "noto da vari anni e saccheggiato in superficie", 1971: sopralluogo di R. Ferraro e A. Caridotti del CSAS nel mese di novembre 1972: rilievo.

- Rinvenimento isolato (loc. incerta)
- Rinvenimento isolato (decontestualizzato)
- Rinvenimento isolato
- Rilitta ipotetica (loc. incerta)
- Rilitta ipotetica
- Rilitta (loc. incerta)
- Rilitta
- Area di frammenti (loc. incerta)
- Area di frammenti (decontestualizzati)
- Area di frammenti
- cerchi antichi
- Estimetro
- Posidonia
- al other values
- Decrizione
- Matta
- Mosaico di Posidonia
- Posidonia
- di resti

Detail of the graphic interface query

REGIONE AUTONOMA FRIULI VENEZIA GIULIA

[L'ufficio](#) | [Info](#) | [Catalogo dei Beni Culturali](#) | [Contatti](#) | [Consulenze e info](#) | [Permessi o Escazioni di Patrimonio](#) | [Biblioteca e Servizi di documentazione](#) | [Archivio Fotografico](#) | [Pubblicazioni](#)

# Patrimonio Culturale

FRIULI VENEZIA GIULIA

[Beni Culturali](#) | [Archeologia](#) | [Restauro](#) | [Tutela Beni Librai](#) | [Progetti](#)



Alegoria dell'amore  
Vai alla scheda >

**RICERCHE**

Cerca nel Catalogo dei Beni Culturali

Gli autori |  I luoghi dei beni |  Gli oggetti

Cerca nelle Collezioni dei Beni Culturali

**NEWS**

08/09/2014  
**Inaugurazione Furto Ferma**

La scalinata d'arte contemporanea Furto Ferma sarà inaugurata domenica 22 febbraio...

[\[continua\]](#)

08/09/2013  
**Inaugurazione Furto Ferma2**

Giornata di studi - Furto Ferma: L'indagine si inverte nell'ombra dei progetti...

[\[continua\]](#)

21/07/2013  
**L'Orca del racconto2**

Un marito infido e geloso, generoso e misero di Livorno di Paolo Carotasso per Foll...

[\[Vai alla scheda\]](#)

21/07/2013  
**L'Orca del racconto**

Leggere per... Imparare, leggere per chi ancora non si sa fare, ma... se ascoltare...  
[\[Vai alla scheda\]](#)

**PERCORSI**

**TEPOLO**  
Copolovari dal Tepolo in Friuli Venezia Giulia

Come può reggere a suoi piedi del trono di Dio del fregio, perché...  
[\[continua\]](#)

Scrittura Regionale per il Patrimonio Culturale del Friuli Venezia Giulia

[Facebook](#) | [Twitter](#) | [LinkedIn](#)

Amministratore | [Contattaci](#) | [Mappa](#) | [Ricerca](#)

Cognome:  Nome:

## The Geographic Information System of the Cultural Heritage SiRPaC FVG

Database of over 320.000 records and related webGIS, implemented in collaboration with Universities, Superintendance, public and private institutions.

[www.ipac.regione.fvg.it/](http://www.ipac.regione.fvg.it/)





Scheda: Relazioni | Bibliografia | Siti Archeologici: Id Scheda 512



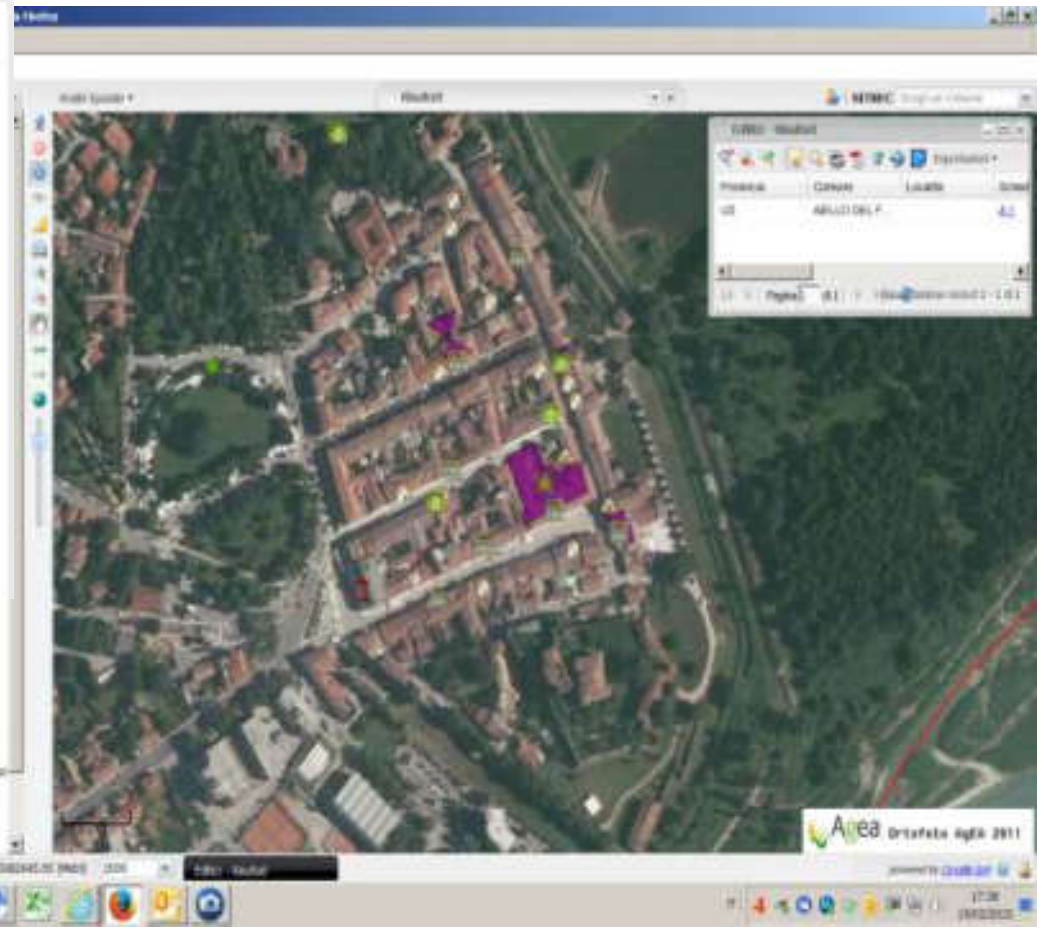
**Oggetto:** INEDIAMENTO - castellare  
**Denominazione:** COO 12  
**Localizzazione:** COOROPPO (UD) , La Gradisca  
**Cronologia:** età del bronzo recente - inizio della prima età del Ferro  
**Ambito culturale:** cultura dei castellari tiziani  
**Indagini di scavo:** Comune di Codroipo - Soprintendenza per i Beni archeologici del Friuli Venezia Giulia - 3004/00/00-3009/00/00; 3011/00/00-3014/00/00

Il sito è collocato immediatamente a sud del capoluogo comunale, in un terreno compreso tra il Parco Regionale dello Istitutivo ed il campo sportivo, il terreno, di forma romboidale, con due lati di circa 100 metri e due lati di circa 150 metri, è localizzato in zona di frangenti, su un modesto dosso di forma romboidale modellato dall'erosione. Il dosso conserva ancora nel rilievo dei margini rispetto all'area stessa traccia dei paleovali da cui ebbe origine, sui quali almeno sul lato orientale...

**Continua**

Riconoscibili il perimetro ed i dati perimetrali che lo determinano; rimane traccia della base del rilievo dell'oggettore sul lato orientale

**link:**  
 Alto | no



Area Grafica 49/04 2011



**Identifica**

**S1 - Sito Archeologico**  
 Scheda: **SI 102**  
 Provincia: **UD**  
 Comune: **PALAZZOLO DELLO STELLA**  
 Località: **Pescarola, fiume Stella**  
 Tipologia: **PdS 009/ UA PALAZZOLO 04**  
 Denominazione: **GIACIMENTO SUBACQUEO**  
 geom: **punto approssimato qct: rilievo da cartografia con sopralluogo**  
 y: **5072679.34**  
 x: **351006.95**

**SiRPAC FVG** is an instrument for sharing knowledge, of documentation for research and dissemination purposes, but also of efficient territorial *governance, protection and proactive valorisation policies.*

The Informative system is a guarantee for the protection that must pass from defensive and proprietary to proactive and community, «from economically residual and supported to industrially affordable” (Montella 2009).



# UNDERWATERMUSE

## WP4: Testing underwater heritage valorisation methods with stakeholder involvement

➤ main activities

### 1. Preparation for pilot actions

Thematic coordination related to pilot action implementation: reports on field work in Grado, Torre S.Sabina and Kaštela.

Kaštela: the site of Resnik/Siculi

Grado: 2 nd Grado shipwreck.

Torre S.Sabina (Br)

# UNDERWATERMUSE

## 2. Implementation of pilot actions - Type 1

### *Output: Pilot actions implemented in the field of capacity building*

Capacity building **on AR-focused** training material developed for museum experts to be held in Gorizia and Split; VR workstation in Grado, Caorle, Kaštela, Brindisi.

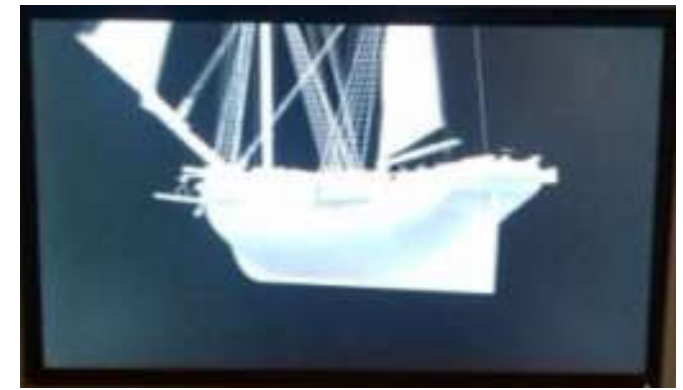
The technology is presented to museum experts at events, in Grado (LP/PP1), Caorle (PP2), Kaštela (PP3/PP4) and Bari (PP6). Stakeholders participate in the decisions regarding the organisation and location of the Workstations in the museums where VR becomes available, bearing in mind their accessibility to tourists



# UNDERWATERMUSE



The know-how:  
existing VR  
workstations  
in Caorle Archaeological  
Museum  
about the Mercure  
shipwreck





# UNDERWATERMUSE

## 3. Implementation of pilot actions - Type 2.

*Output: Pilot actions implemented in the field of underwater cultural heritage valorisation*

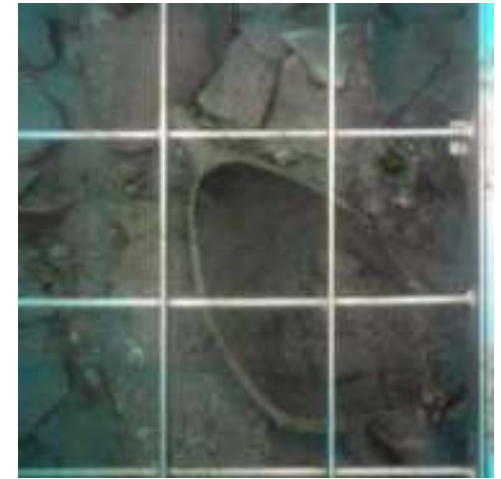
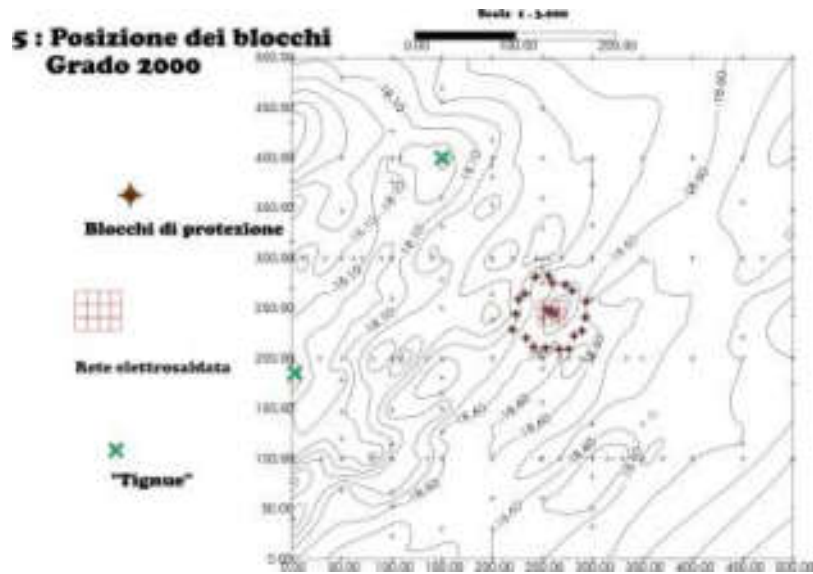
**Underwater cages for heritage valorisation built, renewal plan and utilization/operational concept developed jointly with stakeholders**

- The shipwreck **Grado2**: underwater steel cages for its exploration by divers and glass-bottomed vessels (letter of Intent 28/06/2017 prot. 10254 confirming the acceptance for the equipment by SABAP FVG).
- The site of **Torre Santa Sabina** : “blue path” that encompasses the landing site and exposed portions of shipwrecks (agreement with Superintendance).
- The site of **Resnik/Siculi**: photographed and mapped in 3D

Exhibition and education activity programme developed for an interactive underwater museum

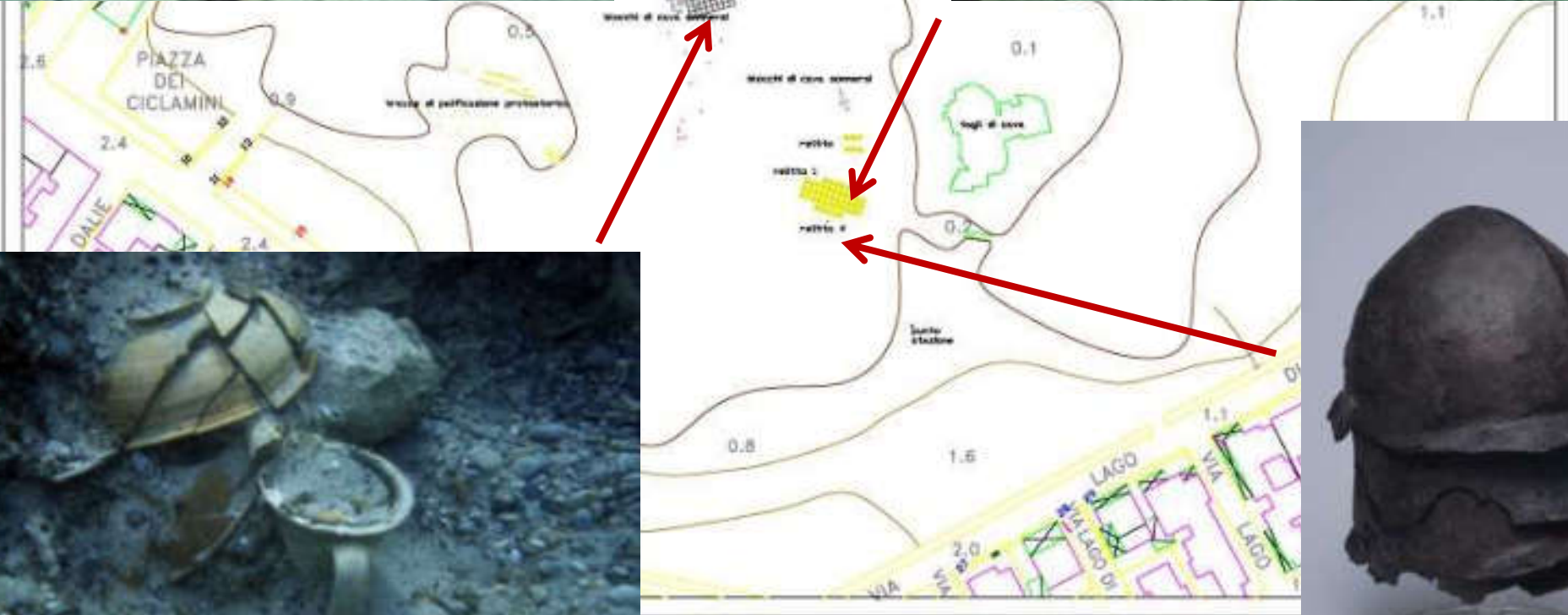
Pilot cross visits / peer review of Type 2 partner

# UNDERWATERMUSE



*The shipwreck  
Grado 2  
3rd cent. BC*



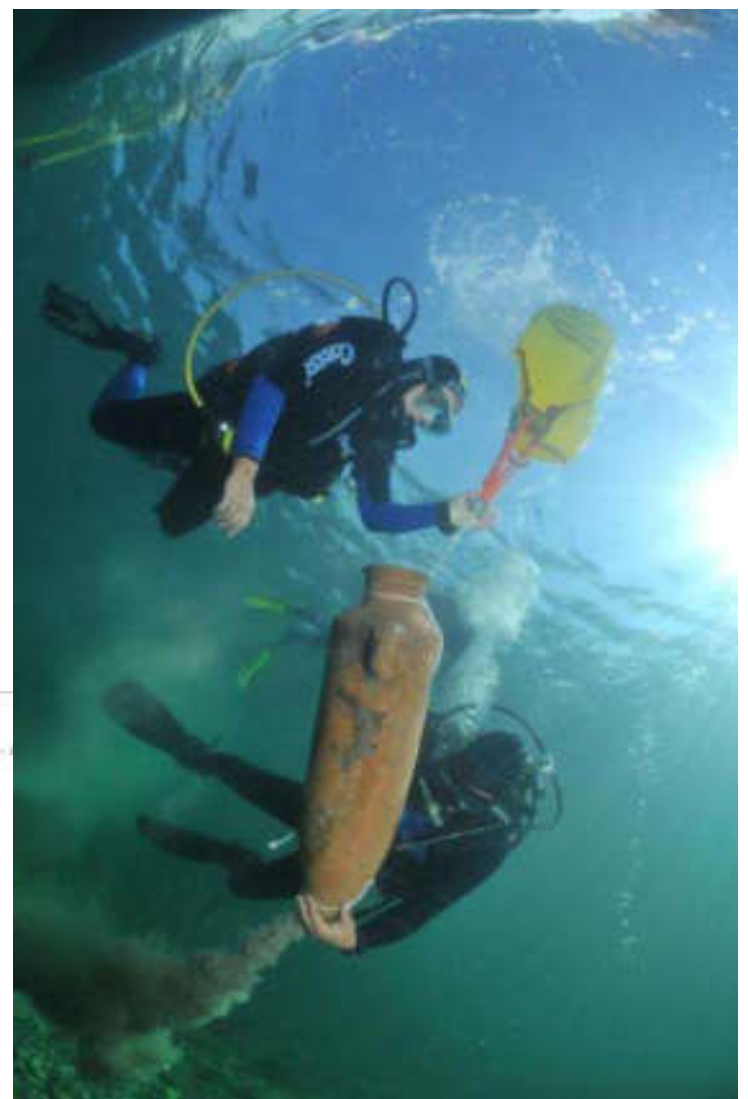
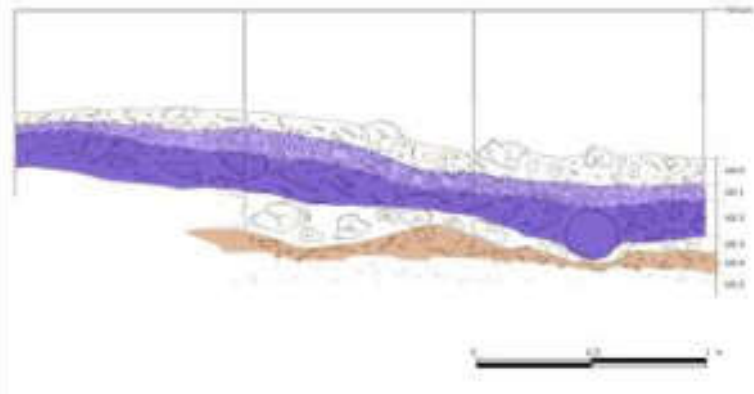


Torre S. Sabina: a pluristratified and complex site  
general underwater map



# Torre S. Sabina: a pluri-stratified and complex site

## The underwater stratigraphy





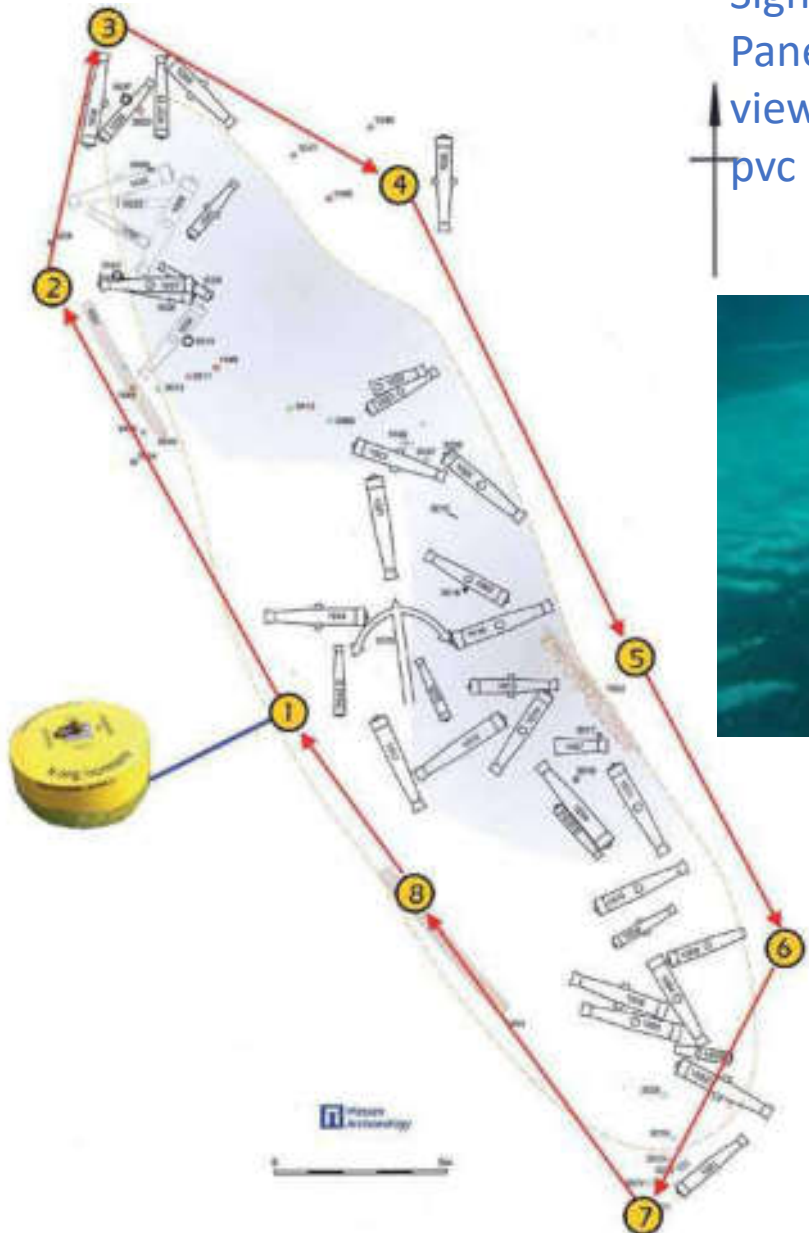
# UNDERWATERMUSE



Resnik/Siculi:  
a pluri-stratified and complex site



# Pluri-stratified and complex sites: the underwater archaeology at the challenge of the valorization



Blue trails  
Signals  
Panels/labels  
viewers  
pvc booklets

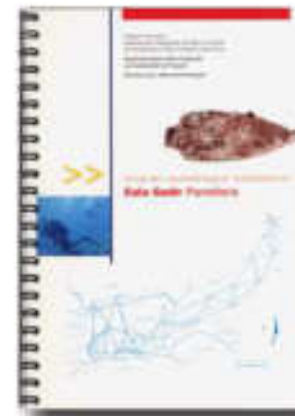


S. Pietro in Bevagna (Ta)

UG3K system  
(Sicily itineraries):  
underwater viewer  
connected to an aerial for  
reading the data  
recorded on  
tags in the labels



Cala Gadir, Pantelleria, Sicily





# Pluri-stratified and complex sites: the underwater archaeology at the challenge of the valorization


## Blue trails

The underwater booklet/guide for the HMS m/A1 submarine protected wreck diver trail. © NAS

### The information includes:

- Finding the site – including GPS co-ordinates
- A north arrow –to aid navigation and orientation.
- A labelled multibeam sonar image of the wreck
- A photographic scale
- General information
- Space for any notes and observations.
- A 15 cm scale for taking small measurements
- Four images of marine life found on the wreck.
- How to find out more including a Quick Reader (QR) code.
- Texts with suggestions

**HMS/m A1 Submarine Protected Wreck Visitor Trail**


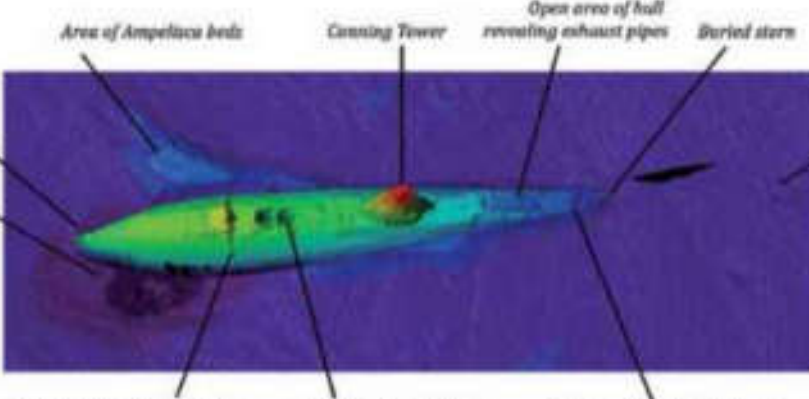
ENGLISH HERITAGE  National Underwater Society

**Finding the site:**  
Do not drop your shot directly on the wreck as this risks damaging the historic wreck.

**Bow (WGS 04)**  
Lat. 50° 44.549' N  
Long. 00° 55.285' W

**Good shot location off to the west of the wreck (WGS 04)**  
Lat. 50° 44.541' N  
Long. 00° 55.280' W

**Stern (WGS 04)**  
Lat. 50° 44.530' N  
Long. 00° 55.273' W





2013 multibeam sonar survey funded provided by NAS Marine & Coastal Services

MCS

20cm photograph scale for your pictures



**HMS/m A1 Submarine Protected Wreck Visitor Trail**


ENGLISH HERITAGE  National Underwater Society

**Build:** Vickers Sons & Maxim Ltd at Barrow-in-Furness  
**Length:** 103 ft / 31m  
**Commander:** Mr Martin Woodward

**Launched:** 19th July 1902  
**Discovered:** 1989

**Lost:** In 1911 whilst being used used for underwater target practice  
**Protected:** By the Protection of Wrecks Act (1973) in 1998







Bring your 100 to the HMS/m A1 submarine please! (or try to help record the marine life that is an abundant on the site for the MCS Research Project.)

Please take photographs and notes of the wreck and supply copies to either the NAS or directly to the wreck's dossier.

Please have a go at measuring or photographing the wreck that you see the forward face of the conning tower (see longer advice and see the space to record your notes and observations. The photographic scale may help to record the size of the features.

**Notes / Observations / Measurements**

15cm scale

Find out more about the HMS/m A1 submarine and the work of the NAS on     

Did you enjoy your visit? Please remember to fill in a feedback form about your visit. Did you know that there are other diver trails on the Seaman's Bay Wreck. NAS Outreach and on the wreck of the Coronation? Contact the NAS for more information on recording these protected wreck-visitor trails. Tel: 01293 519421 | [nao@nationalunderwatersociety.org](mailto:nao@nationalunderwatersociety.org)

# Pluri-stratified and complex sites: the underwater archaeology at the challenge of the valorization



## Blue trails Underwater Monitoring and Remote Control systems

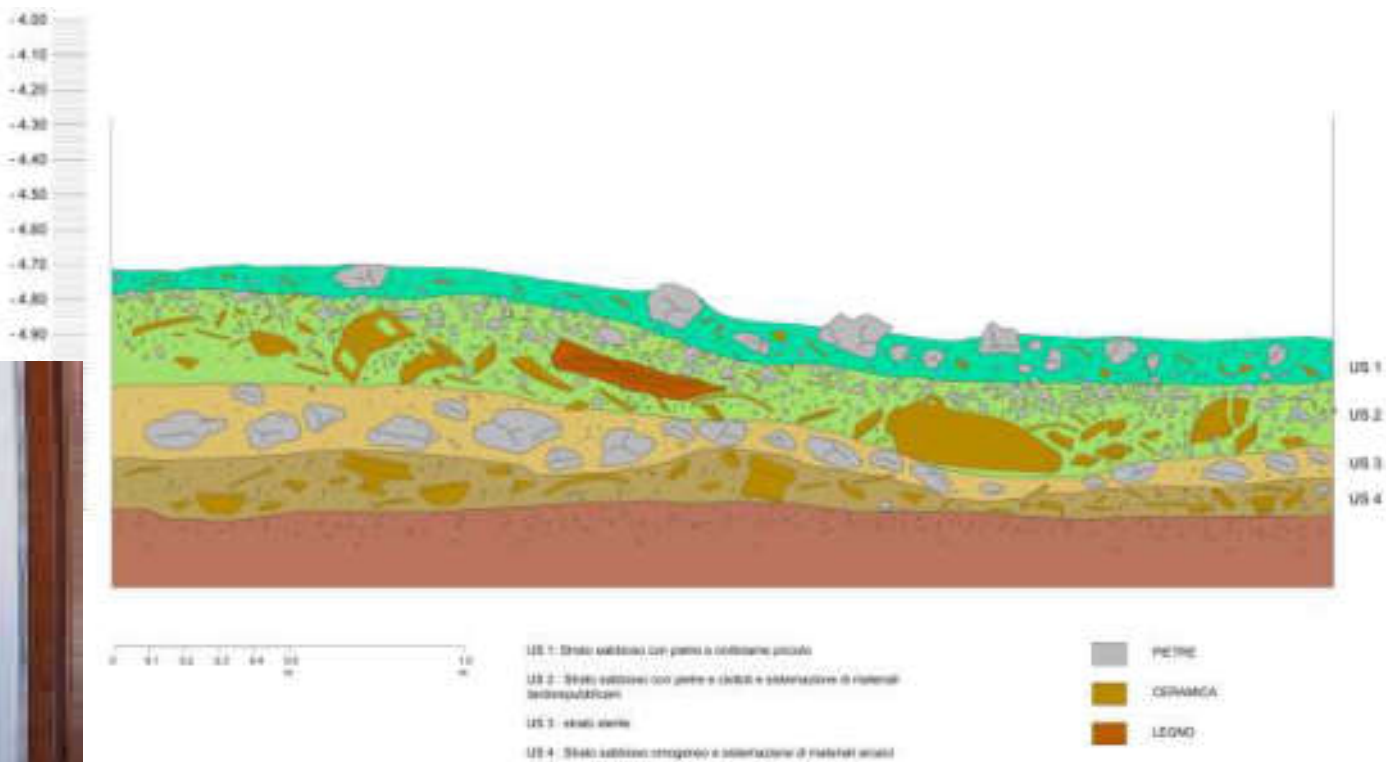


Are they really efficient?

# Pluri-stratified and complex sites: the underwater archaeology at the challenge of the valorization

## Blue trails

Underwater stratigraphy and archaeology materials reproduction





## Blue trails: what solution

- ✓ Stratigraphy and archaeological materials reproduction?
- ✓ Signals, labels, tags and QR codes?
- ✓ 3D Viewers and tablets?
- ✓ Ships replicas?
- ✓ Etc.

We have to answer all these questions, but especially

**We have to think of the valorization of our UCH in a logic of economic, environmental and social sustainability**

# UNDERWATERMUSE

## 4. Implementation of pilot actions - Type 3

**Output: *Pilot actions implemented in the field of skill development***

Training material for diving guides (including young entrepreneurs) to learn and practice underwater guiding (100 hours course)

# UNDERWATERMUSE

## WP5

**Transnational toolkit for regional action planning in underwater cultural heritage valorisation**

**1. Output: *Regional action plans on underwater heritage valorization / Draft action planning prepared by partner regions***

Stakeholder meetings linked to draft action plans

**2. Output: *Transnational toolkit based including best practices on underwater cultural heritage valorization - policies***

Internal quality check of draft action plans: knowledge provider feedback reports on draft APs once they have been tested in pilot actions in WP2

Final draft action plan concept including the results of internal quality check and outcomes of the pilots

Transnational toolkit concept synthesizing pilot results and best practices

Stakeholder meeting related to action plan finalization



# TITLE MASTERFORMAT

Organisation name

Contact person

 Address

 email@

 Telephone number

 [www.italy-croatia.eu/acronym](http://www.italy-croatia.eu/acronym)



# UNDERWATERMUSE

Carlo Beltrame

Kick off Meeting | Trieste | 10-11 April 2019

## REALTÀ VIRTUALE & IMMERSIVA



### ESCLUDERE IL MONDO ESTERNO

Convincere gli utenti di essere entrati in una realtà completamente nuova.

I visori escludono il mondo circostante e usando la stereoscopia si inganna il cervello dell'utente, creando l'illusione della profondità e della tridimensionalità.



## REALTÀ AUMENTATA



### MIGLIORARE IL MONDO ESTERNO

La realtà aumentata, invece, non elimina il mondo reale, ma sfrutta i computer per migliorarlo e per aumentare le informazioni di un contesto.





*Il vasto patrimonio storico e naturalistico che si trova sui fondali marini del mondo è un'importante risorsa che deve essere protetta e valorizzata con una particolare attenzione.*

(UNESCO, 2001).

La Realtà Virtuale come potente strumento per :

- accessibilità
- esperienza di apprendimento ad alto impatto emotivo
- raggiungere un ampio pubblico

# THE INVINCIBLE WRECK

<http://www.cloudtour.tv/invincible>

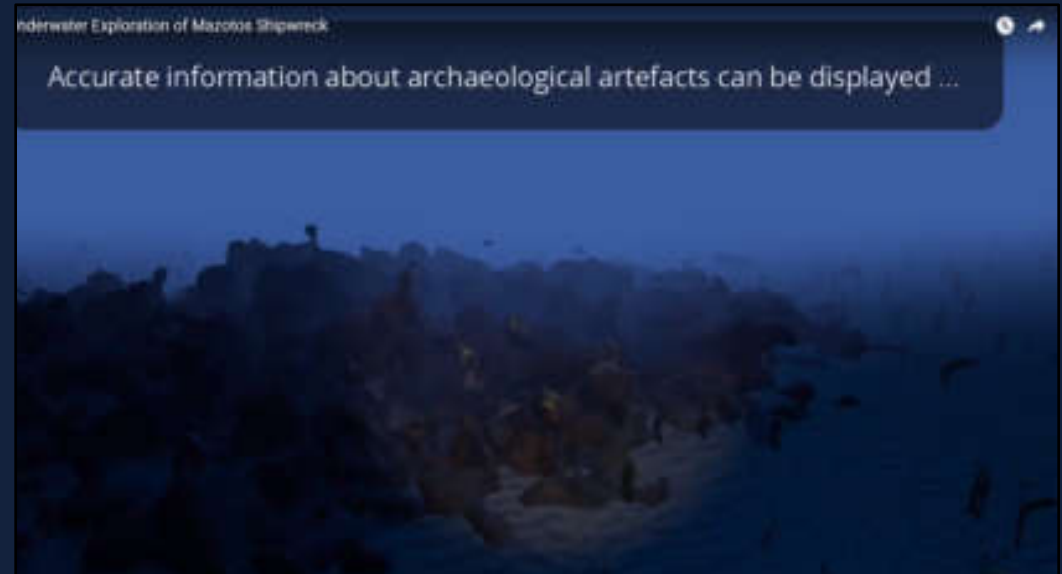


TOUR VIRTUALE

Progetto VISAS  
*Relitto di Cala Minnola*



Progetto iMareCulture  
*Relitto di Mazotos*







MUSEI VIRTUALI



MUSEI SUBACQUEI

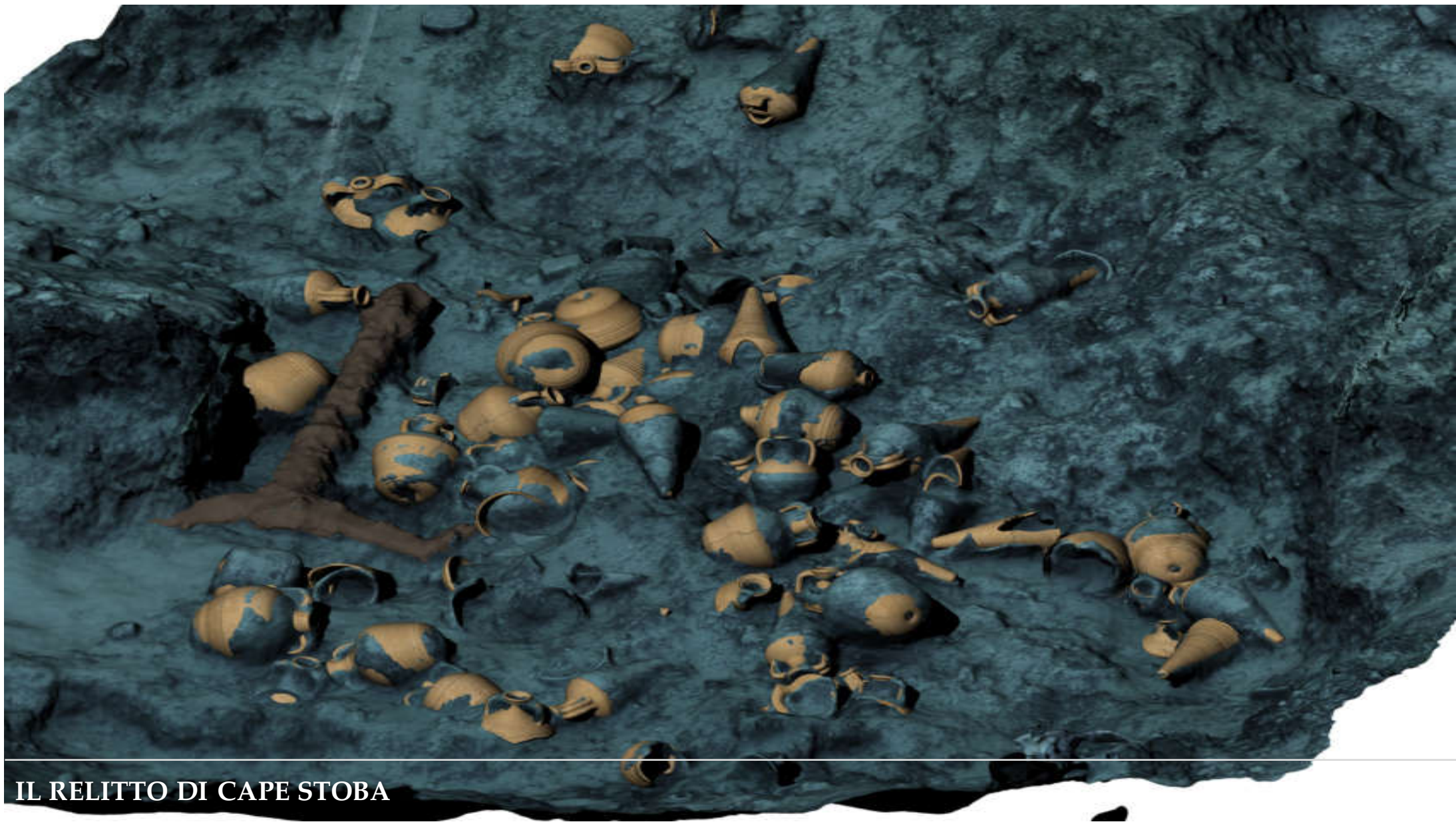




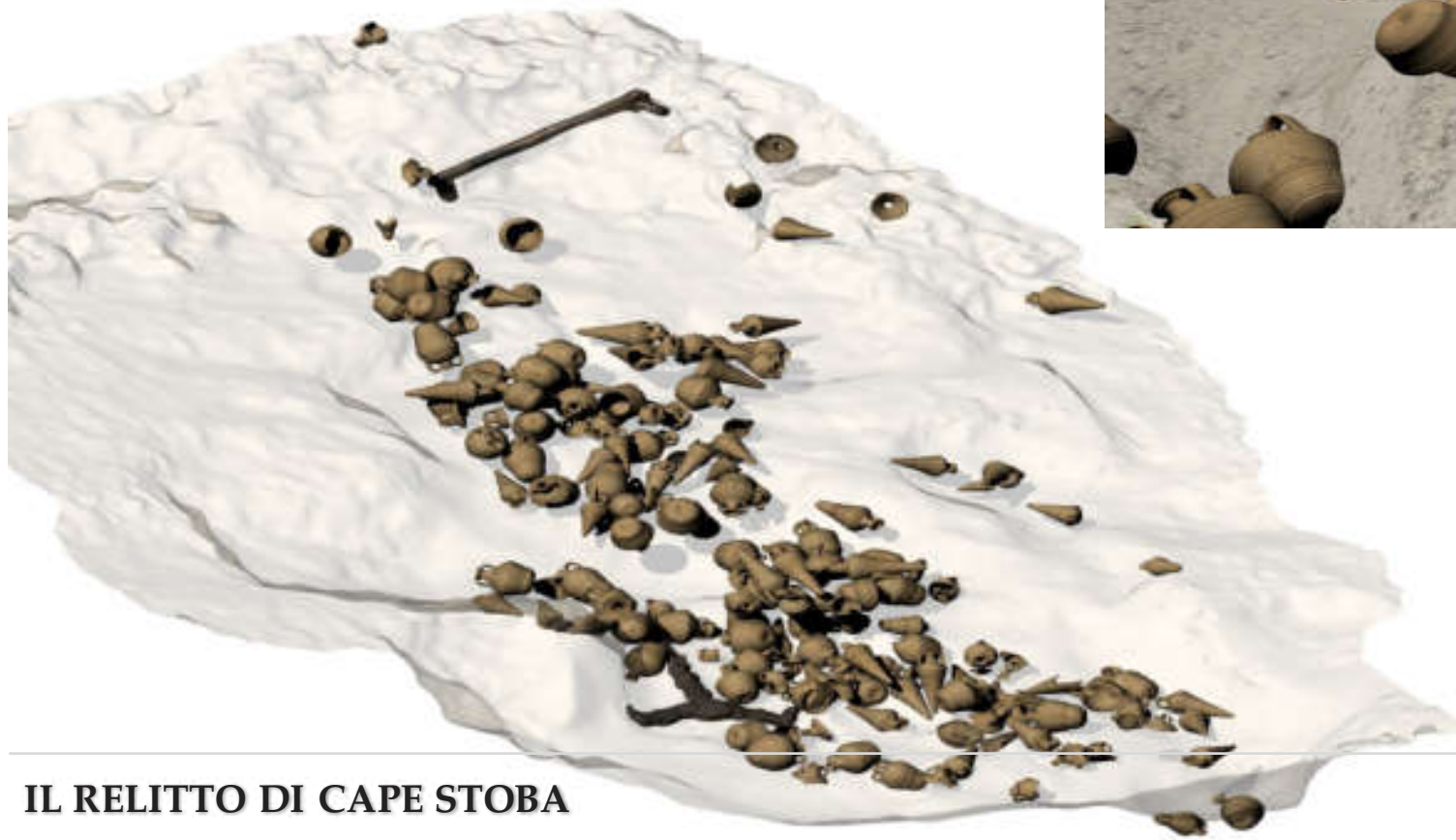
REALTÀ AUMENTATA



I SITI ARCHEOLOGICI SOMMERSI INDAGATI DALL'UNIVERSITÀ CA' FOSCARI

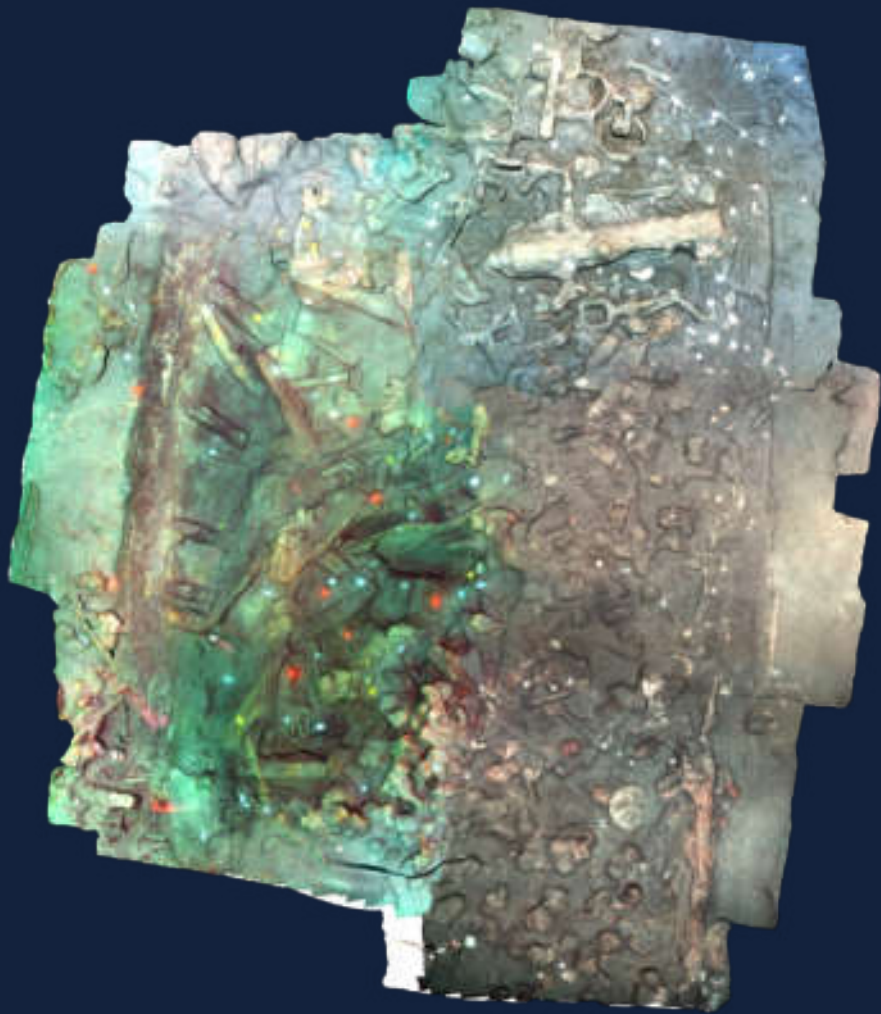


IL RELITTO DI CAPE STOBA

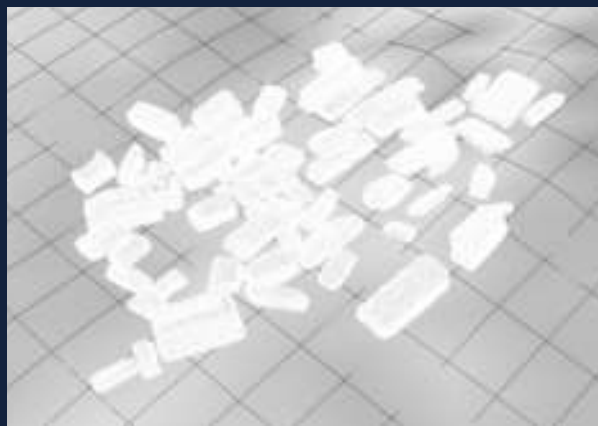
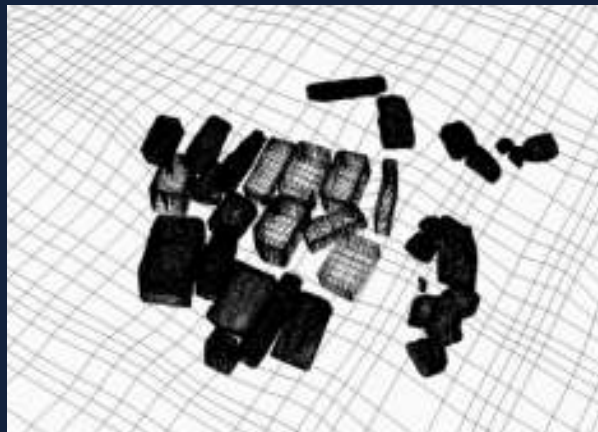
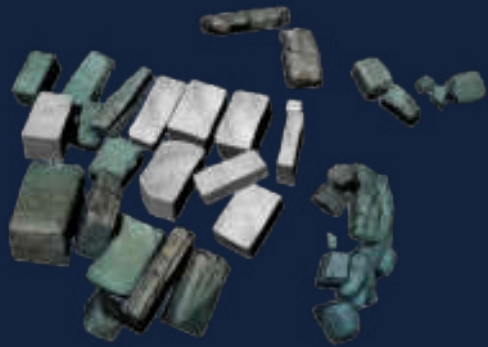


**IL RELITTO DI CAPE STOBA**





IL RELITTO DEL BRIGANTINO MERCURIO



*RILIEVO FOTOGRAMMETRICO*

*CAD SOFTWARE*

*MAPPATURA CON TEXTURE  
AD ALTA RISOLUZIONE*

**I RELITTI CON CARICHI DI MARMI IN SICILIA**