

Policy Forum of the IKINET Project

**Regional “Competence Centres” and European
knowledge and innovation networks:an international
comparison of innovation cluster policies**

Roma 20 settembre 2007

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Regional Research Centre Benecon, Cultural heritage, ecology and economy for the productive recovering, the reconvention, the eco-compatibility and design of environmental systems of cultural value

ambiente
rappresentazione
strutture **ars**

project leader
Prof. Arch. Carmine Gambardella

ars knowledge network
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Regional Research Centre Benecon, Cultural heritage, ecology and economy for the productive recovering, the reconvention, the eco-compatibility and design of environmental systems of cultural value is an **Immaterial Factory**

- Human resource
- Scientific Equipment
- Network of Scientific Laboratories



To make compatible ecology and economy for the eco-sustainable development of the natural and constructed environment;

To sustain the scientific and technological innovation through the analysis and diagnosis multicriteri@;

To promote the economic development through the increase of working places in the fields of conservation, research and fruition of cultural and environmental heritage;

To increase the value of material culture in order to develop local and tourism economy;

To stimulate the participation of the inhabitants in the local activities in order to consolidate the relationship between Man and Environment;

To do a spin off in order to identify the state, define strategies and construct the scope for develop educational projects and working places.



benecon a bridge between the world of knowledge and the world of know-how

Benecon features a human resource of 250 researchers, belonging to four athenaeums (Napoli Second University, Napoli Federico II University, Sannio University, University of Salerno), and a resource of scientific instruments of about 9,6 millions euro. The Center created a network for the upgrading of multicriteri@ competences for the technological transfer and support to the territorial stakeholders.

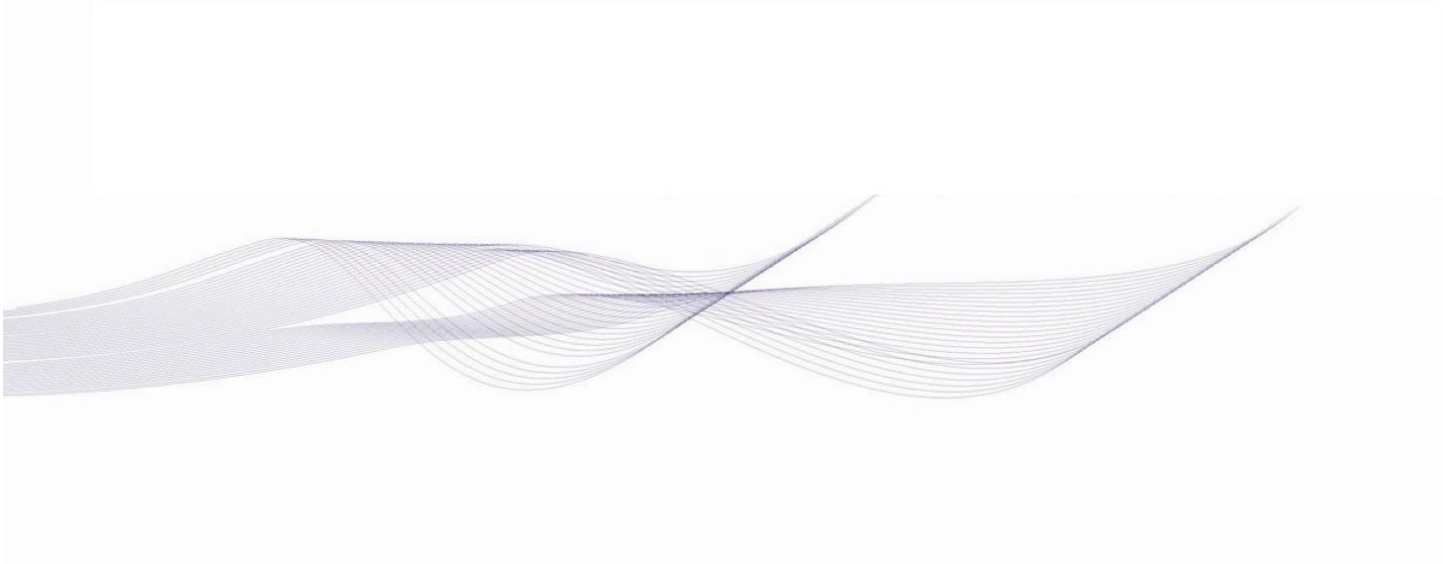
Regional Research Center Benecon
Project Leader Prof. Arch. Carmine Gambardella
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ars fabbrica immateriale Via I maggio, Frignano (CE)
www.benecon.it • benecon@unina2.it





Human resource

SOGGETTO CAPOFILA SECONDA UNIVERSITA' DEGLI STUDI DI NAPOLI_DIPARTIMENTO DI CULTURA DEL PROGETTO



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Human resource

Subject actuators and operative units

A · Design Knowledge Department Second University of the Studies of Naples

Spaces for the memory
Scientific commissary Danila Jacazzi

Anthropic transformations of built environment
Scientific commissary Gaetano Borrelli

Ergo design of the services
Scientific commissary Patrizia Ranzo

Control of the physical levels of the environment
Scientific commissary Luigi Maffei

Conservation and guardianship of the built environment
Scientific commissary Giuseppe Fiengo

Historical environment of the city and of the region
Scientific commissary Gaetana Cantone

Multicriteri@ analysis of complex systems
Scientific commissary Carmine Gambardella

Structural analysis of environment
Scientific commissary Antonio De Luca

Administration, management and marketing of territorial resources
Scientific commissary Mario R. Spasiano

Aesthetic assessment of the demo-anthropologic phenomenon
Scientific commissary Aldo Trione

B · Department of Configuration and Actuation of the Architecture University of the Studies of Naples Federico II

Tecnologies for sustainable environment
Scientific commissary Virginia Gangemi

Maintenance of urban and environmental systems
Scientific commissary Gabriella Caterina

Bio-climactic technologies
Scientific commissary Marcello Marocco

Analisi geografica per le risorse del paesaggio e dell'ambiente
Scientific commissary Maria Mautone

C · Department of Sciences of Education University of the Studies of Salerno

Education and communication sciences
Scientific commissary Arturo Vanni

Psico-pedagogical analysis for the enjoyment of Cultural Heritage
Scientific commissary Vincenzo Sarracino

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D · Department of Civil Engineer Second University of the Studies of Naples

Structural adaptations of complex systems
Scientific commissary Pasquale Malangone

E · Surgical Department of Internal Medicine "F. Magrassi e Lanzara" Second University of the Studies of Naples

Radiology applied to the cultural heritage and environment
Scientific commissary Salvatore Cappabianca

F · Faculty of Fine Arts Second University of the Studies of Naples

Archeological Knowledge of the topography of the territory
Scientific commissary Stefania Gigli Quilici

History and Artistic knowledge of the territory
Scientific commissary Riccardo Lattuada

G · Faculty of political studies for European and Mediterranean High Education "Jean Monnet" Second University of the Studies of Naples

Legal and Tributary Cabinet
Scientific commissary Gian Maria Piccinelli

H · Department of Economics and Management University of the Studies of Naples Federico II

Territory and finances
Scientific commissary Stefano Ecchia

I · Department of Sciences of the Earth University of the Studies of Naples Federico II

Dynamics of the Territory in a seismic area
Scientific commissary Giuseppe Luongo

L · PE.ME.IS. Department University of the Studies of Sannio

Biology and ecology for the conservation of the environment
Scientific commissary Eugenia Aloj Totaro

M · Scientific and technologic park of the metropolitan area of Naples and Caserta

Scientific commissary Luigi Iavarone

N · European University Center for Cultural Heritage - Ravello

Scientific commissary Ferruccio Ferrigni

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Resource of scientific instruments

Thematic laboratories

Laboratory
Multi criteria analysis
of the architecture
and the environment

Laboratory for the analysis
of multi dimensional relief
of material and immaterial
resources of the human
and natural heritage, for
the management and
exploitation of
territorial capital.

coordinator
Sabina Martusciello

Laboratory
environmental control

Laboratory for the analysis
of control procedures
of the physics parametric
of comfort in indoor and
outdoor environments;
realization of models and
experimental methods
through prototypes.

coordinator
Luigi Maffei

Laboratory
Fruition and environmental
enhancement

Laboratory for the environmental
re-qualification and for the
recover and maintenance
of landscape, archaeology
and urban contexts.
Evaluation of procedures
for the research and control
of sustainable environment.

coordinator
Virginia Gangemi

Laboratory
Communication
for the cultural and
environmental heritage

Laboratory for the develop-
ment of communication
strategies and for the
tourism valorization of the
cultural and environmental
heritage as well as for the
development of actions
for the territorial marketing.

coordinator
Giuliano Minichiello



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environment representation structures

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acoustic mapping
acoustic area division
big areas acoustic
acoustic power measuring
building acoustic measuring
psychoacoustics
artificial lighting design
alternative energy
co-generation
building energetic certification
air, water, soil quality
electromagnetic fields
physical - technical materials measurements
biology and ecology for environment preservation
environmental requalification
landscape impact evaluation
eco-museum
facilities eco-design
environmental sustainability technologies
urban and environmental systems maintenance
bioclimatic technologies

multicriteri@ land analysis
multi dimensional relief of architectural, monumental and historical-artistic heritage
LIDAR system scanning
hyperspectral survey system CASI
SLAR system marine pollution detection
aerial platform remote sensing
satellite remote sensing
three dimensional land scanning
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DTM/DSM processing
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hydrogeological disaster monitoring
coastal erosion monitoring
landslide movement monitoring
rapid prototyping
territorial marketing

materials, elements and structural components testing
dynamic features testing
videodenscopy inspections
tests with flat jacks
masonry structures surveys
steel structures surveys
structural reliefs
pacometric investigations
experimental investigations
georadar surveys
reinforced concrete structures surveys
destructive testing
non destructive testing on masonry
non destructive testing on reinforced cement structures
semi-destructive testing on masonry
sonreb method investigations
digital thermography
ultrasonic and sonic investigations
surveys on wooden structures
structural monitoring

Environment analysis and diagnosis are aimed at monitoring the existence and the intensity of physical (acoustic, light and electromagnetic pollution), chemical, biological impacts and experimentally create/verify solutions for a sustainable use of resources. Investigation fields are: energetics, light, acoustic, electromagnetic fields, air, water and soil quality analysis.

Land and environment representation are based on a scientific multicriteri@ methodology of a patented software Benecon Carta Uni.Te.Mi.Ca. (minimum catalogued land unit charter). The platform implements the knowledge network through discretization and measure of all material and immaterial features of natural and built environment.

Structural, functional and technological adjustment and the consolidation and refurbishment of buildings suppose a quali-quantitative knowledge that can be acquired through measures, analysis and experimental testing that allow the understanding and documentation of the investigation object in its complex layout.

environment representation structures

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P.O.R. Campania 2000/2006 "Il progetto è stato realizzato con il cofinanziamento dell'Unione Europea" Misura 3.16. Promozione della ricerca e del trasferimento tecnologico nei settori connessi alla crescita ed allo sviluppo sostenibile della Regione Campania.

Anechoic chamber • Artificial sky Mirror sky • Solar simulator "Heliodon" • Psychoacoustic analysis system • Acoustic holography system • CCD video photometer for photometric, radiometric and colorimetric measurements • CM26000 spectrophotometer • Water analysis system • Air quality monitoring junction box + PM10/2,5 powder analyzer + NO-NOx analyzer • Gas chromatographer Perkin Elmer • Noisemonitoring net • Automatic micrometeorological station tas • Landscape impact evaluation system • Thermal shock chamber + remote air condenser

CS1000A spectroradiometer • Automatic climate monitoring station • Detection mobile unit + electromagnetic field meter + automatic sequential station + microclimatic junction box + digital lux meter + phonometer + probe digital multimeter kit + thermometer • Radon gas detection system e-perm • Multi Gas Monitor, analyzers and SW • FT-spectrometer - IR NICOLET 740 PE • Micro-climate junction boxes • Analysis tools VIA-SWGABI 4 PRO+BWAL e IKP/PE • Climate chamber with 600 LT - 40/+180°C capacity • Dry Corrosion Test Cabinet DCTC • Rain and gelivity testing chamber • TOBI x 50 Eye-Tracker ergonomic observation chamber • Domestic cogeneration system • Ultrasound device with 360° volumetric measuring probe • Extruder • Point Load Tester • Portable monitor for Radio measures • Solar box • STUR • Data elaboration center with 7 workstations + SW LWA Bruel & Kjaer + SW for buildings energetic evaluation

Aero transported Laser Scanner LIDAR ALS50II • Hyperspectral aero transported system ITRES CASI 1500 • Hyperspectral aero transported system ITRES TABI 320 • SLAR aero transported system • Multibeam system RESON SEABAT 8125 • Laser Scanner 3D Zoller & Froehlich • Aerofotogrammetric digital camera LEICA ADS 40 • Laser scanner system 3D LEICA HDS4500 • Remotely operated underwater vehicle • Acoustic positioning underwater system and Sub Botton Profilers and parametric echosounder • Portable MicroTac + computerized tomograph + ecographic probe + 3D images acquisition and Elaboration system • Mobile lab Sprinter Mercedes 380D CDI • ThermoCAM SC 3000 • Thermacam Nikon NECTH 7102 MV • Seismograph • FAD Platform

DVP400 Complete stereo station • 3D vision system for computers • Aerial triangulation compensation modulus • DVP Station bracket • SW Photogrammetric LPS • GPS net reference station • Laser 3D total station without prism • Total station GPS detection • Data elaboration Center featuring 40 workstations • software Autodesk Map, ER Mapper Professional, Image Web Server Corporate, Cart@net Enterprise Edition, ArchInfo (ArcView and ArcEditor), ArcView - GIS ESRI Platform, 3D Analyst, Tracking Analyst, Erdas Image - Leica Virtual Explorer, JRC 3D Reconstructor

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Ultrasonic system CMS • Station for deformability tests with flat jacks • High precision digital pacometer for reinforced concrete structures surveys (COVER MASTER CM9) • LPBAS Data acquisition control unit system for slit measuring devices • Videodenscope • Structural investigations Radar system with DATA LOGGER (Georadar) • Equipment for semi-destructive and non destructive testing on masonry: RIS K2 system; Infrared thermacam • Digital oscilloscope

environment

acoustic mapping
acoustic area division
big areas acoustic
acoustic power measuring
building acoustic measuring
psychoacoustics
artificial lighting design
alternative energy
co-generation
building energetic certification
air, water, soil quality

electromagnetic fields
physical - technical materials measurements
biology and ecology for environment preservation
environmental requalification
landscape impact evaluation
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facilities eco-design
environmental sustainability technologies
urban and environmental systems maintenance
bioclimatic technologies



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environment

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Scientific Equipment

Solar simulator Heliodon

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Automatic climate monitoring station



BabucA-BSA010



Artificial sky Mirror sky

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multicriteri@ land analysis
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representation



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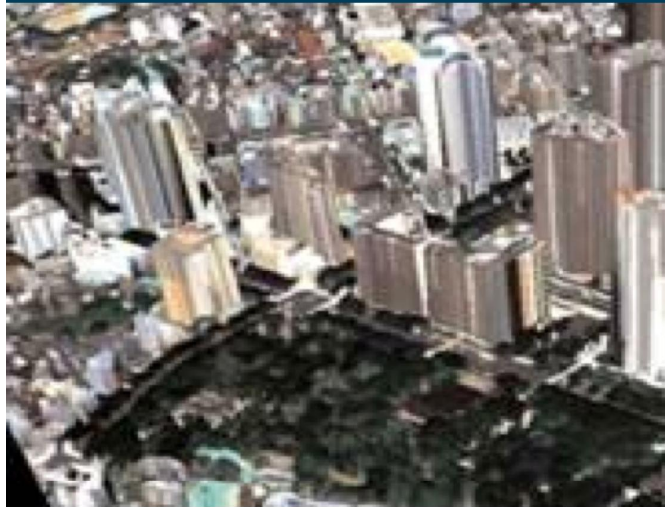
representation

representation

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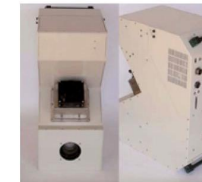


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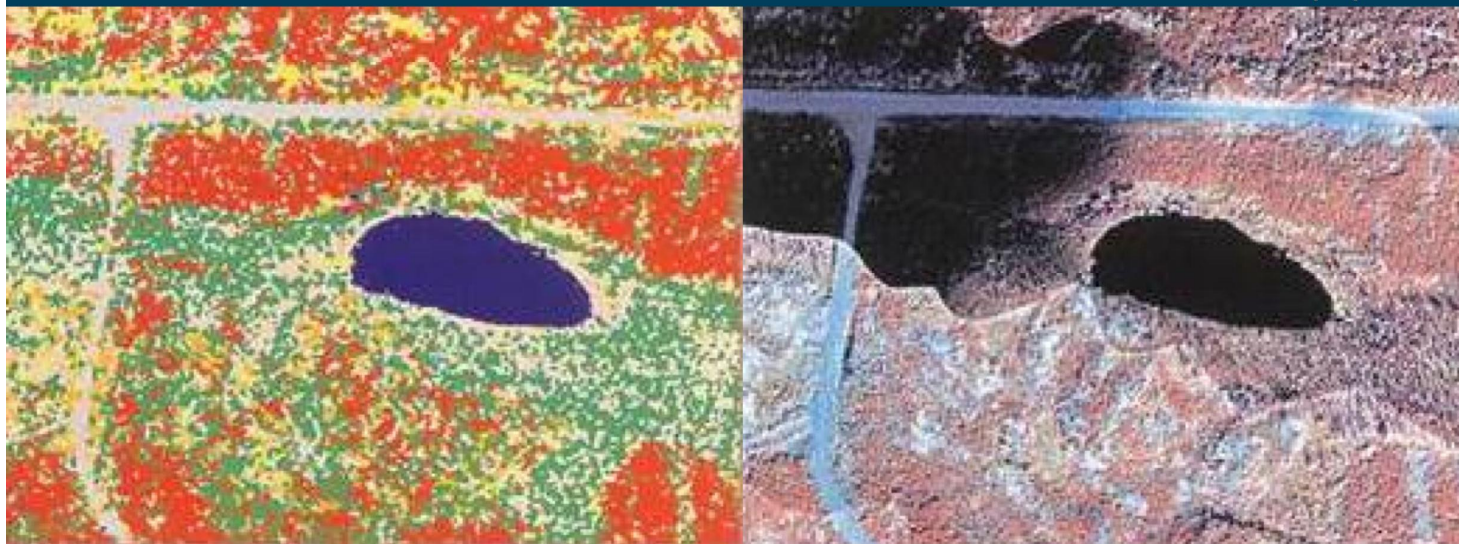
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APPLICATIONS

- ✓ land use;
- ✓ Identification of polluted land and marine areas
- ✓ vegetation condition
- ✓ stability of the slopes
- ✓ mapping of areas exposed to geological risk
- ✓ analysis of physical and biological features of water courses and seacoast
- ✓ risk mapping

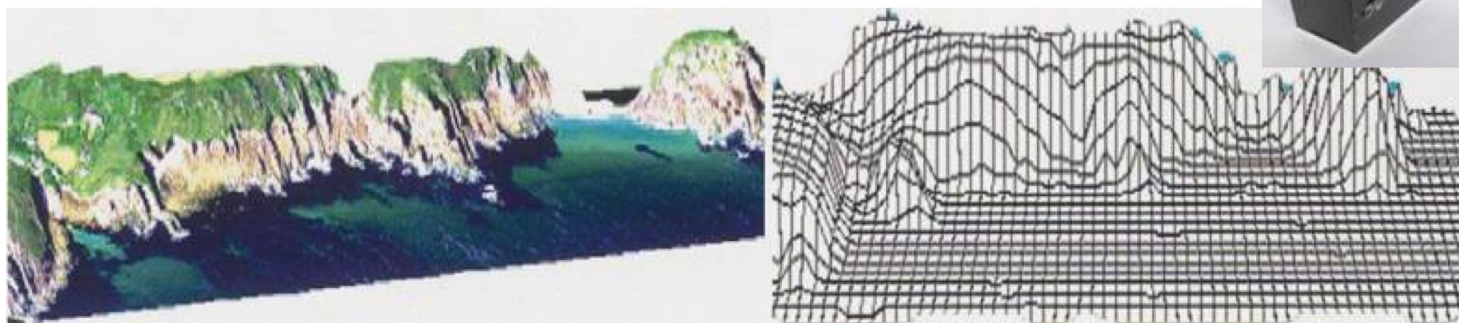


Scientific Equipment



APPLICATIONS

- ✓ land use survey
- ✓ slopes relief and modeling

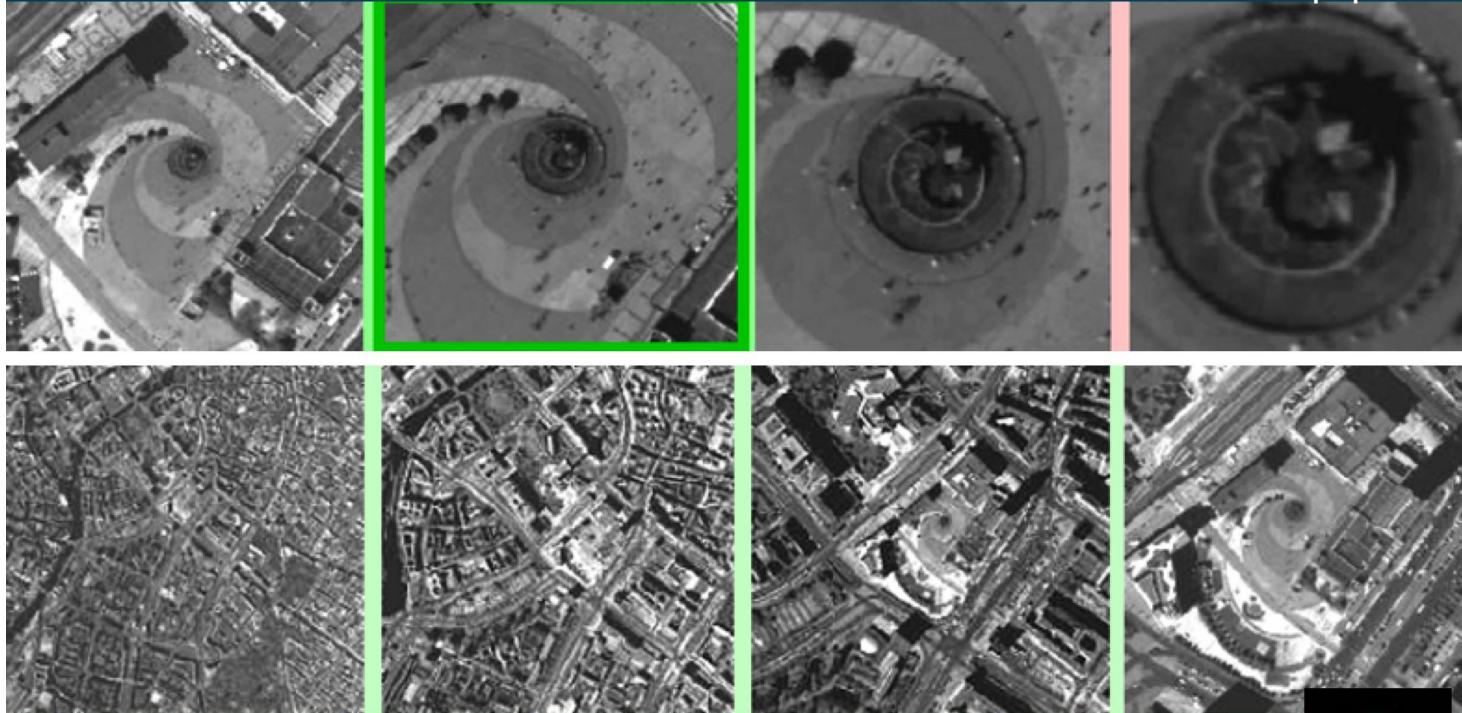


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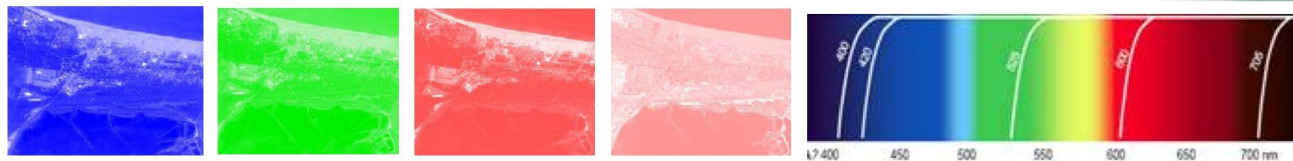
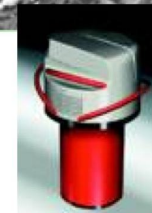
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Scientific Equipment



APPLICATIONS

- ✓ acquires aerial images in digital format, in colour, black and white and infrared
- ✓ acquires topographic support points through the GPS system
- ✓ software post-processing for map creation, digital orthophotoplans and for the survey and analysis of the acquired images



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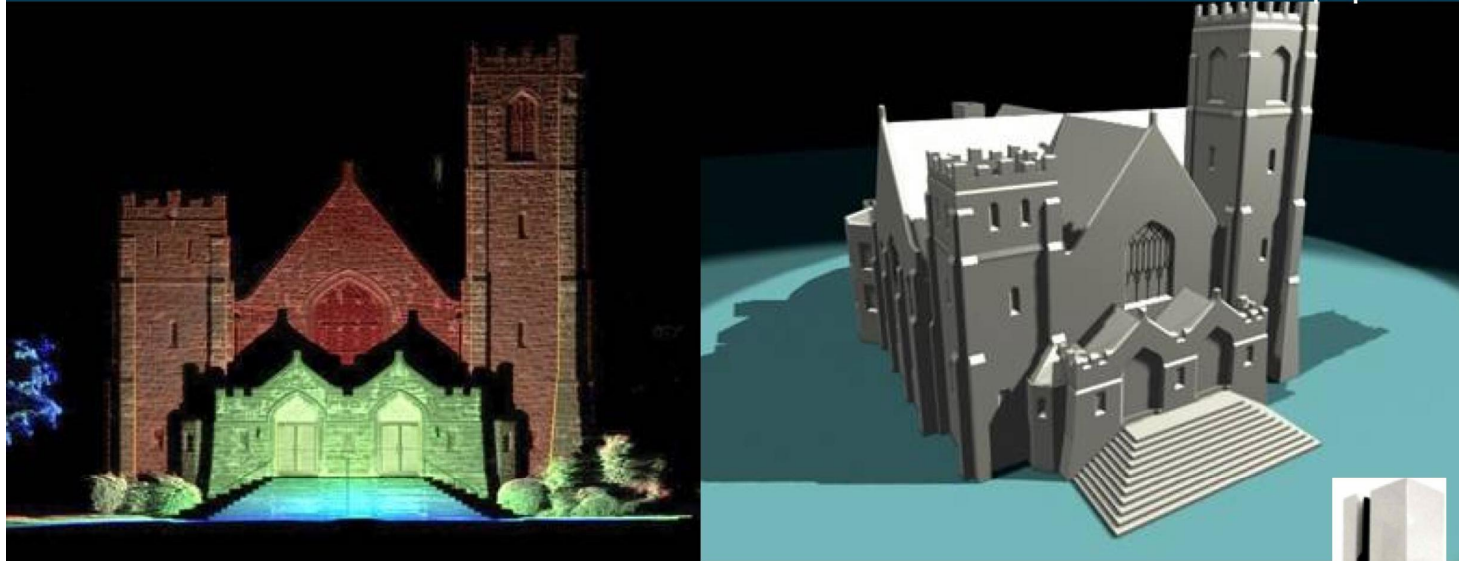
Aerofotogrammetric digital camera ADS 40



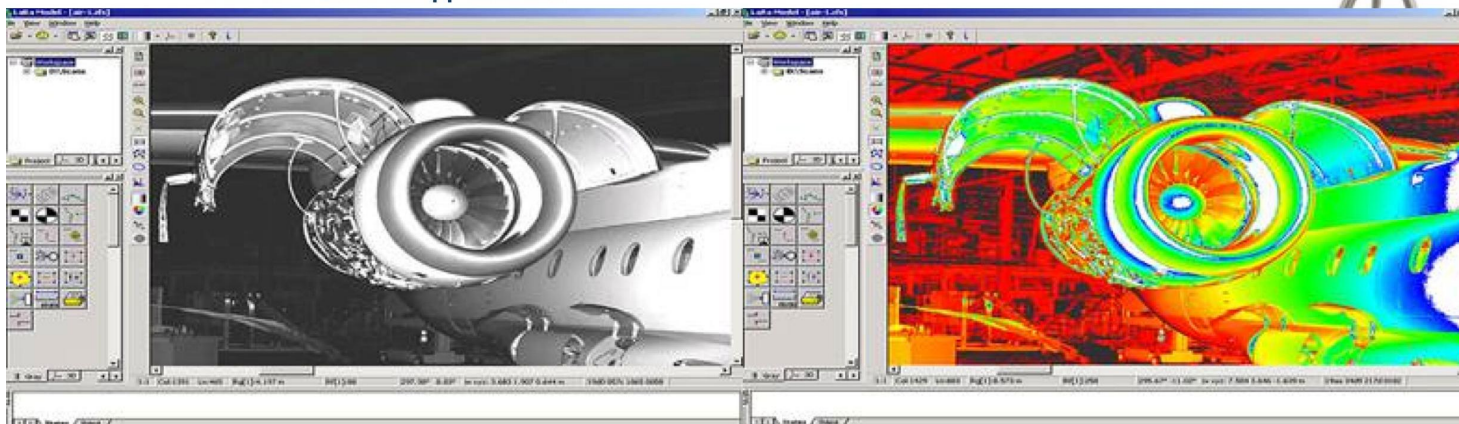
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Scientific Equipment



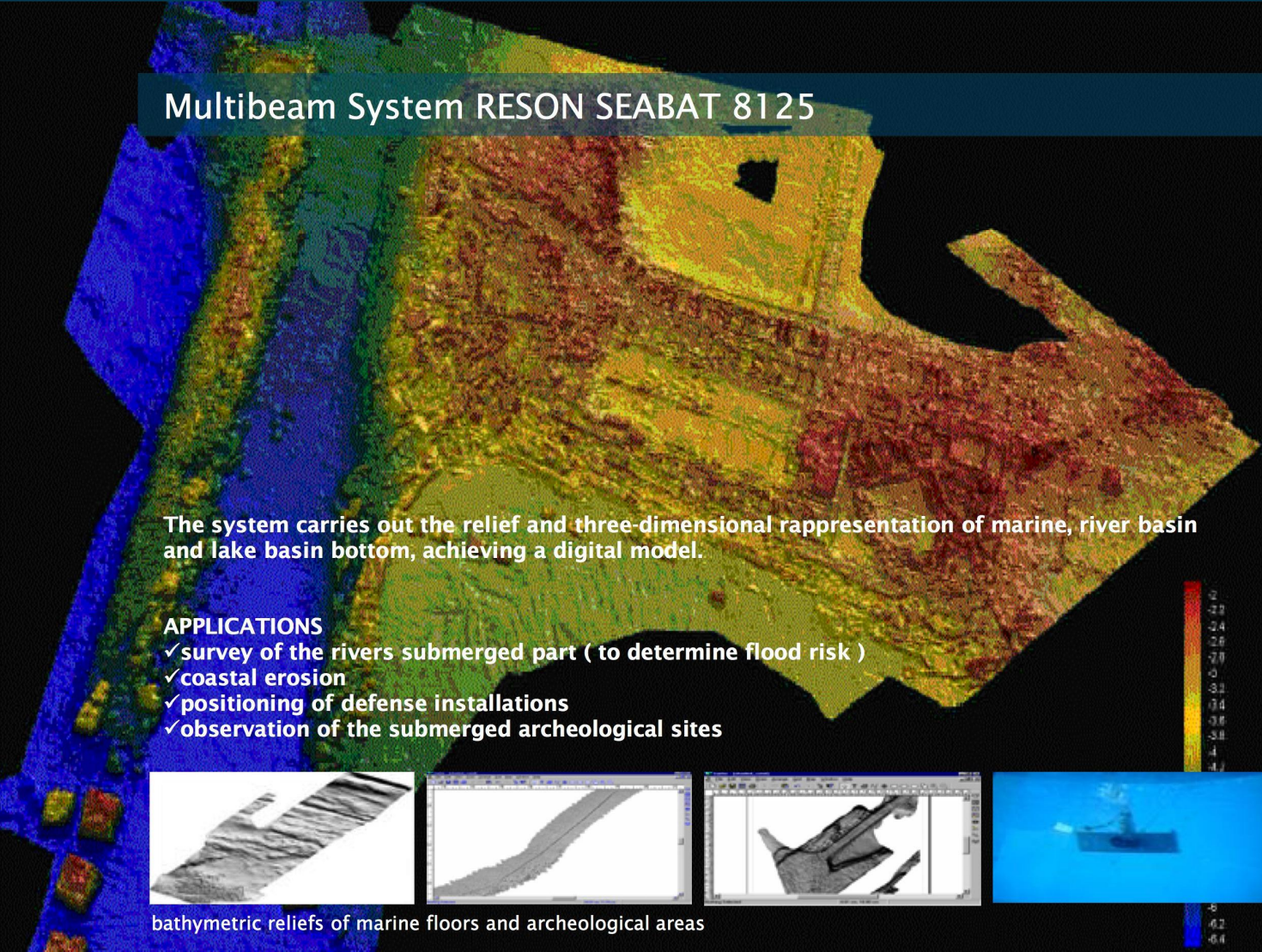
The system allows relief and three-dimensional representation of buildings and land elements, as well as industrial applications



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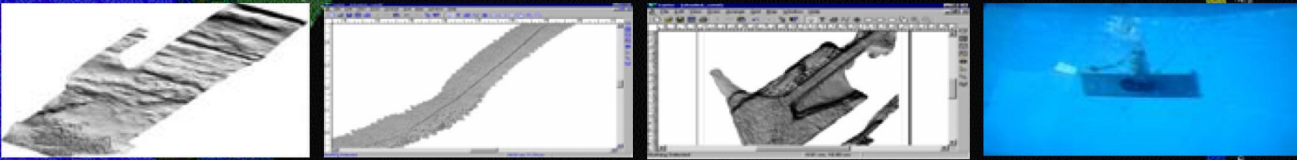
Multibeam System RESON SEABAT 8125



The system carries out the relief and three-dimensional representation of marine, river basin and lake basin bottom, achieving a digital model.

APPLICATIONS

- ✓ survey of the rivers submerged part (to determine flood risk)
- ✓ coastal erosion
- ✓ positioning of defense installations
- ✓ observation of the submerged archeological sites



bathymetric reliefs of marine floors and archeological areas

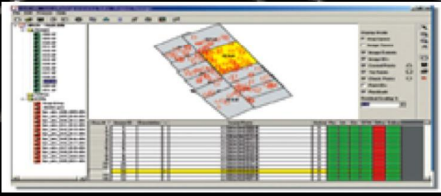
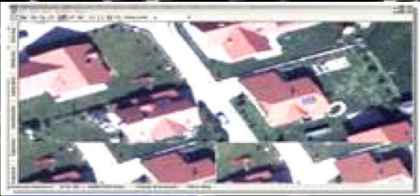
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Photogrammetric Software LPS

APPLICATIONS

- ✓ numerical cartography;
- ✓ aerial triangulation;
- ✓ digital land models (DTM);
- ✓ land surface models (DSM);
- ✓ ortophotos mosaic representation
- ✓ digital ortophotoplans;
- ✓ 3D ortophotoplans.



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Scientific Equipment

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Digital image

Dots cloud

Laser Scanner 3DaZoller & Froehlich

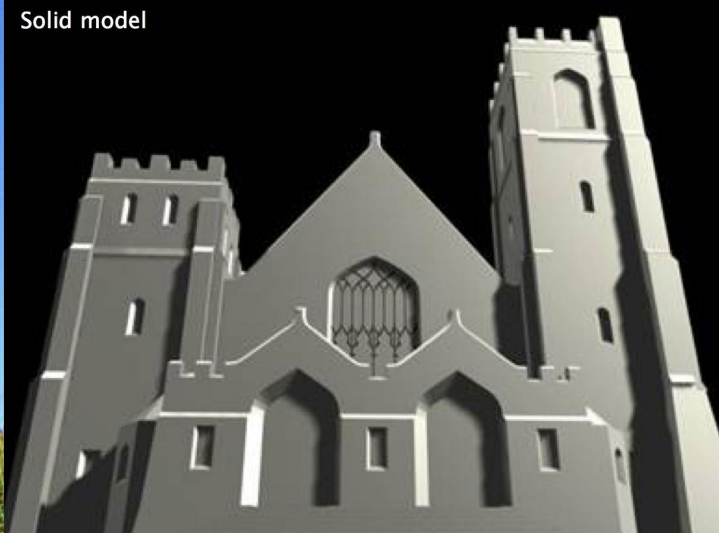


The laser scanner System 3D is particularly suitable for building relief and for land elements with a vertical development (rockfaces, pits, etc).



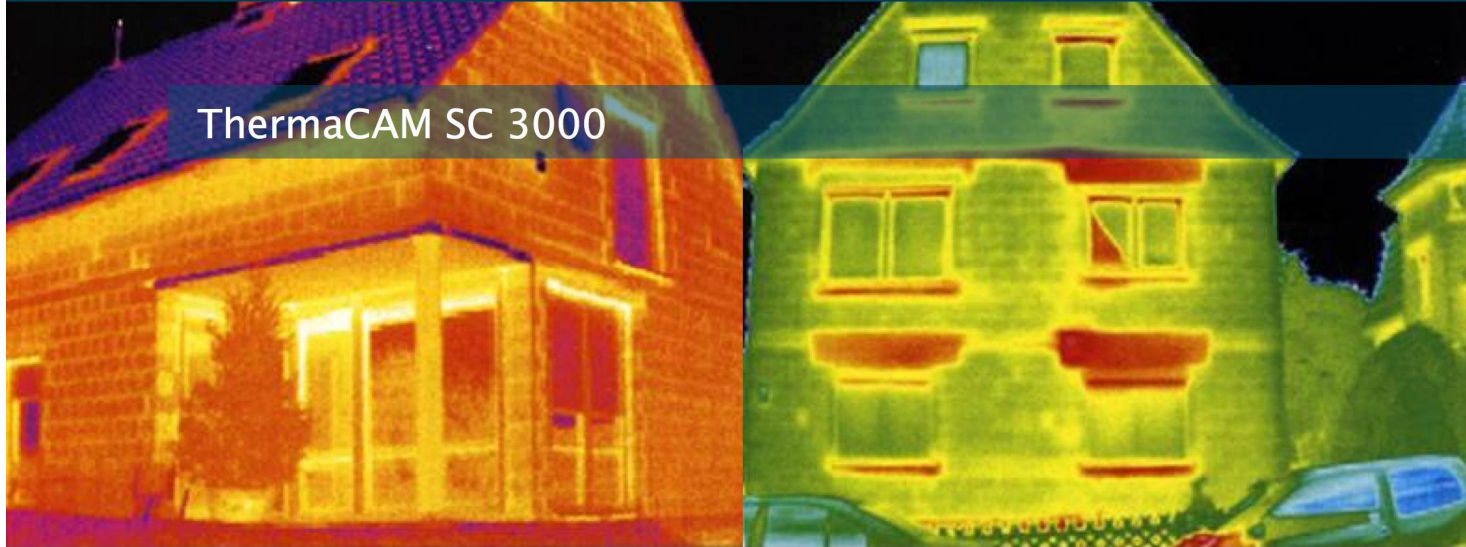
overlapping model-photograph

Solid model



Scientific Equipment

ThermaCAM SC 3000



APPLICATIONS

- ✓ isolation check
- ✓ isolation planning
- ✓ urban renewal planning
- ✓ energy dispersion identification
- ✓ research of infiltrations in roofs and walls
- ✓ condensation points localization
- ✓ structure check



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materials, elements and structural components testing
dynamic features testing
videoendoscopy inspections
tests with flat jacks
masonry structures surveys
steel structures surveys
structurals reliefs
pacometric investigations
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reinforced concrete structures surveys
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structures



Structural, functional and technological adjustment and the consolidation and refurbishment of buildings suppose a quali-quantitative knowledge that can be acquired through measures, analysis and experimental testing that allow the understanding and documentation of the investigation object in its complex layout.

structures

structures

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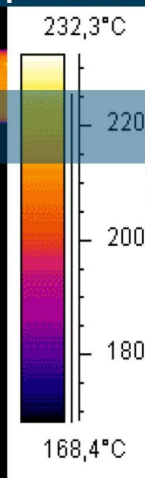
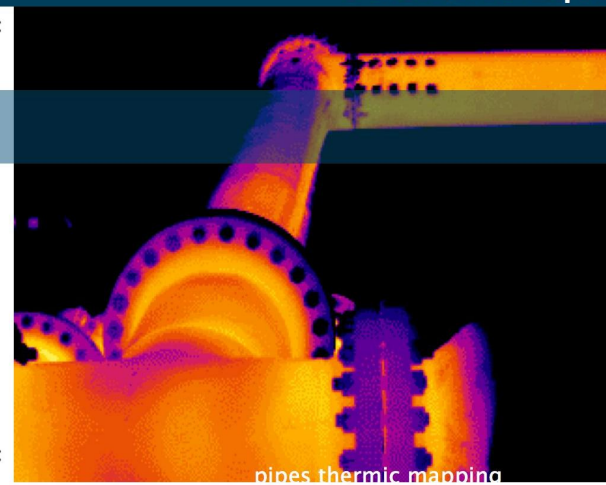
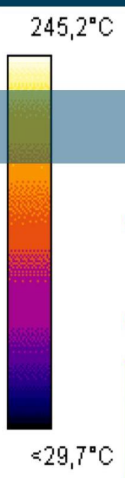
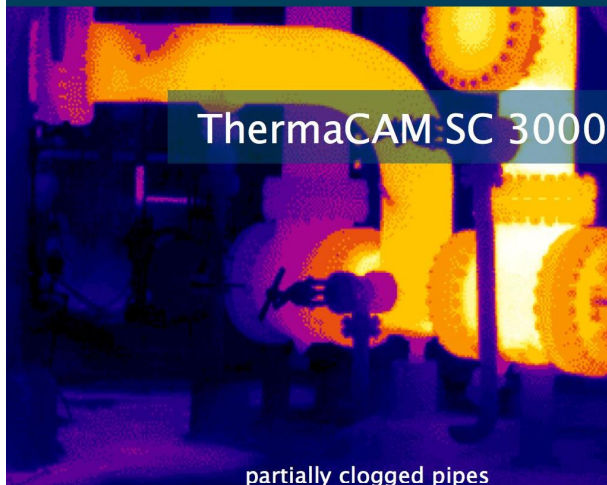
Ultrasonic system CMS • Station for deformability tests with flat jacks • High precision digital pacometer for reinforced concrete structures surveys (COVER MASTER CM9) • LPDAS Data acquisition control unit system for slit measuring devices • Videoendoscope • Structural investigations Radar system with DATA LOGGER (Georadar) • Equipment for semi-destructive and non destructive testing on masonry: RIS K2 system; Infrared thermacam • Digital oscilloscope

Scientific Equipment

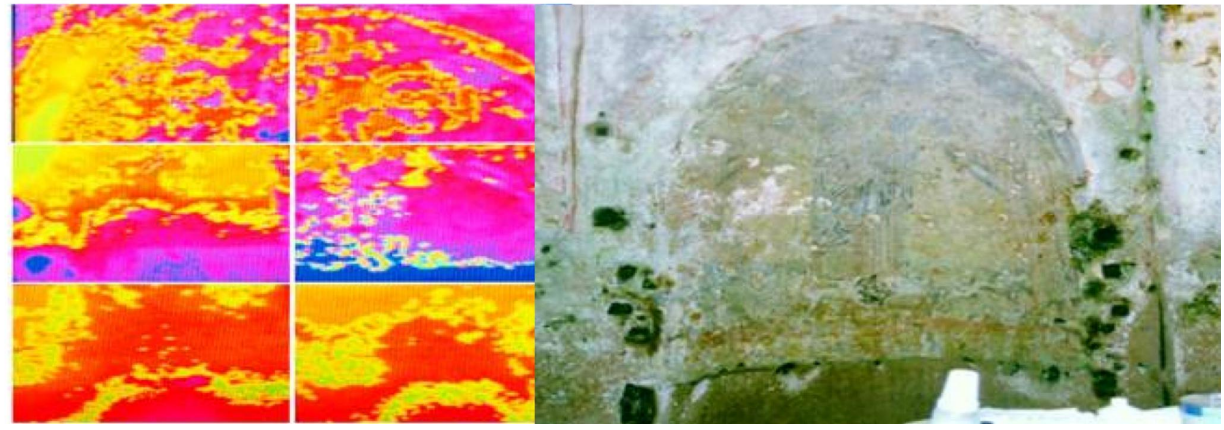
CRdC benecon
Centro Regionale di Competenza per i beni culturali ecologia economia per il recupero eco-compatibile e il design di supporto dei sistemi ambientali a valenza culturale

ambiente rappresentazione strutture **ars**

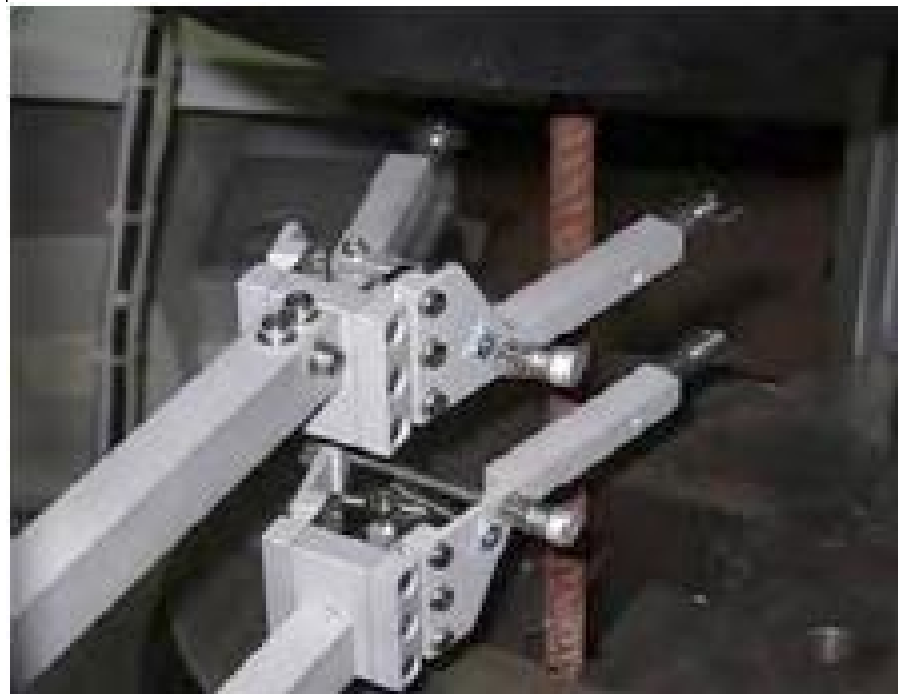
ThermaCAM SC 3000



Applications_termographic survey Cripta dei S.S. Stefani, Vaste (LE)

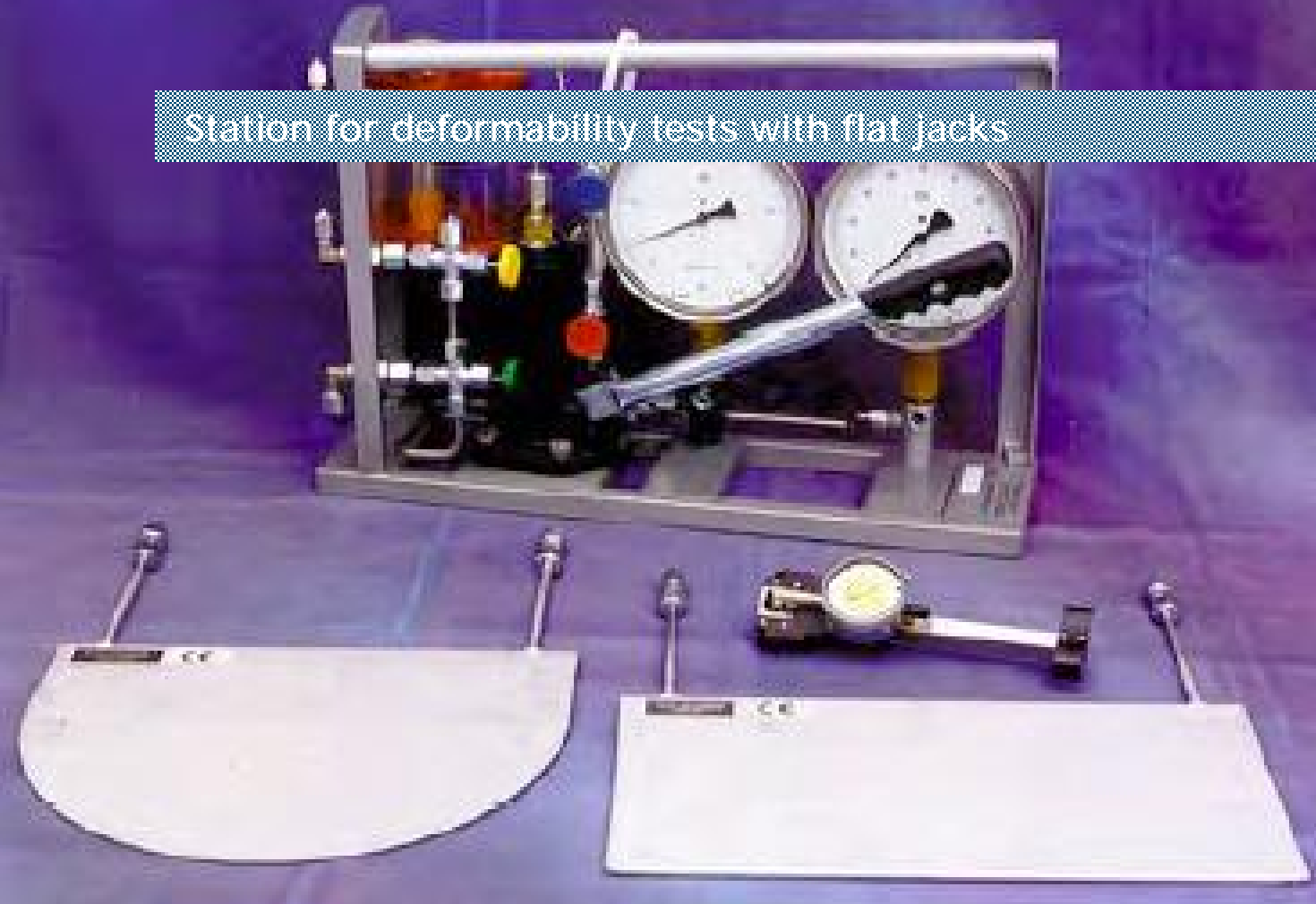


Equipment for semi-destructive testing on masonry



Scientific Equipment

Station for deformability tests with flat jacks



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Land and environment representation are based on a scientific multicriteri@ methodology of a **patented software Benecon Carta Uni.Te.Mi.Ca.** (minimum catalogued land unit charter). The platform implements the **knowledge network** through discretization and measure of all material and immaterial features of natural and built environment.



A vertical banner for Benecon. At the top, it says "CRdC benecon" in white on a dark background. Below that, it reads "Centro Regionale di Competenza per i beni culturali ecologia economia per il recupero eco-compatibile e il design di supporto dei sistemi ambientali a valenza culturale". Further down, there is a logo with the text "ambiente rappresentazione strutture" and "ars". At the bottom, it says "ars knowledge network benecon".

Patented software Carta Uni.Te.Mi.Ca. (Minimum Catalogued Land Unit Charter)

SISTEMAZIONE DELLA CARTA UNITE.MI.CA.

L1 Unità Minima di Riferimento		L2 Area Sottore Censuaria		L3 Anno della rete TeleAtlas		L4 Sinerzio puntuale Manifesto	
Layer Multicriteriali		L2 Fattori fisici e naturali Fattori antropici		L3 Simile Forme Acquedotti		L4 Topologia costruttiva (Sinerzio spazio-temporale) Dati catastali	
Tematismi		L2 Piani e programmi Ecologia Paisaggio		L3 Toponomastica Larghezza Forma		L4 Abilità Rilievo Scrittura ortografica Scrittura stilizzata	

Il Metodo Ecogeometrico consente, attraverso le Analisi Multicriteriali, di discretizzare il sistema complesso con sintesi sistemiche prodotte dalla Carta Digitale del Rilievo (Carta Uni.Te.Mi.Ca.) negli Layer della conoscenza.

Il data-base relazionale, interagendo dinamicamente con la restituzione non solo geometrica dell'organismo architettonico, entra nel corpo stesso dell'architettura con un sistema GIS, nel quale ogni punto assume una profondità d'indagine sempre implementabile.

L1

- L1 Identità
- L2 Fattori fisici e naturali
- L3 Fattori antropici e insediativi
- L4 Caratteri e valori visuali
- L5 Fonti

L2

- L1 Identità
- L2 Fattori fisici e naturali
- L3 Fattori antropici e insediativi
- L4 Caratteri e valori visuali
- L5 Caratteri dell'unità territoriale minima catalogata
- L6 Caratteri dell'unità immobiliare: Piano 1-n
- L7 Fonti

L3

- L1 Identità
- L2 Asse stradale
- L3 Entità principali
- L4 Sede stradale
- L5 Corpo stradale
- L6 Pertinenze
- L7 Concessioni
- L8 Fonti

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ambiente
rappresentazione
strutture

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ambiente
rappresentazione
strutture **ars**

PROF. CARMINE GAMBARELLA CENTRO REGIONALE DI COMPETENZA BENECON

Dipartimento di Cultura del Progetto_SUN_Direttore del Dipartimento e Responsabile Scientifico del Benecon_Centro Regionale di Competenza per i Beni Culturali Ecologia Economia Prof. Carmine Gambardella

cartaUNI.TE.MI.CA.*

[* Unità Territoriale Minima di catalogazione]

Indice Chiudi applicazione

L territorio L manufatto L infrastruttura	—	Edificio	Nome di accesso		Gestione Accessi
		Cava	<input type="text"/>	Password	
			<input type="text"/>	<input type="button" value="Entra"/>	

P.O.R. Campania 2000/2006
"Il progetto è stato realizzato con il cofinanziamento dell'Unione Europea"
Misura 3.16_Promozione della ricerca e dal trasferimento tecnologico nei settori connessi alla crescita ed allo sviluppo sostenibile della Regione Campania.
Benecon_Centro Regionale di Competenza per i Beni Culturali Ecologia Economia
Abazia di San Lorenzo ad Septimum_Borgo San Lorenzo I_80131 Aversa (CE)
tel/fax +39.081.8149266/8141593 www.benecon.it info@benecon.it



ars knowledge network
benecon

Identità		L1	
1. DATI CATALOGAZIONE		3. DATI GENERALI nell'unità spaziale di appartenenza	
1.1 Compilatore	CHIARA IMPERATI	3.8.1 Zona residenziale/Abitazione	<input checked="" type="checkbox"/> n°:
1.2 Data Catalogazione	19/06/2006	3.8.2 Edificio Scolastico	<input type="checkbox"/> n°:
1.3 Data Aggiornamento	04/09/2006	3.8.3 Edificio Universitario	<input type="checkbox"/> n°:
1.4 Data Sopralluogo	09/06/2006	3.8.4 Ospedale	<input type="checkbox"/> n°:
1.5 Foglio	17	3.8.5 Chiesa	<input type="checkbox"/> n°: 1
1.6 Particella	43	3.8.6 Convento	<input type="checkbox"/> n°:
2. DATI LOCALIZZATIVI		3.8.7 Biblioteca	<input type="checkbox"/> n°:
2.1 ID/Codice Comune	Q5BH	3.8.8 Banca	<input checked="" type="checkbox"/> n°: 1
2.2 Denominazione		3.8.9 Cinema	<input type="checkbox"/> n°:
2.3 Provincia	SA	3.8.10 Ufficio Postale	<input checked="" type="checkbox"/> n°: 1
2.4 Comune	CASTELLABATE	3.8.11 Ufficio Amministrativo	<input type="checkbox"/> n°:
2.5 Frazione/Località		3.8.12 Municipio	<input type="checkbox"/> n°:
2.6 Localizzazione/Via	CORSO MATERAZZO	3.8.13 Supermercato	<input checked="" type="checkbox"/> n°: 2
2.7 Toponimo		3.8.14 Attività commerciale di I° necessità	<input checked="" type="checkbox"/> n°:
3. DATI QUANTITATIVI nell'unità spaziale di appartenenza		3.8.15 Attività artigiane	<input checked="" type="checkbox"/> n°:
3.1 Superficie totale	38467	3.8.16 Edifici non utilizzati	<input checked="" type="checkbox"/> n°:
3.2 Superficie totale edificata	2368	3.8.17 Cimitero	<input type="checkbox"/> n°:
3.3 Superficie totale non edificata	36099	3.8.18 Parcheggio	<input checked="" type="checkbox"/> n°: 1
3.4 Superficie edificata/Superficie totale	0,06 %	3.8.19 Azienda Agricola	<input type="checkbox"/> n°:
3.5 Area Verde/Superficie totale	0,74 %	3.8.20 Industria	<input type="checkbox"/> n°:
3.6 Spazi liberi/Superficie totale	0,02 %	3.8.21 Giardino Pubblico	<input type="checkbox"/> n°:
3.7 Strade/Superficie totale	0,11 %	3.8.22 Parco	<input checked="" type="checkbox"/> n°: 1
		3.8.23 Area Agricola	<input type="checkbox"/> n°:
		3.8.24 Area Sportiva	<input type="checkbox"/> n°:
		3.8.25 Emergenza storica-ambientale	<input checked="" type="checkbox"/> n°:
		3.8.26 Dote	<input checked="" type="checkbox"/> n°:
		3.8.27 Compromissione	<input type="checkbox"/> n°:
		3.8.28 Stazione	<input type="checkbox"/> n°: 0
		3.8.29 Bar	<input checked="" type="checkbox"/> n°: 4
		3.8.30 Altro	<input type="checkbox"/> n°:
		3.9 Note	

CARTA UNI.TE.MI.CA.

Carta dell'unità territoriale minima catalogata

Risultato Ricerca: 1	
Foglio	Particella
17	43

Ricerca

Seleziona Tutto

Invia al GIS

Foglio

Particella

Visualizza

Elimina

Stampa

Stampa TUTTO

Ripulisci Pagina

Ripulisci Tutto

Salva Informazioni

Indietro

Avanti

Menu Principale

L1 1-2-3 4 5 6 L2 1 L3 1-2-3 4-5-6-7 8 9-10 11-12 L4 1-2-3 4 L5 1-2-3 4 5 6-7-8 9 10 11-12 13 14-15-16 17-18-19-20 21-22 L6 1-2 3 4 5 6-7-8 9 10-11-12 13 14 15 L7 1 TAB2 LME

Identità L1

4. DATI URBANISTICI

UNITA' EDILIZIA	4.1 Codice Comune	05BH	VINCOLI	4.29 Idrogeologico	<input type="checkbox"/>
	4.2 Descrizione			4.30 Archeologico	<input type="checkbox"/>
	4.3 Indirizzo	CORSO MATERAZZO		4.31 Storico	<input type="checkbox"/>
	4.4 Note			4.32 Sismico	<input type="checkbox"/>
	4.5 NCEU	SALERNO		4.33 Militare	<input type="checkbox"/>
	4.6 Sezione			4.34 Altro	<input type="checkbox"/>
	4.7 Foglio	17		4.35 Note (leggi e articoli)	
	4.8 Particelle	43		4.36 Adottato dal Consiglio Comunale	<input checked="" type="checkbox"/>
	4.9 Subalterni	1		4.37 Delibera n°	
	4.10 Categoria			4.38 Data	<input type="checkbox"/> 22/12/2006
	4.11 Classe			4.39 Approvato dal Consiglio Comunale	<input checked="" type="checkbox"/>
	4.12 Consistenza			4.40 Decreto n°	
	4.13 Rendita			4.41 Data	<input type="checkbox"/> 22/12/2006
	4.14 Proprietà	COMUNALE		4.42 Zona PRG	A1 CENTRO STORICO
CATASTO URBANO	4.15 Sezione		PRG	4.43 Piano di Zona	<input type="checkbox"/>
	4.16 Foglio			4.44 Programma del traffico urbano	<input type="checkbox"/>
	4.17 Particelle			4.45 Piano di zonizzazione acustica	<input type="checkbox"/>
	4.18 Qualità			4.46 Normative di attuazione	<input type="checkbox"/>
	4.19 Classe			4.47	<input type="checkbox"/>
	4.20 Rendita			4.48	<input type="checkbox"/>
CATASTO TERRENI	4.21 Rendita Domenicale		PIANTE PROGRAMMI	4.49 Altro	<input checked="" type="checkbox"/> PIANO PAESISTICO; PIANO
	4.22 Rendita Agraria			4.50 Intensità di traffico bassa	<input checked="" type="checkbox"/>
	4.23 Tavoleta IGM	12		4.51 Intensità di traffico media	<input type="checkbox"/>
	4.24 Quadrante	502		4.52 Intensità di traffico alta	<input type="checkbox"/>
	4.25 Descrizione			4.53 Accessibilità con mezzi pubblici	<input type="checkbox"/>
IGM	4.26 Censito	<input type="checkbox"/>	ACCESSIBILITA'	4.54 Fermata Bus	<input type="checkbox"/>
	4.27 Non Censito	<input type="checkbox"/>		4.55 Stazione linee ferrate	<input type="checkbox"/>
	4.28 Note				
C. P. NAPOLEONICO					

CARTA UNI.TE.MI.CA.
Carta dell'unità territoriale minima catalogata

Risultato Ricerca: 1

Foglio	Particella
17	43

Ricerca Selezione Tutto

Invia al GIS

Foglio Particella

Visualizza Informazioni

Stampa Informazioni

Ripulisci Pagina Ripulisci Tutto

Salva Informazioni

Indietro Avanti

Menu Principale


L1 1-2-3 4 5 6 L2 1 L3 1-2-3 4-5-6-7 8 9-10 11-12 L4 1-2-3 4 L5 1-2-3 4 5 6-7-8 9 10 11-12 13 14-15-16 17-18-19-20 21-22 L6 1-2-3 4 5 6-7-8 9 10-11-12 13 14 15 L7 1 TAB3 LME

Identità

5. IDENTIFICAZIONE DELL'UNITA' SPAZIALE NEL TESSUTO URBANO

Seleziona l'immagine da visualizzare

Y:\CASTELLABATE\17\43\LIF2\PAG2 COPIA.JPG



CARTA UNI.TE.MI.CA.
 Carta dell'unità territoriale minima catalogata

Risultato Ricerca: 1	
Foglio	Particella
17	43

Ricerca Seleziona Tutto

Invia al GIS

Foglio Particella

Visualizza Informazioni

Stampa Informazioni

Ripulisci Pagina Ripulisci Tutto

Salva Informazioni

Indietro Avanti

Menu Principale

PLANIMETRIA DEL TESSUTO URBANO

Immagine 03



			Foglio	Particella	Cod	N° Foto	Foglio	Particella	Cod	N° Foto		
6.1	A	Veduta d'insieme	17	43	A	1					+	✓
6.2	B	Veduta d'insieme	17	43	B	2					+	✓
6.3	C	Veduta d'insieme									+	✓
6.4	D	Veduta d'insieme									+	✓
6.5	E	Emergenze ambientali									+	✓
6.6	F	Emergenze ambientali									+	✓
6.7	G	Emergenze ambientali									+	✓
6.8	H	Emergenze ambientali									+	✓
6.9	I	Emergenze storiche									+	✓
6.10	L	Emergenze storiche									+	✓
6.11	M	Emergenze storiche									+	✓
6.12	N	Emergenze storiche									+	✓
6.13	O	Facciata	17	43	O	3					+	✓
6.14	P	Facciata									+	✓
6.15	Q	Facciata	17	43	Q	4					+	✓
6.16	R	Facciata	17	43	R	5					+	✓
6.17	S	Portale									+	✓
6.18	T	Portale									+	✓
6.19	U	Altro	17	43	U	6					+	✓

CARTA UNI.TE.MI.CA.

Carta dell'unità territoriale minima catalogata

Risultato Ricerca: 1	
Foglio	Particella
17	43

Ricerca

Seleziona Tutto

Invia al GIS

Foglio

Particella

Visualizza Informazioni

Stampa Informazioni

Ripulisci Pagina

Ripulisci Tutto

Salva Informazioni

Indietro

Avanti

Menu Principale



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e il design di supporto dei sistemi
ambientali a valenza culturale



caratteri dell'unità territoriale minima catalogata

L5

1. DATI GENERALI		COMP. SOCIALE	
1.1 UTE	CASTELLABATE	1.31 Classe di utenza	TURISTI, LA
1.2 NCEU	SALERNO	1.32 n° famiglie	
1.3 Foglio	17	1.33 Provenienza	
1.4 Sezione		1.34 Fascia di età prevalente	
1.5 Particella catastale	43	1.35 Diversamente Abili	<input type="checkbox"/>
1.6 Destinazione catastale		2. DATI QUANTITATIVI	
1.7 Categoria		2.1 Superficie totale	mq. 382.30
1.8 Classe		2.2 Superficie coperta	mq. 220
1.9 Planimetria disponibile	<input checked="" type="checkbox"/>	2.3 Piani fuori terra	n. 2
1.10 Planimetria conforme	<input type="checkbox"/>	2.3.1 Sup. coperta media di piano	mq. 220
1.11 Denominazione	VILLA MATARAZZO	2.3.2 Sup. scoperta	mq. 160
1.12 Via	VIA MATARAZZO	2.3.3 Altezza media di piano	m. 6
1.13 Mancata verifica	<input type="checkbox"/>	2.4 Piani interrati	n. 0
1.14 Aggiornamento in corso	<input type="checkbox"/>	2.4.1 Sup. coperta media di piano	mq.
1.15 Isolato	<input checked="" type="checkbox"/>	2.4.2 Sup. scoperta	mq.
1.16 Interno	<input type="checkbox"/>	2.4.3 Altezza media di piano	m.
1.17 Estremità	<input type="checkbox"/>	2.5 Spazi comuni	n.
1.18 D'angolo	<input type="checkbox"/>	2.5.1 Sup. coperta media di piano	mq.
1.19 Staticamente autonomo	<input checked="" type="checkbox"/>	2.5.2 Sup. scoperta	mq.
1.20 Particella libera	<input type="checkbox"/>	2.5.3 Altezza media di piano	m.
1.21 Particella edificata	<input checked="" type="checkbox"/>	2.6 Unità immobiliari	n.
1.22 Pubblica	<input checked="" type="checkbox"/>	2.7 Unità abitative	n.
1.23 Privata	<input type="checkbox"/>	2.8 Vani	n. 60 CIRCA
1.24 Unifamiliare a schiera	<input type="checkbox"/>	2.9 Scale	n. 5
1.25 Unifamiliare isolata	<input type="checkbox"/>	2.10 Box	n.
1.26 Collettiva a corte	<input checked="" type="checkbox"/>	2.11 Autorimesse	n.
1.27 Collettiva a blocco	<input type="checkbox"/>	2.12 Posti auto	n.
1.28 Unifamiliare colonica	<input type="checkbox"/>	2.13 Volume totale edificio	mc 4500 C.
1.29 Altro		2.13.1 Volume edificio fuori terra	mc 4500 C.
1.30 Vie d'accesso	n° 2	2.13.2 Volume edificio interrato	mc
1.30.1 Accessi veicolare	CORSO MATARAZZO, PIAZZA M	2.14 Superficie pavimentata	mq. 382.30
1.30.2 Accesso pedonale	CORSO MATARAZZO, PIAZZA M	2.15 Superficie coltivata	mq.
		2.16 Superficie incolta	mq.
		2.17 Superficie a verde	mq.

CARTA UNI.TE.MI.CA.

Carta dell'unità territoriale minima catalogata

Risultato Ricerca: 1	
Foglio	Particella
17	43

Ricerca Selezione Tutto

Invia al GIS

Foglio Particella

Visualizza Informazioni

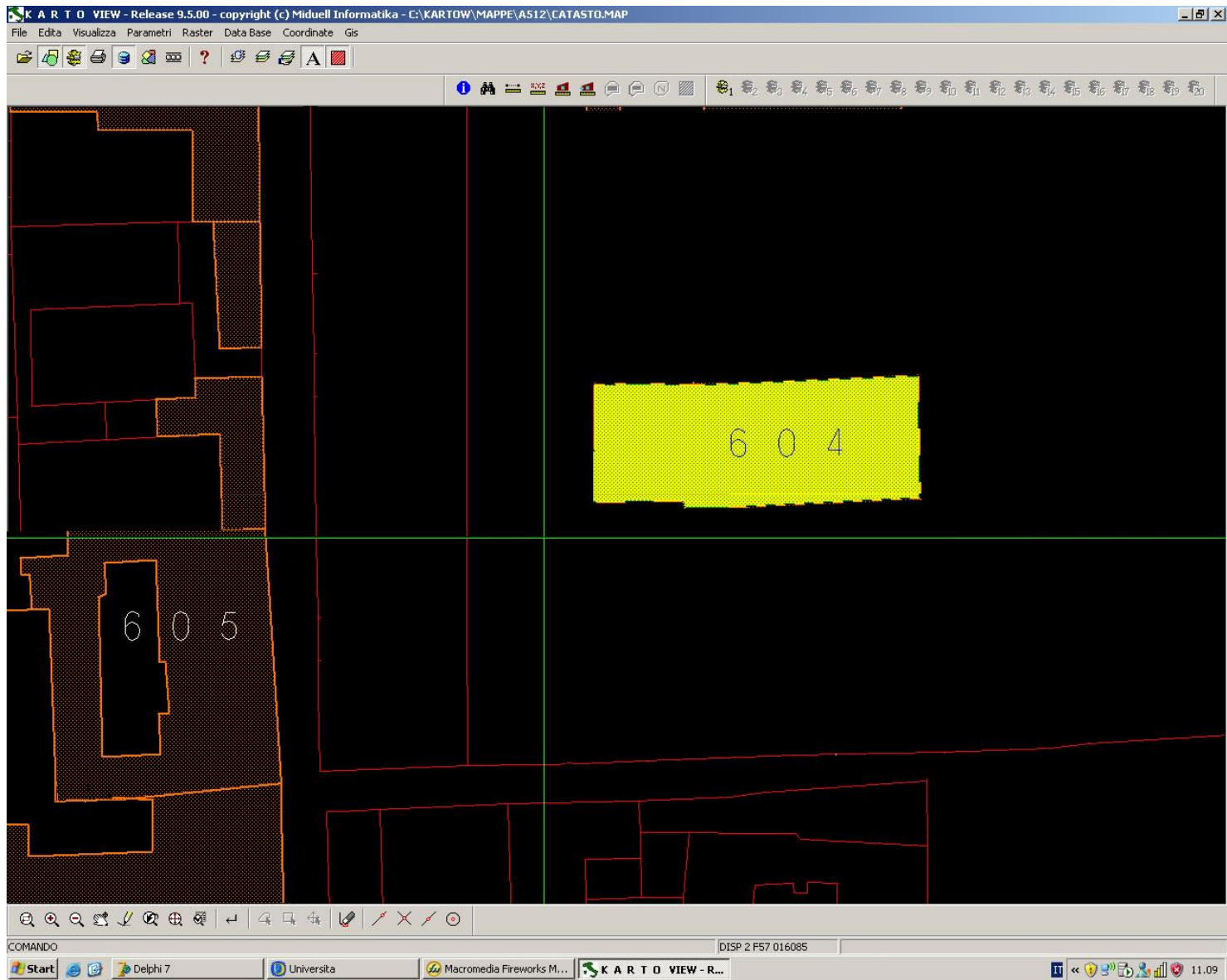
Stampa Informazioni

Ripulisci Pagina Ripulisci Tutto

Salva Informazioni

Indietro Avanti

Menu Principale



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 per il recupero eco-compatibile
 e il design di supporto dei sistemi
 ambientali a valenza culturale

ambiente
 rappresentazione
 strutture **ars**

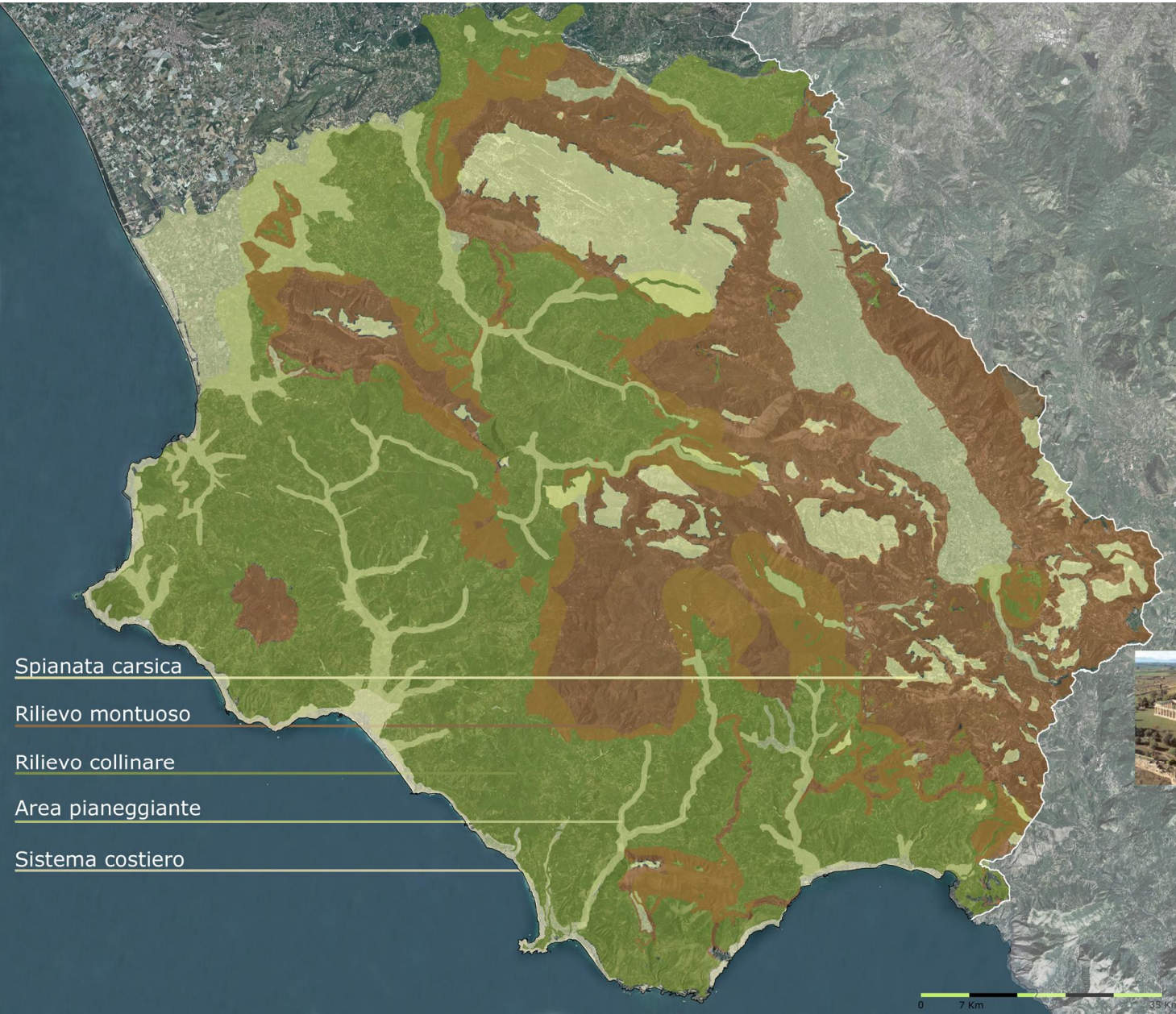


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per il recupero eco-compatibile
e il design di supporto dei sistemi
ambientali a valenza culturale



Goal of **Regional Research Centre Benecon**, Cultural heritage, ecology and economy is increase the value of material culture in order to **develop local economy**.
The Center created a **network for the upgrading of multi-criteria competences** for the technological transfer and support to the territorial stakeholders.

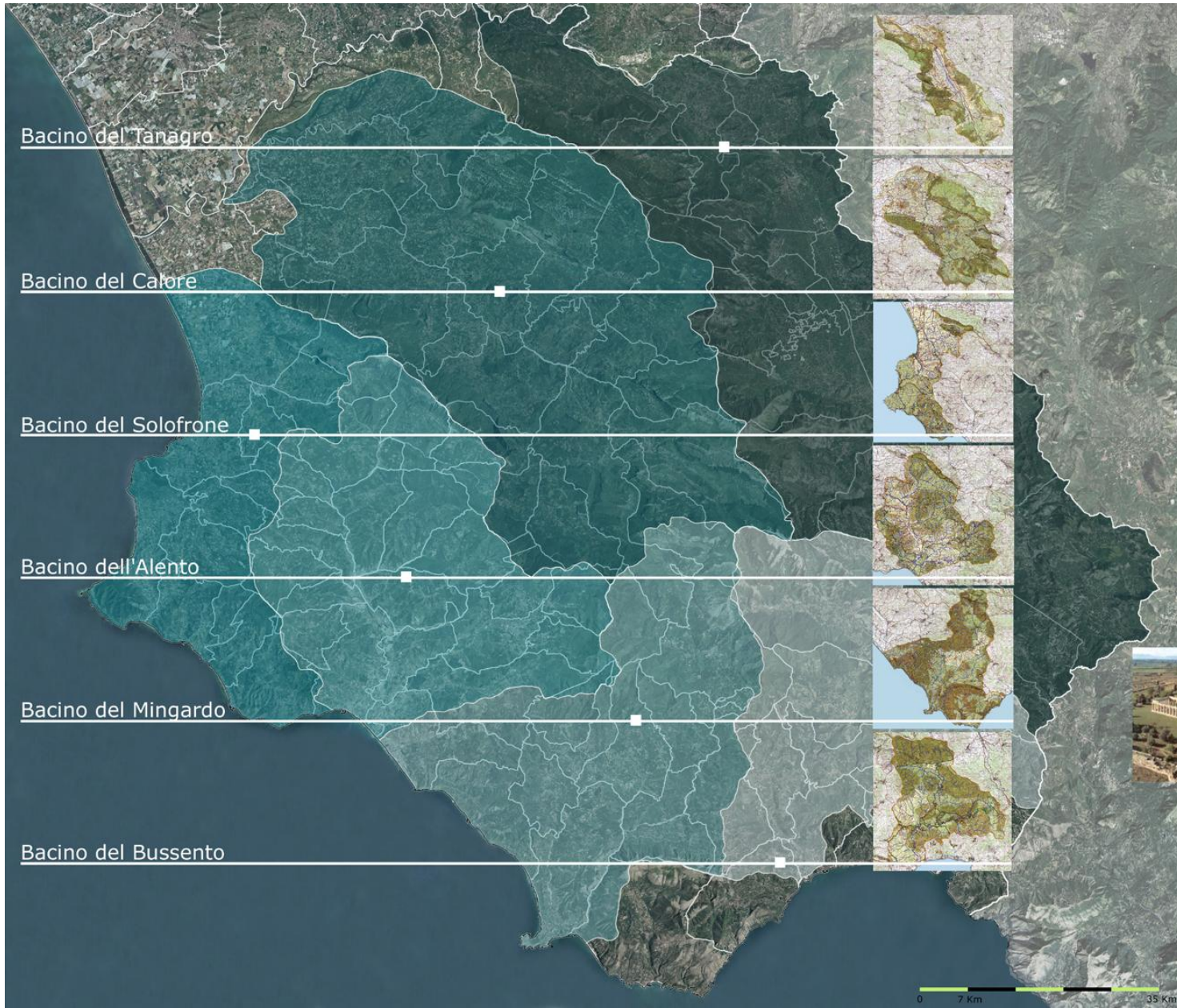




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ambiente
 rappresentazione
 strutture **ars**

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 per i beni culturali ecologia economia
 per il recupero eco-compatibile
 e il design di supporto dei sistemi
 ambientali a valenza culturale

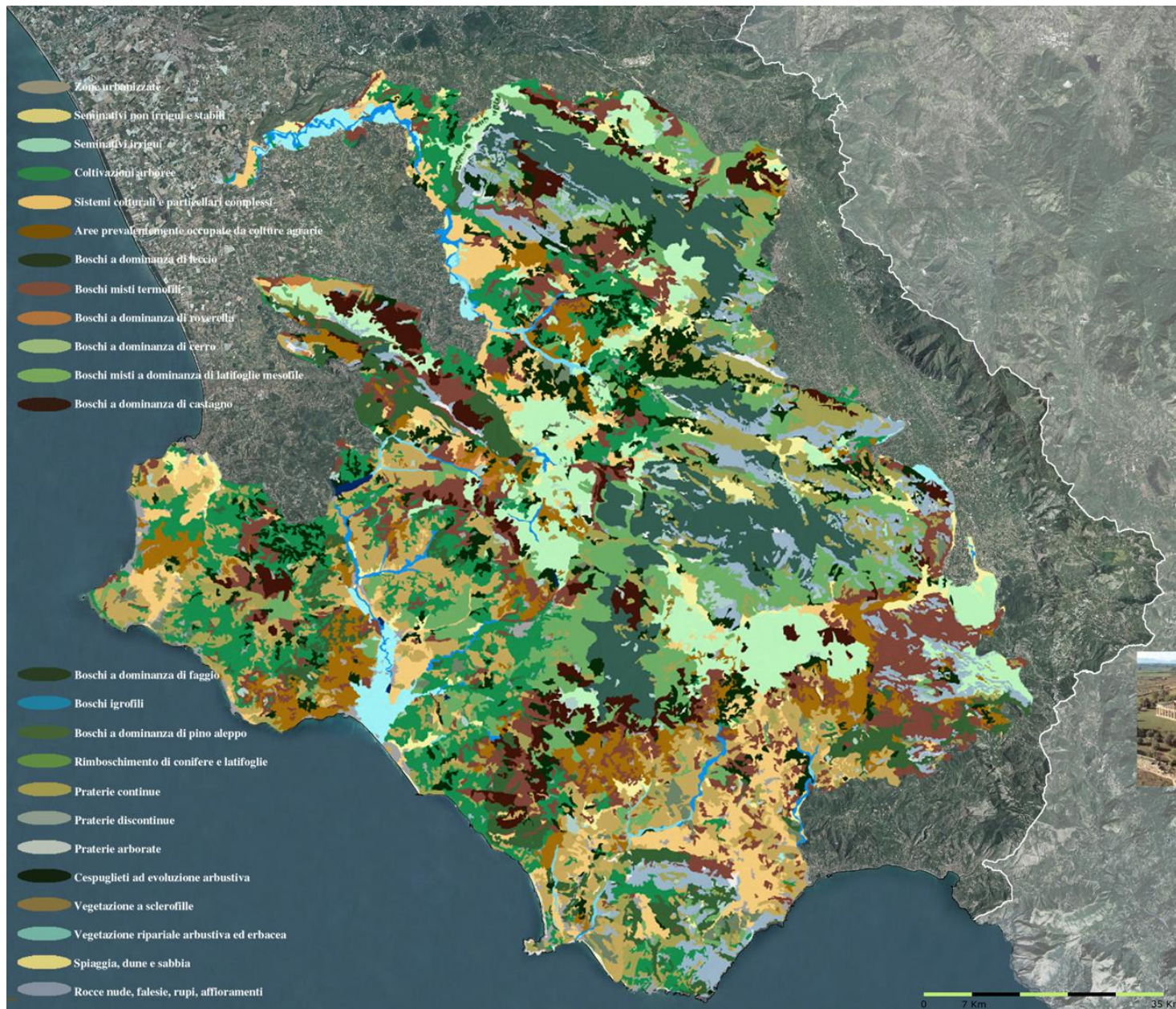
ambiente
 rappresentazione
 strutture **ars**

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ambiente
rappresentazione
strutture



Art. 8-Zonizzazione Piano del Parco
 - zone A, di riserva integrale
 - zone B, di riserva generale orientata
 - zone C, di protezione
 - zone D, di promozione economica e sociale

A1 zone di riserva integrale naturale

A2 zone di riserva integrale di interesse storico-culturale e paesistico

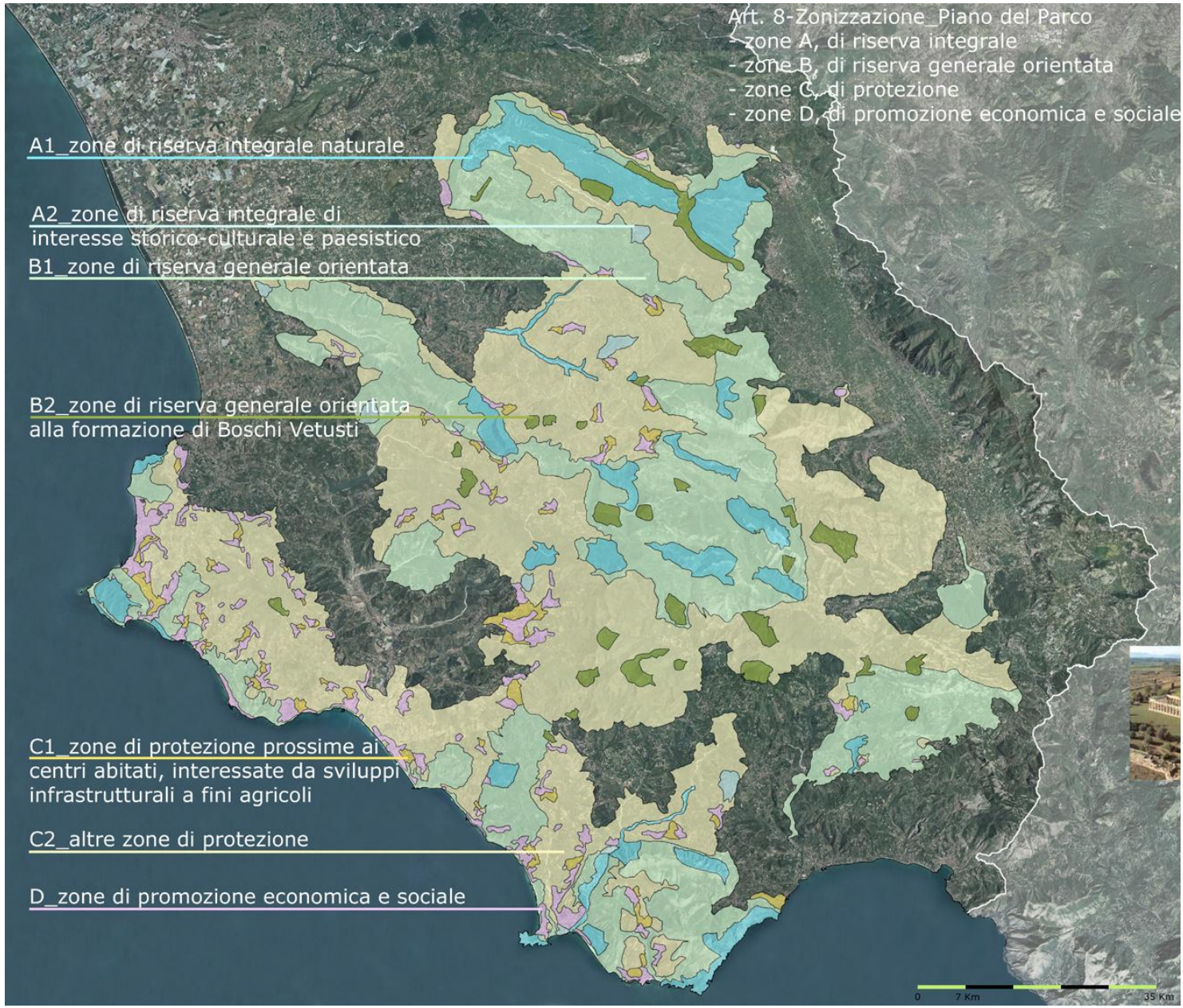
B1 zone di riserva generale orientata

B2 zone di riserva generale orientata alla formazione di Boschi Vetusti

C1 zone di protezione prossime ai centri abitati, interessate da sviluppi infrastrutturali a fini agricoli

C2 altre zone di protezione

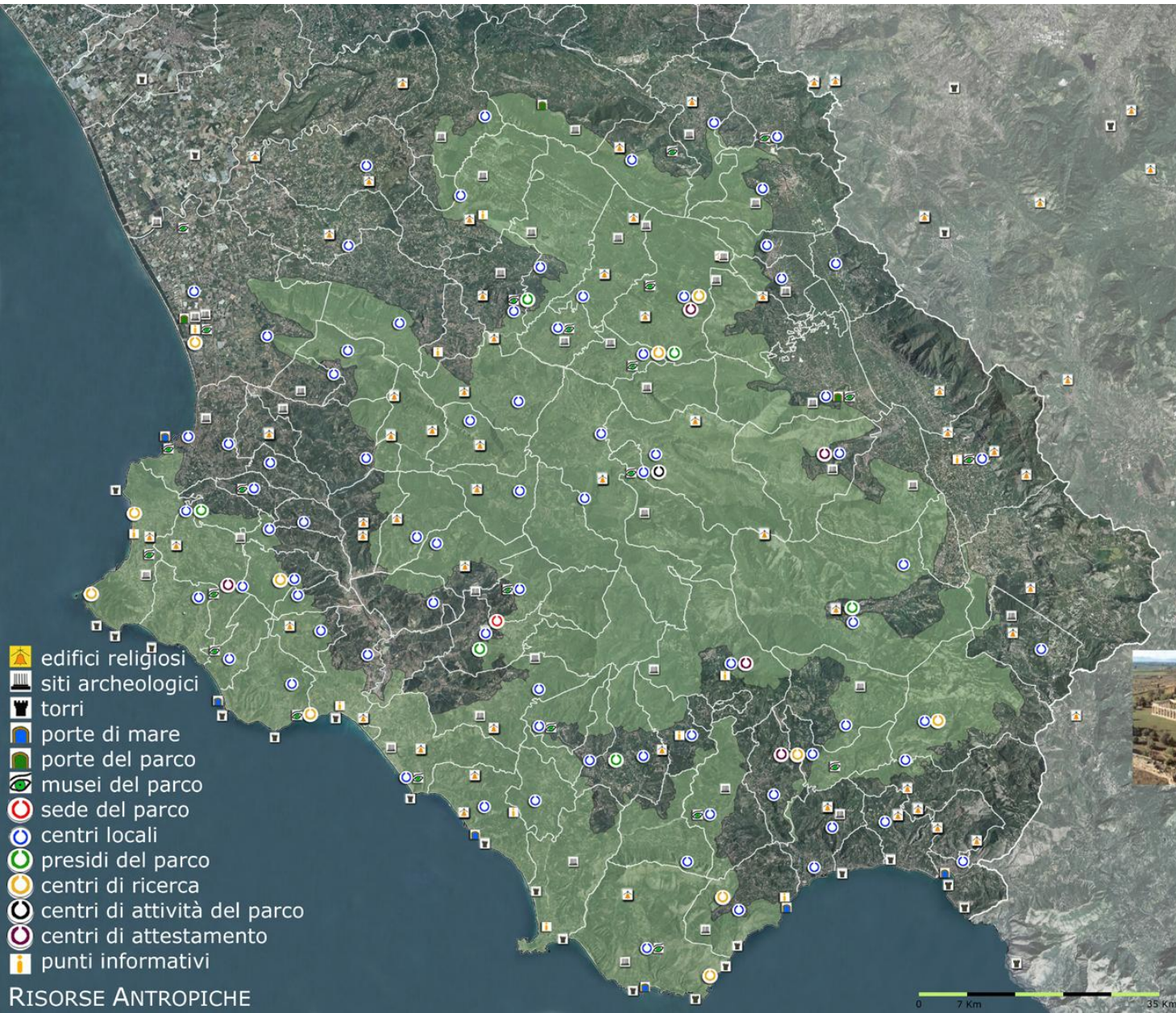
D zone di promozione economica e sociale



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ambiente
 rappresentazione
 strutture **ars**

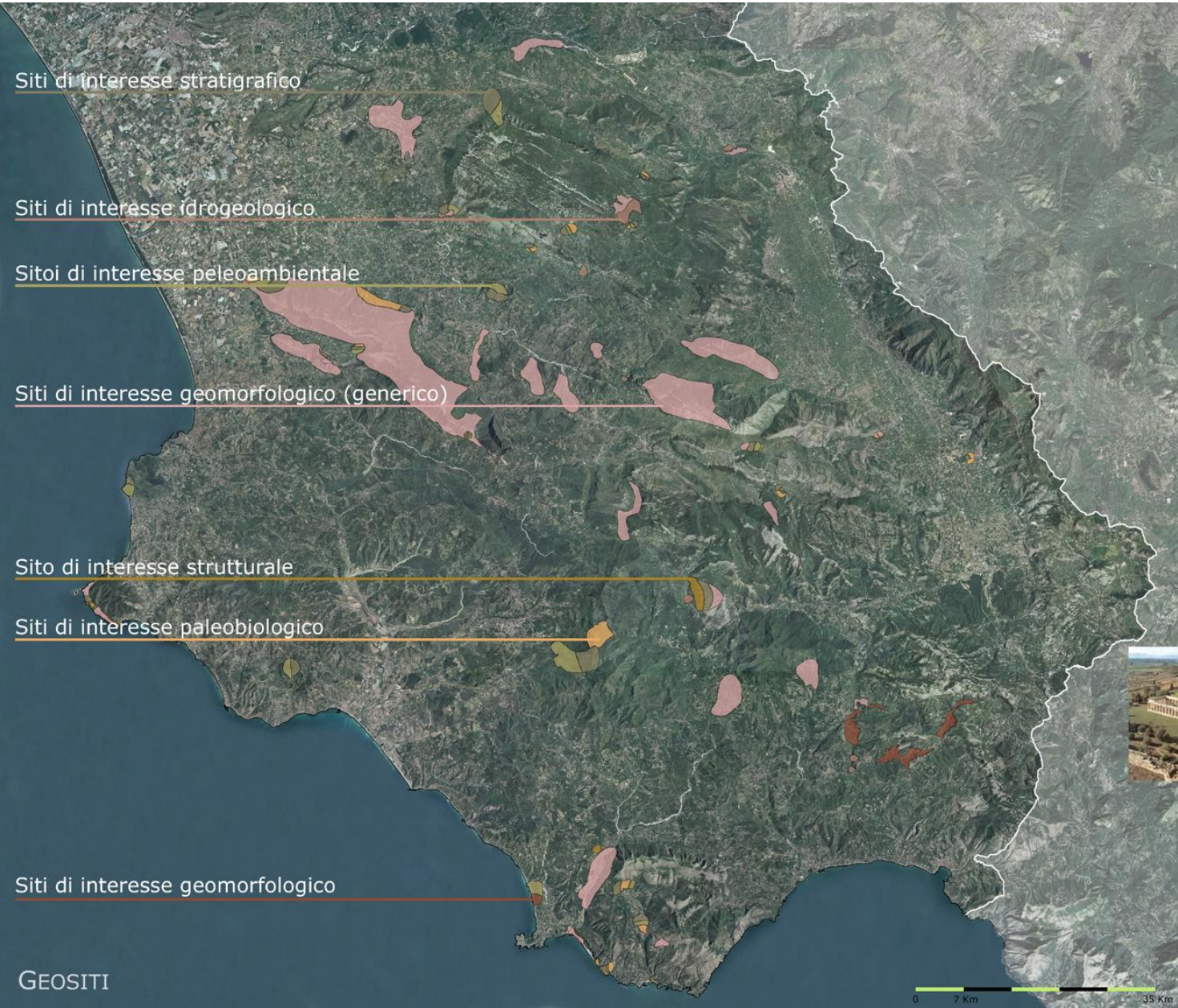




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 per il recupero eco-compatibile
 e il design di supporto dei sistemi
 ambientali a valenza culturale

ambiente
 rappresentazione
 strutture **ars**

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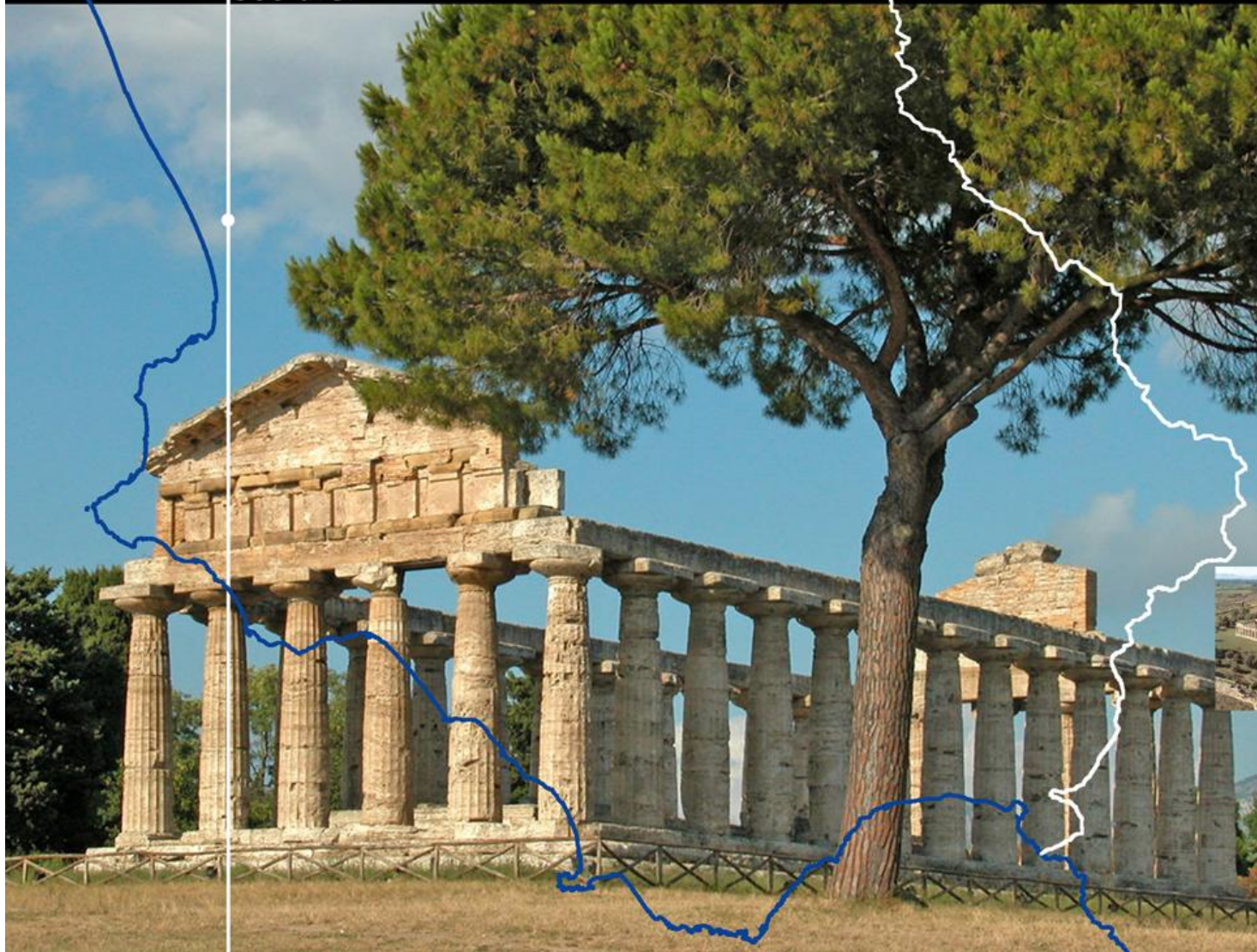


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ambientali a valenza culturale



PAESTUM_Tempio di Cerere
500 a.C.



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e il design di supporto dei sistemi
ambientali a valenza culturale

ambiente
rappresentazione
strutture **ars**



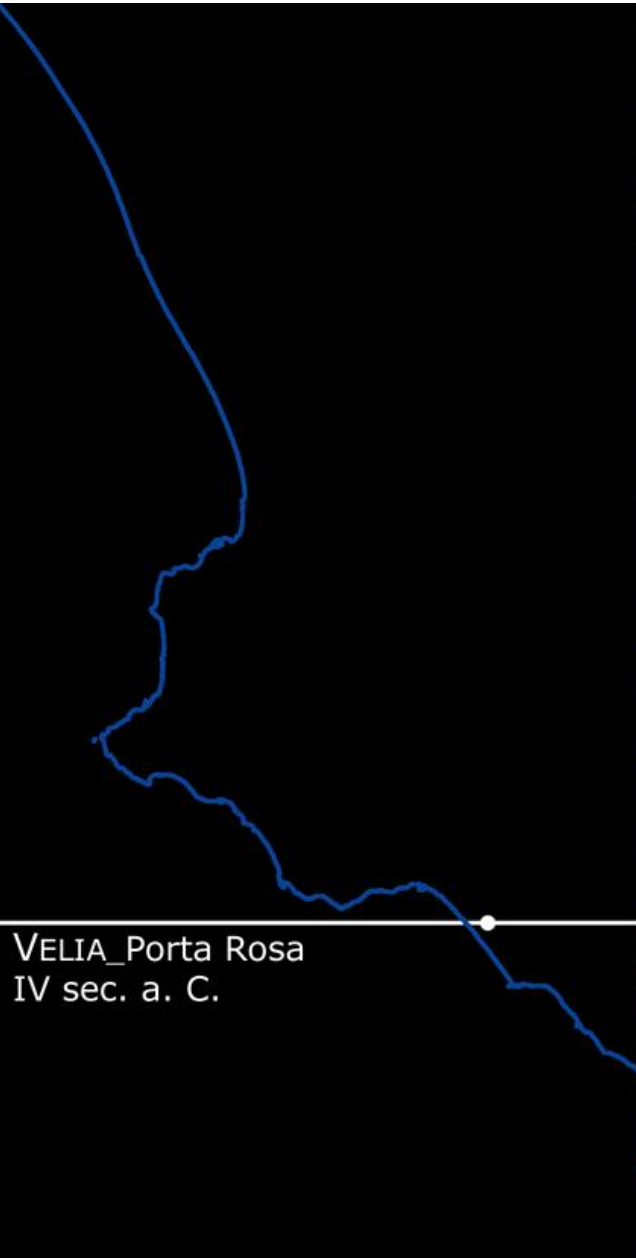


PAESTUM_Tomba del Tuffatore
480 a.C.

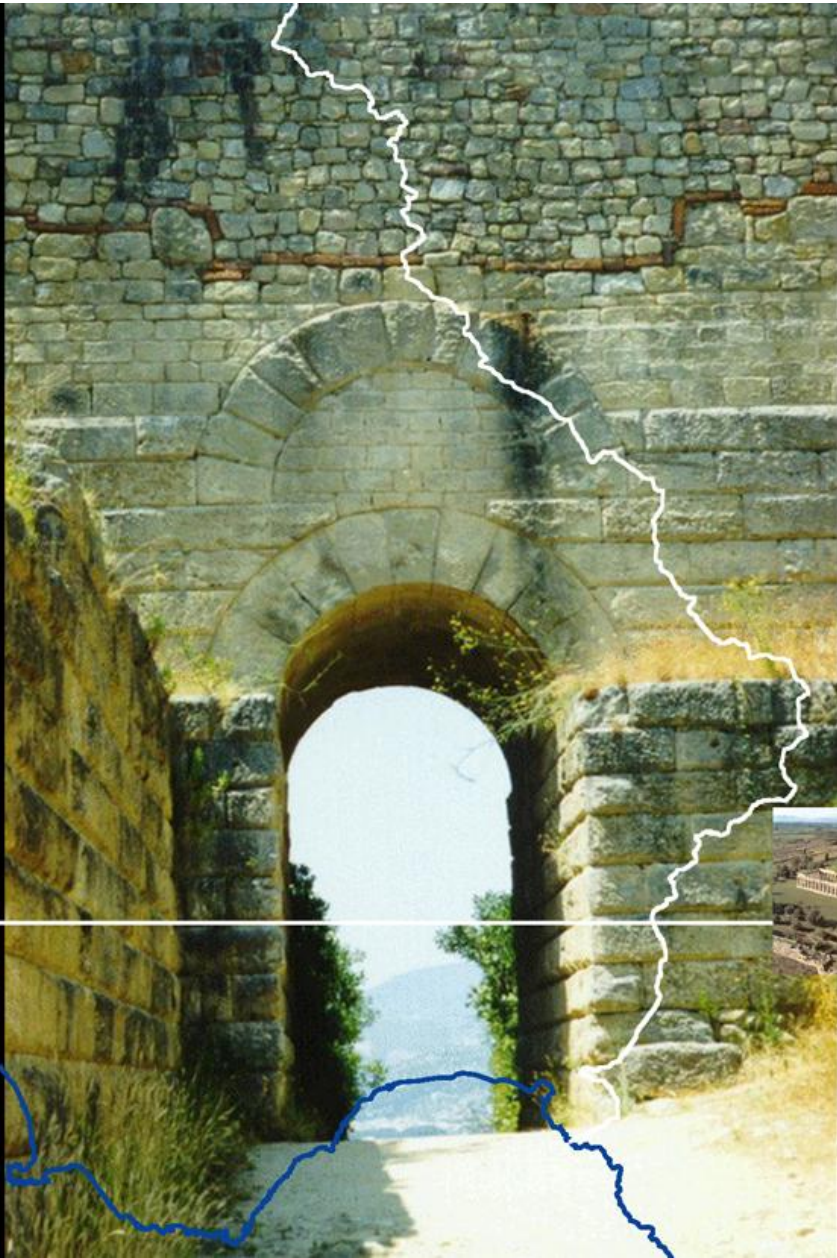
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e il design di supporto dei sistemi
ambientali a valenza culturale

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rappresentazione
strutture **ars**





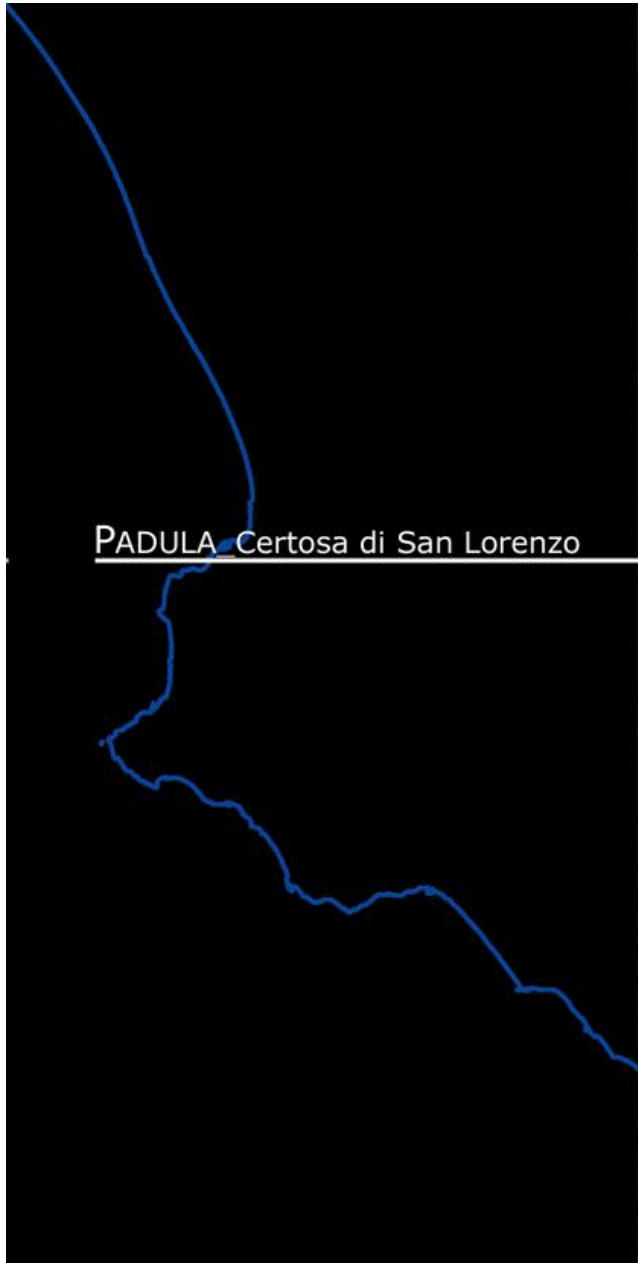
VELIA_Porta Rosa
IV sec. a. C.



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CENTOLA_Centro storico di San Severino



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OTTATI_Mulini



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ACCIAROLI_Torre



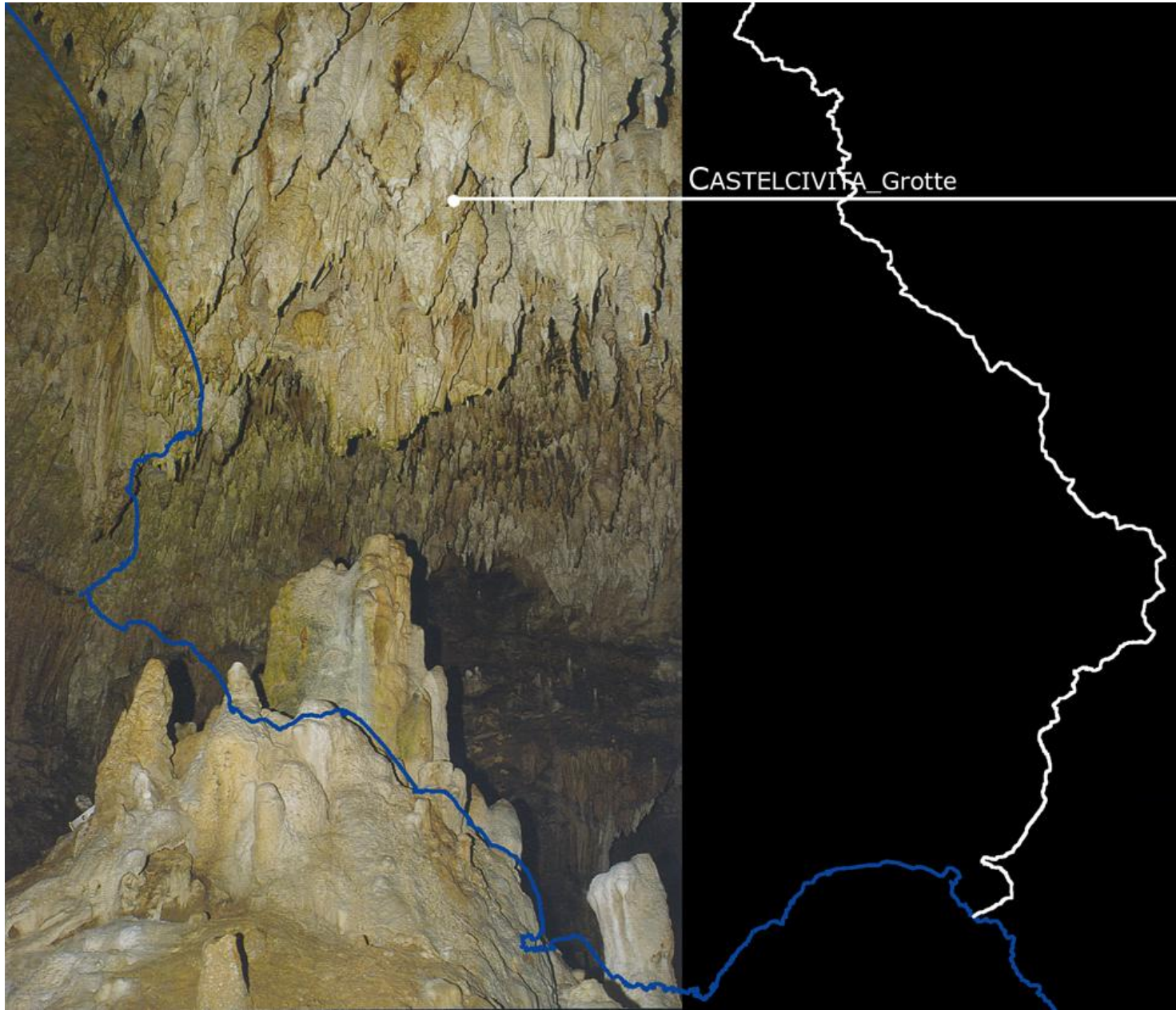
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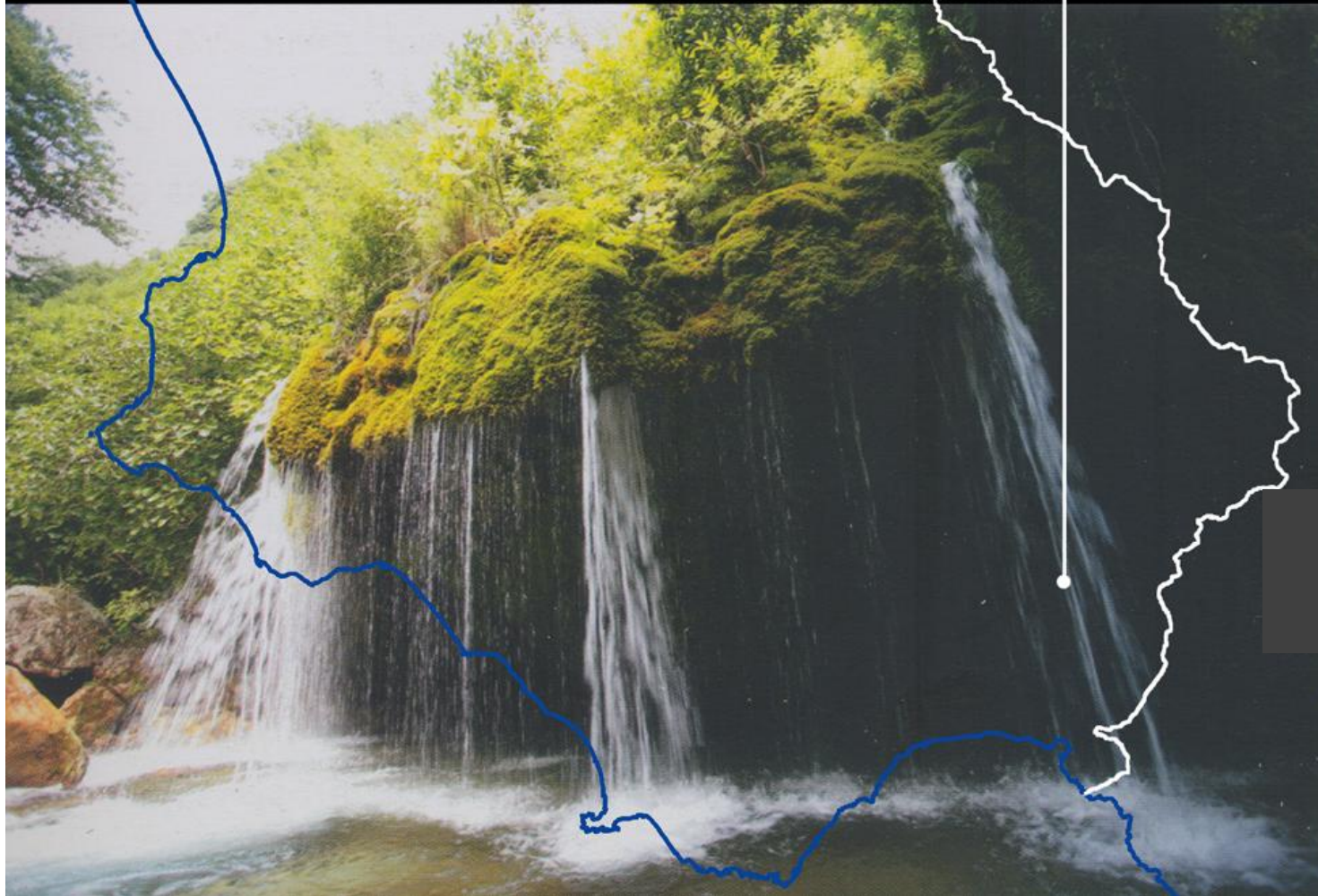


CASALETTO SPARTANO_Capelli di Venere

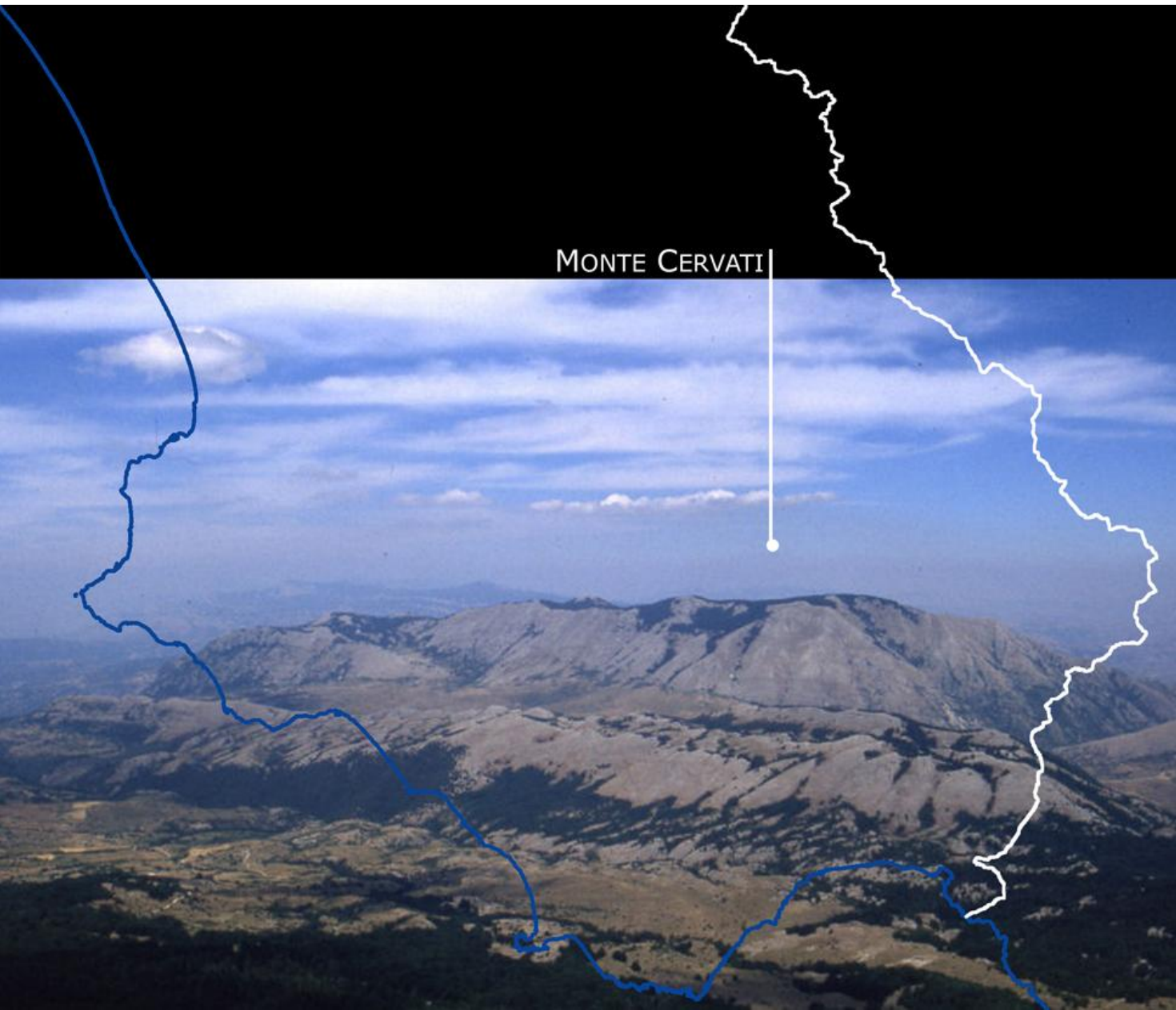
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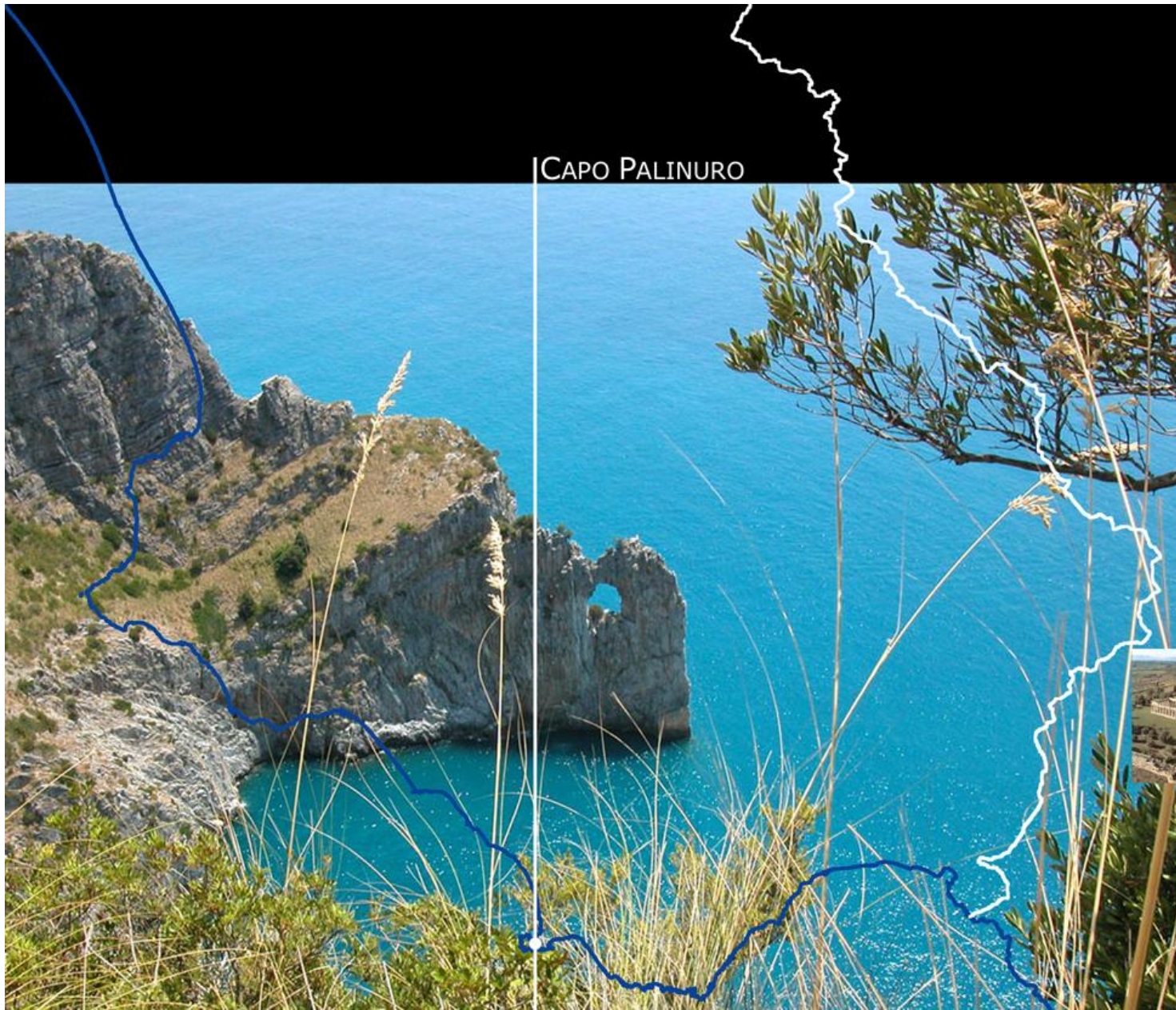


MONTE CERVATI

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LAURINO_Valle Soprana

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ambiente
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● Santuario dei Lattani
 ● Riffa di S. Antonio
 ● Duomo
 ● Mito di Ercole
 ● Ponte Aurunco
 ● Chiesa di S. Marco
 ● Fuochi di S. Giuseppe
 ● Episcopo
 ● Duomo di Carinola
 ● Convento di S. Francesco
 ● Museo del folklore
 (Prog. proposto dal P.L.S.P.)
 ● Chiesa di San Rocco
 ● Valle dei Santi
 ● Mito Chioccia d'oro
 ● Chiesa di Santa Maria Incaldana
 ● Mito del drago
 ● Episcopo
 ● Convento di S. Francesco Carinola
 ● Chiesa dell'Annunziata
 ● Chiesa di San. Tammaro
 Carnevale di Villa Literno
 ● Madonna del Pantano
 ● Madonna dell'Arco
 ● Madonna della Pace

Santuario dei Lattani Roccamonfina
 Chiesa dell'Annunziata Giugliano
 Episcopo
 Convento di S. Francesco Carinola
 Chiesa di San. Tammaro Carnevale di Villa Literno
 Madonna del Pantano
 Madonna dell'Arco
 Madonna della Pace

itinerrario religiosc
 religious route

MITI & TRADIZIONI

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 strutture

ars

Chiesa dell'Annunziata
 Giugliano



itinerario tempo libero e sport
spare time & sport route



Camping Baia Domitia
 Cellole



Trekking
 Monte di Roccamonfina



Autodromo Speedway
 Cellole



Magic World
 Giugliano in Campania



Associazione equestre
 Suessa



Holiday inn Resort
 Campo da golf a 18 buche
 Castel Volturno

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ambiente rappresentazione strutture **ars**

itinerario enogastronomico wine + food route



itinerario archeologico culturale
archaeological route

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Foce Garigliano Sessa Aurunca



Foce Volturno Castel Volturno

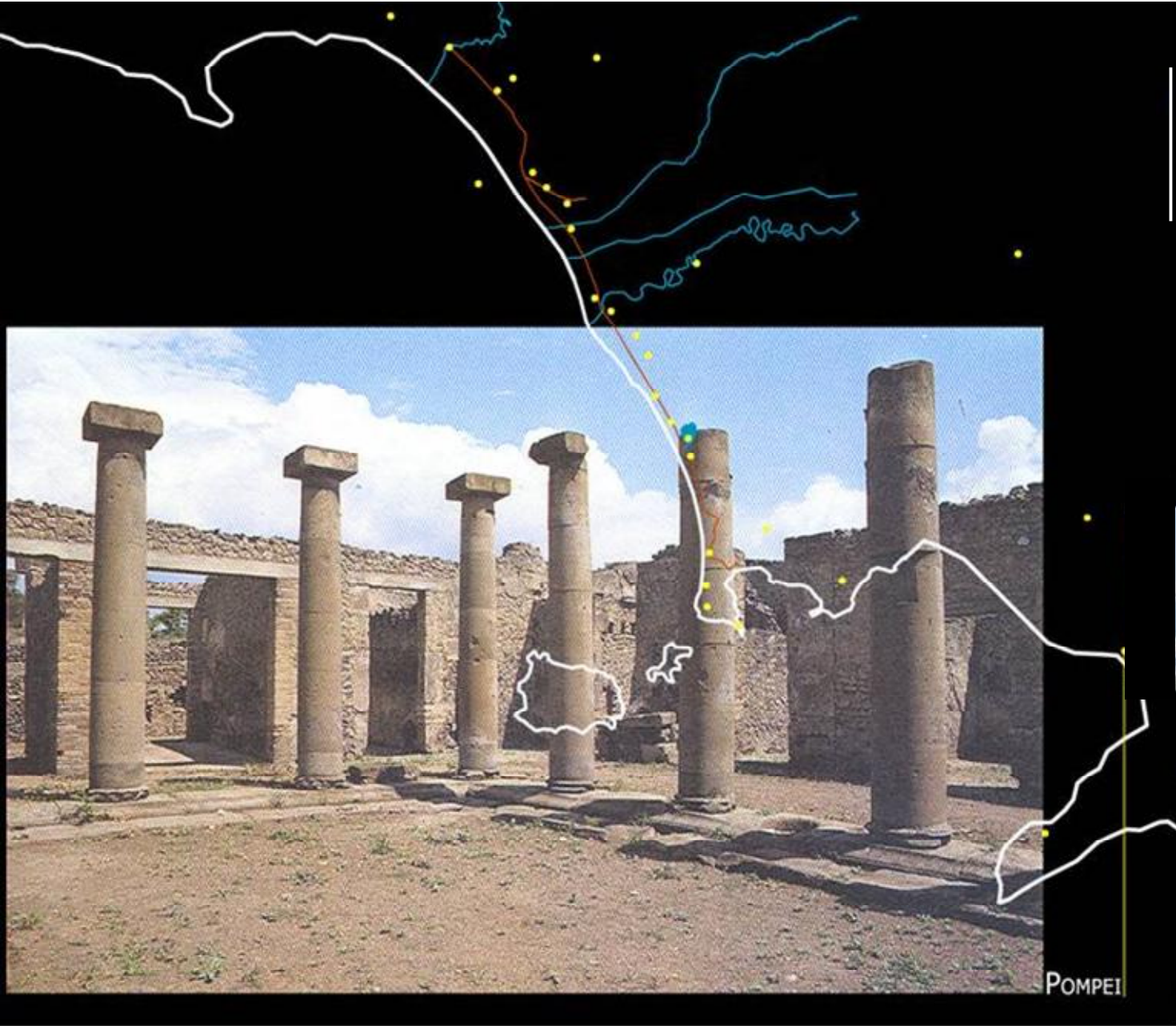


Riserva naturale Regionale del Lago di Falciano_Carinola

**itinerario paesaggistico
naturalistic route**

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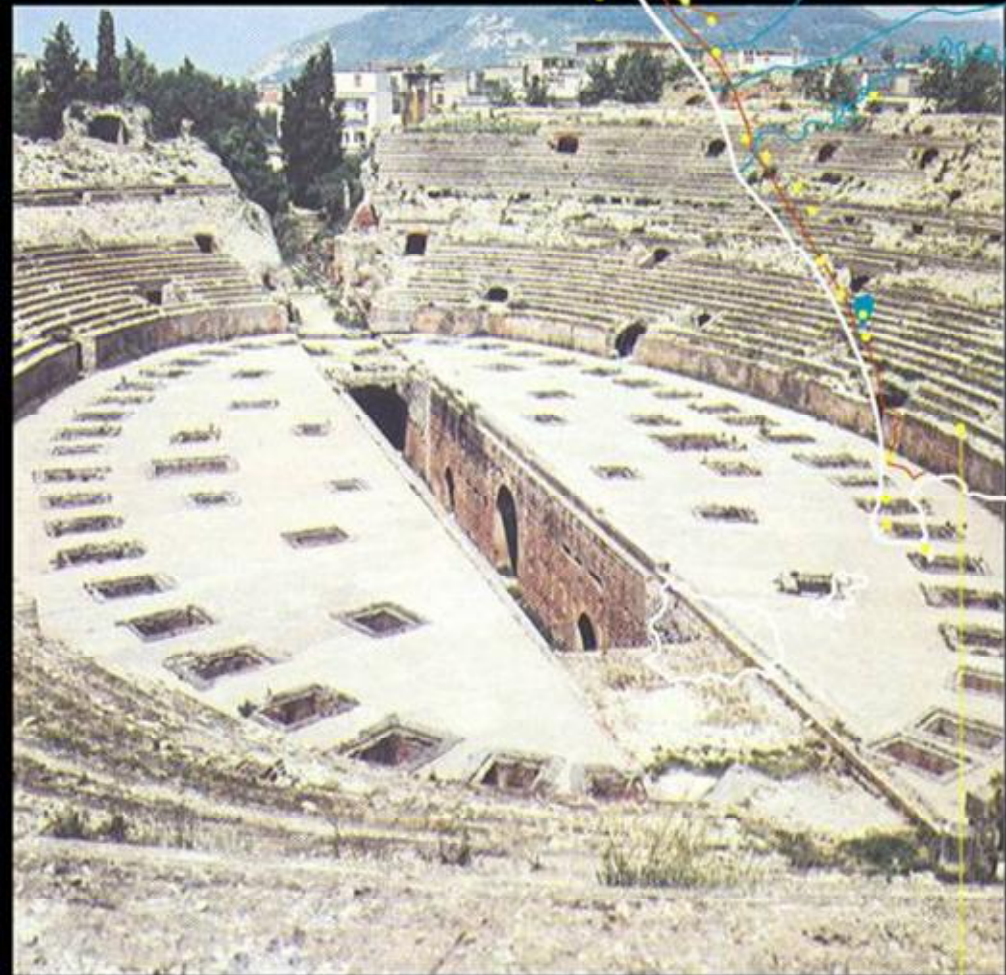


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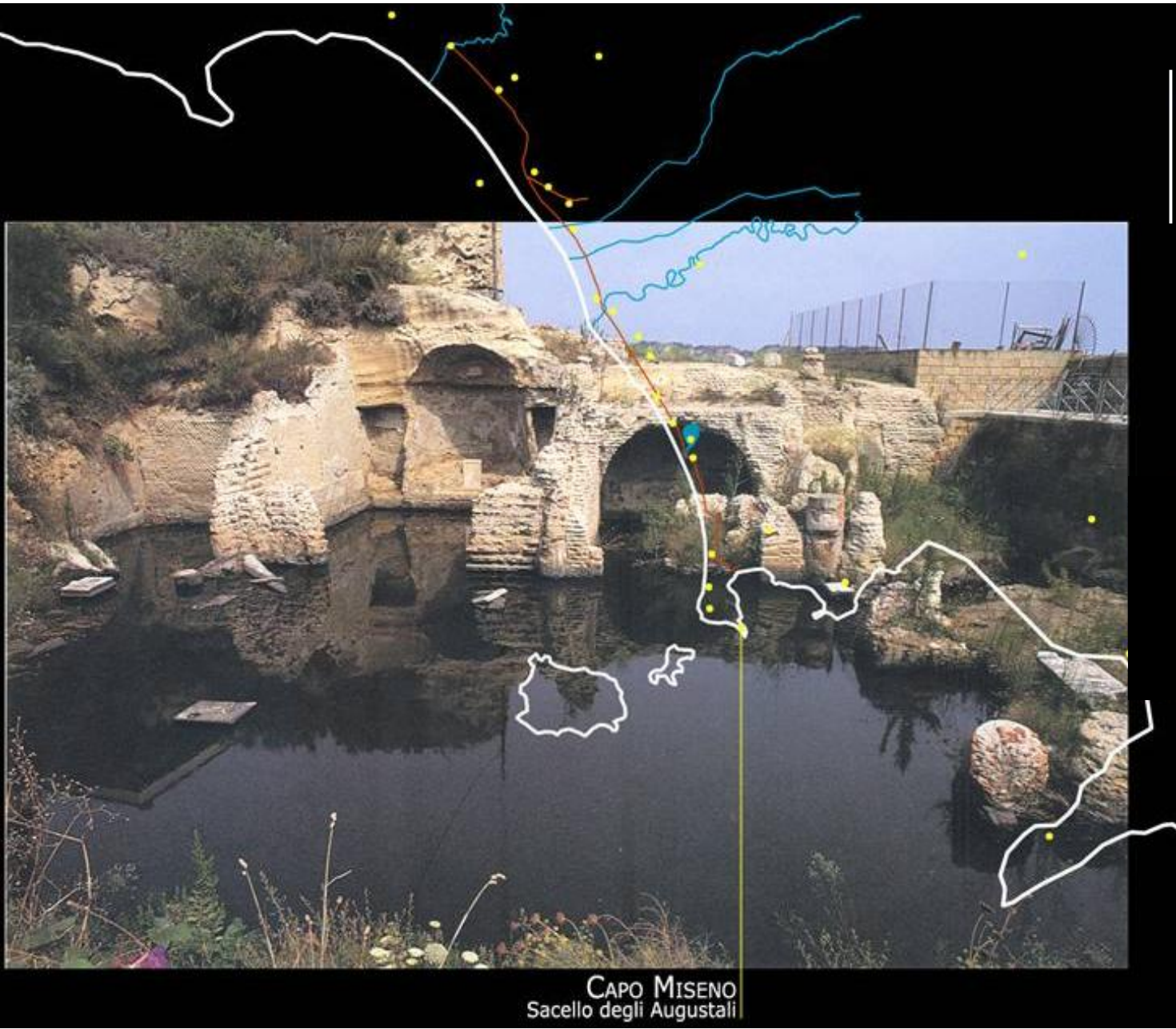


Pozzuoli
Anfiteatro Flavio, Solfatara

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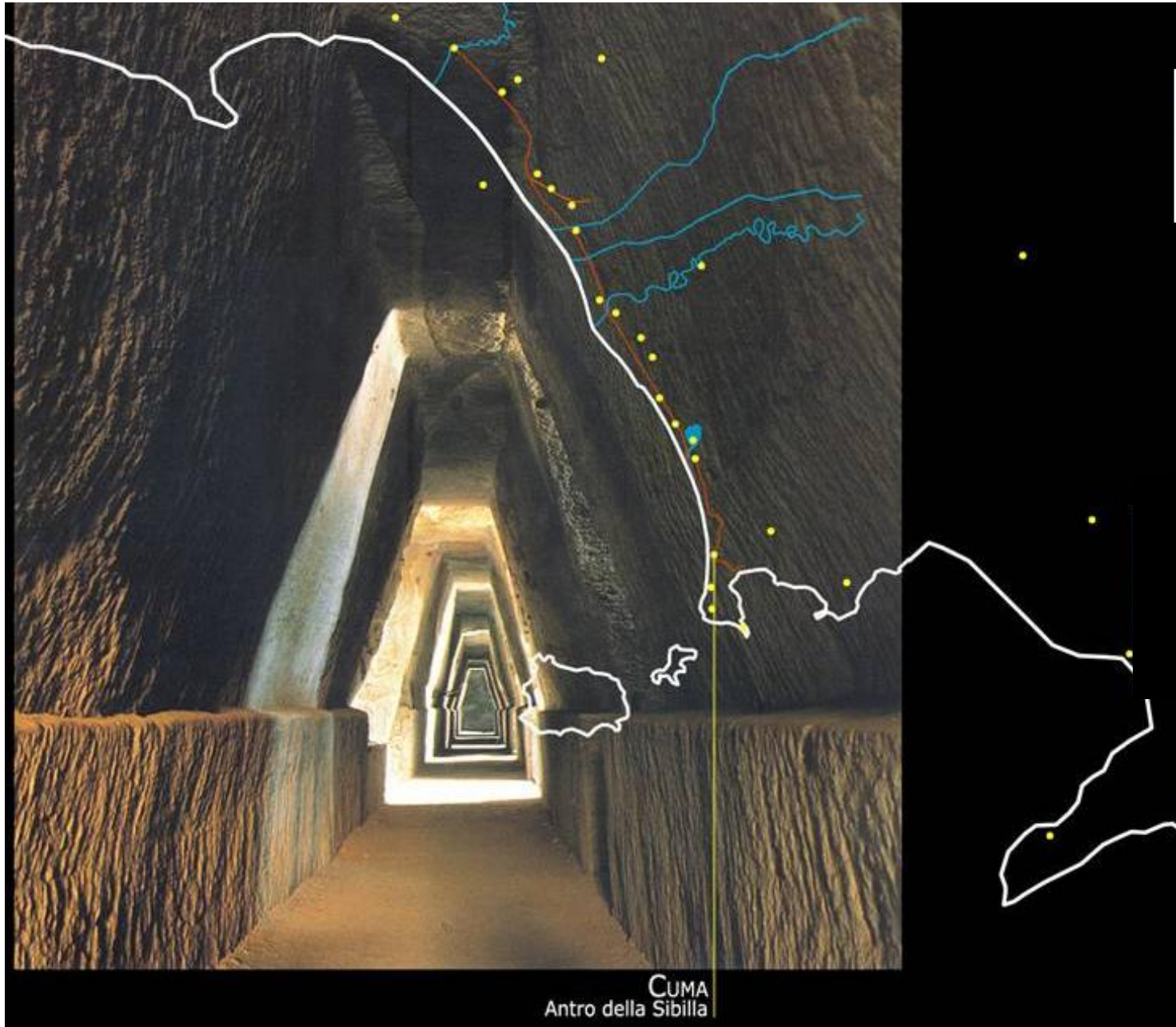


CAPO MISENO
Sacello degli Augustali

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CUMA
Antro della Sibilla

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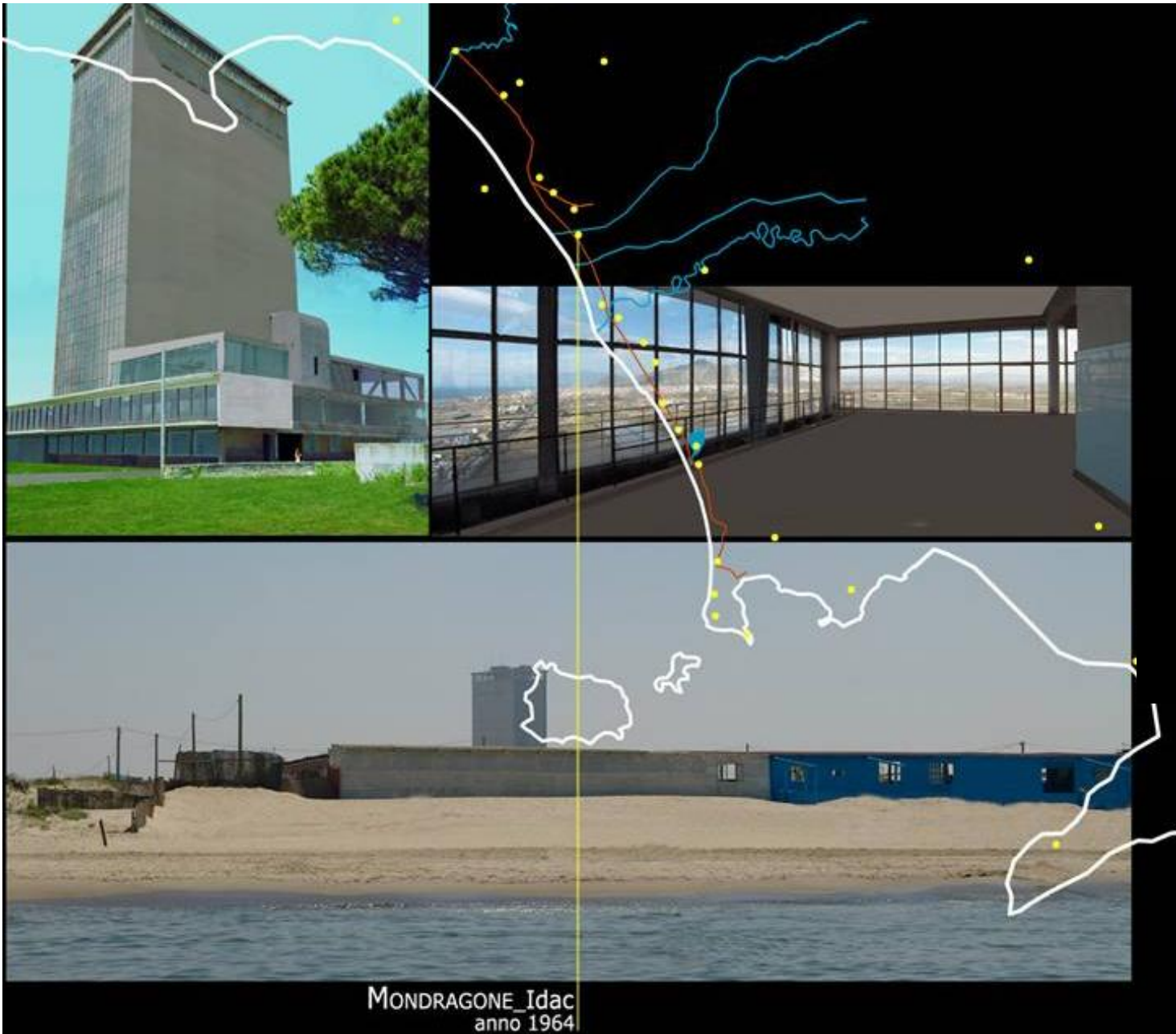


GIUGLIANO IN CAMPANIA _ Lago di Patria

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MONDRAGONE_Idac
anno 1964

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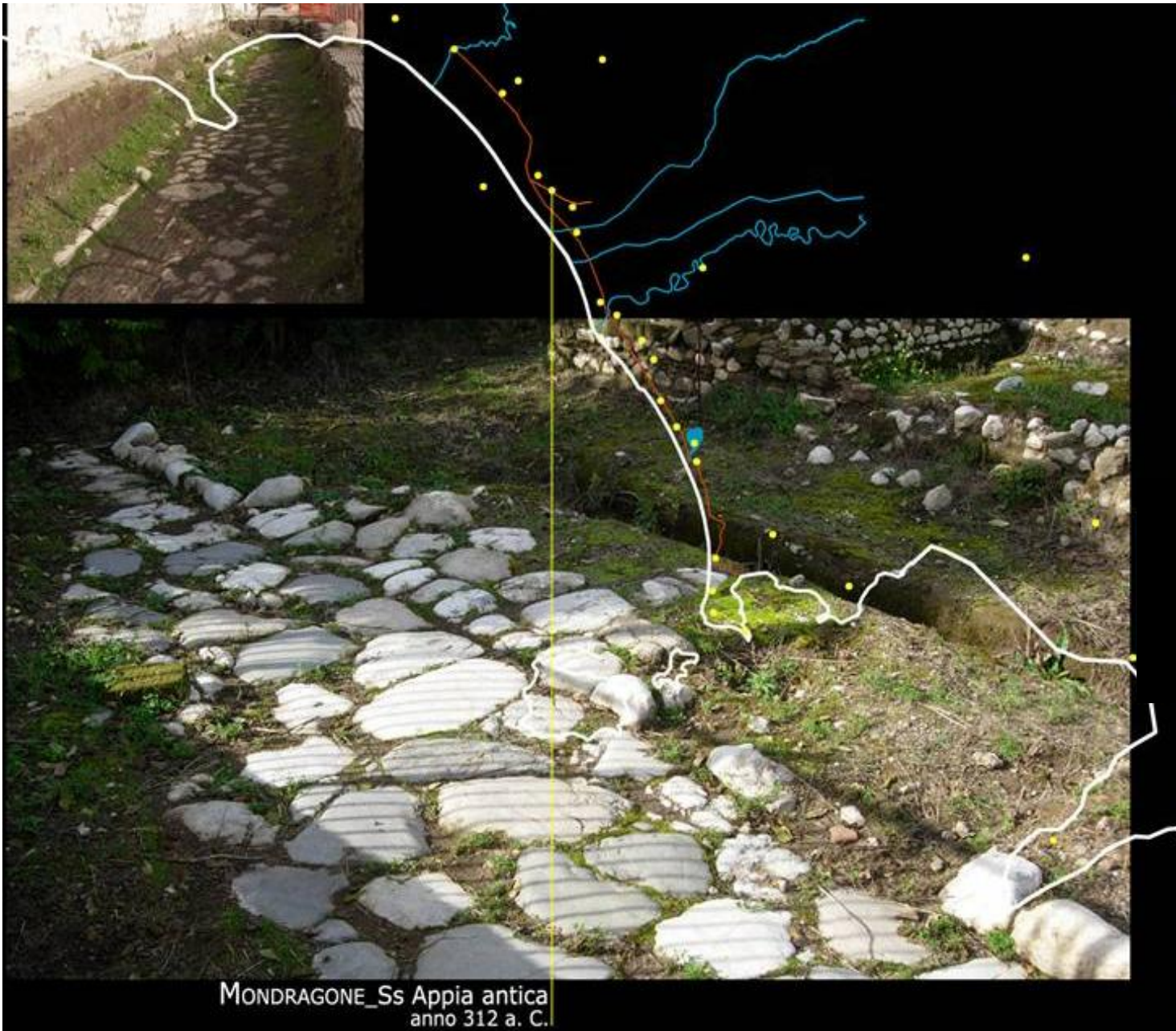


MONDRAGONE_Palazzo Ducale
XIII - XV sec.

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MONDRAGONE_Ss Appia antica
anno 312 a. C.

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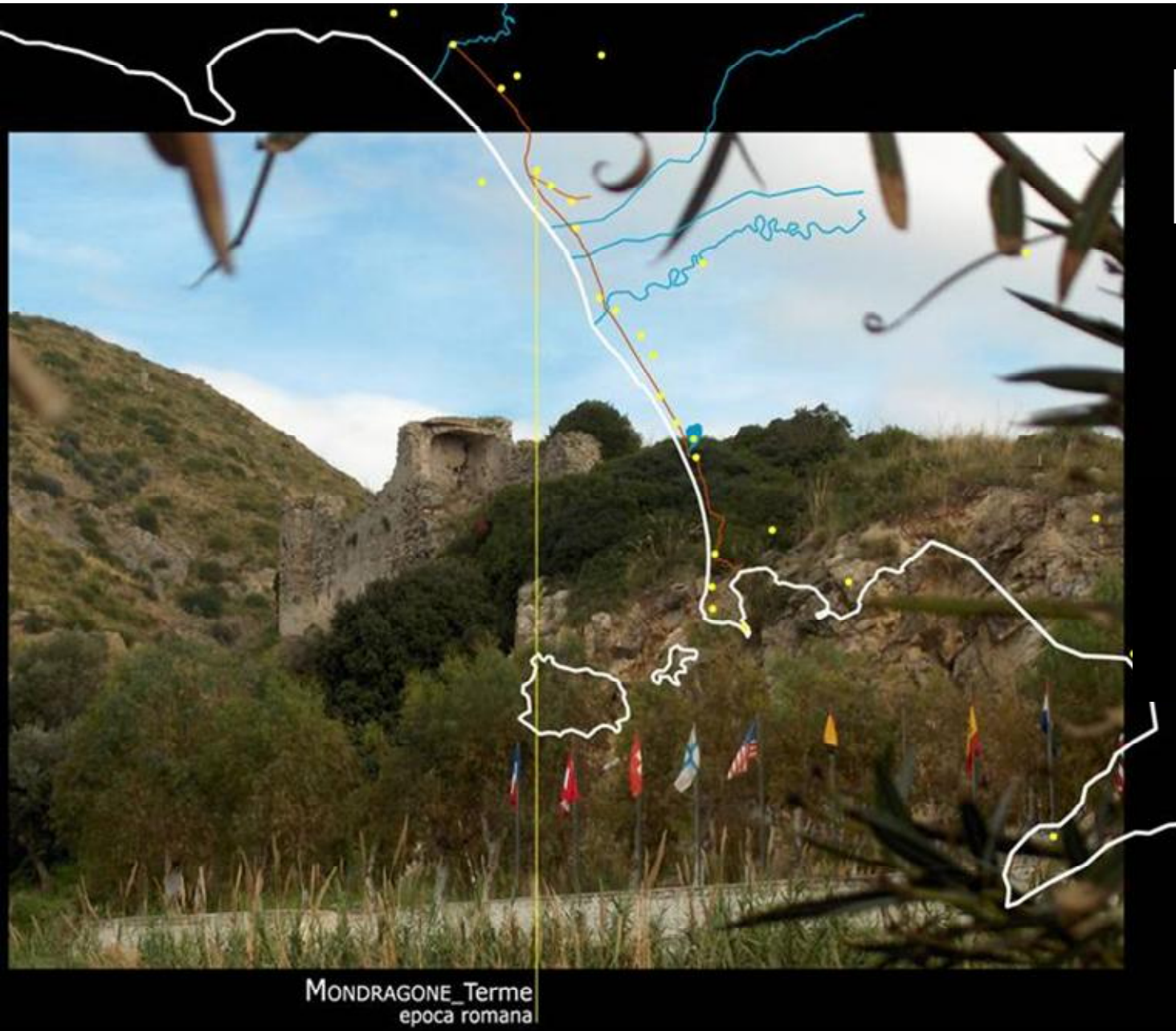
REGIONE CAMPANIA



Unione Europea



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MONDRAGONE_Terme
epoca romana

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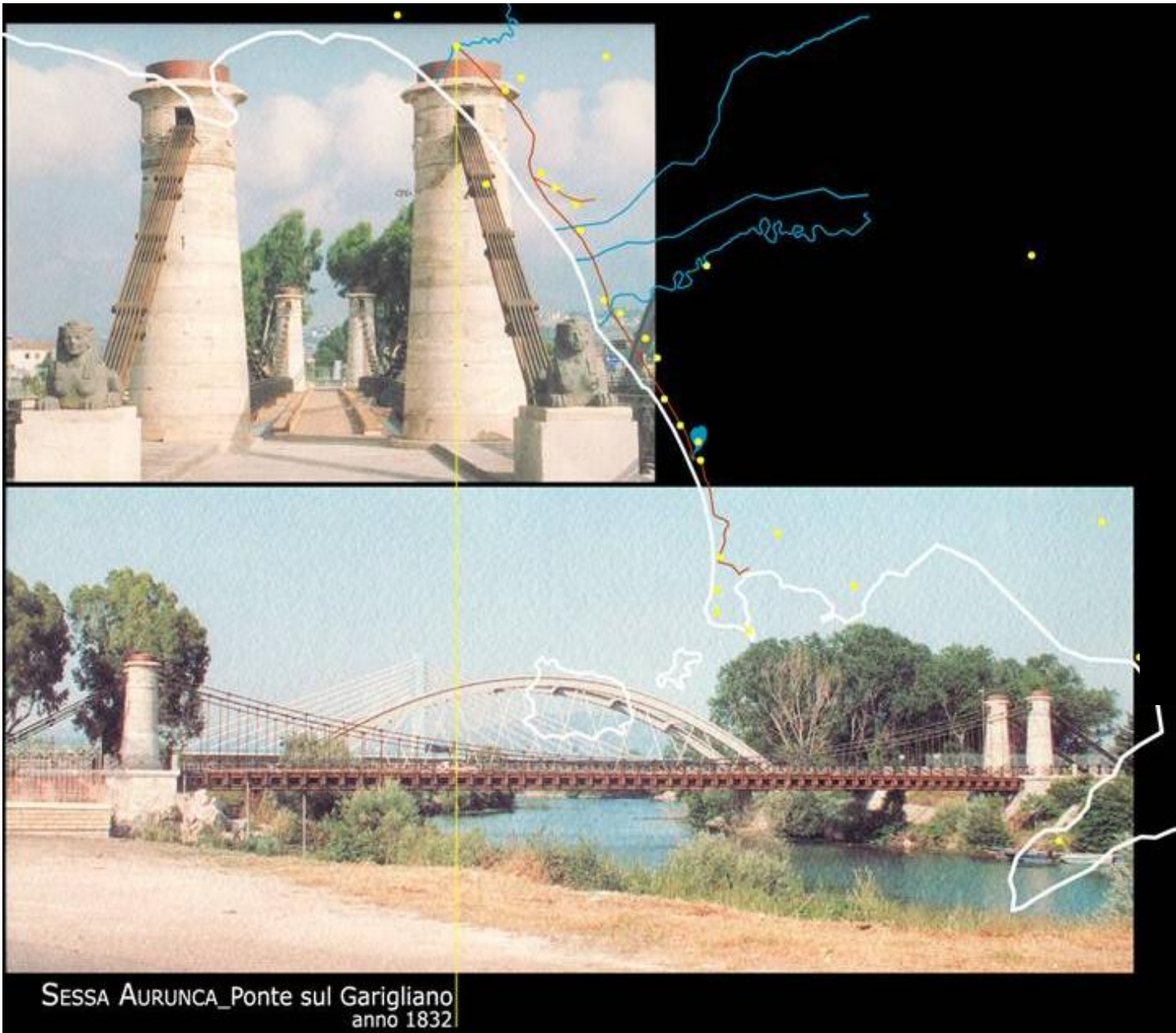


SESSA AURUNCA_Teatro romano
I sec. d. C.

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SESSA AURUNCA_Ponte sul Garigliano
anno 1832

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rappresentazione
strutture **ars**





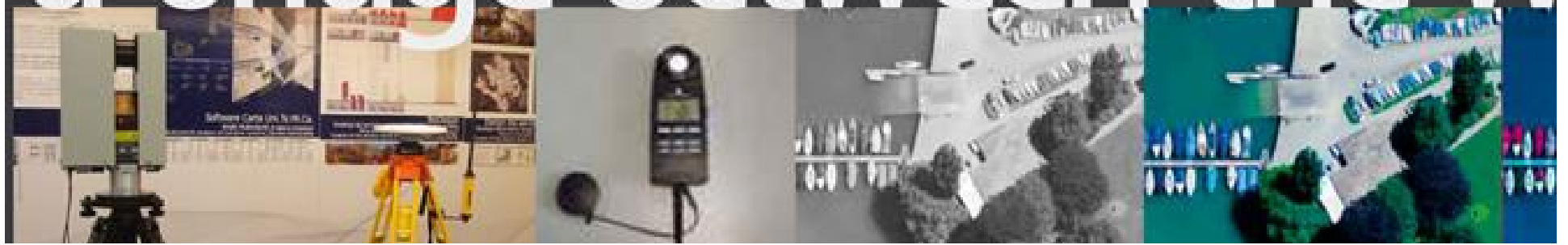
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Benecon features a human resource of 250 researchers, belonging to four athenaeums (Napoli Second University, Napoli Federico II University, Sannio University, University of Salerno), and a resource of scientific instruments of about 9,6 millions euro.

The Center created a network for the upgrading of multicriteri@competences for the technological transfer and support to the territorial stakeholders.

To make compatible ecology
and economy for the eco-
sustainable development of the
natural and constructed
environment;

a bridge between the w



To make compatible ecology and economy for the eco-sustainable development of the natural and constructed environment;

To sustain the scientific and technological innovation through the analysis and diagnosis multicriteri@;

a bridge between the w



To promote the economic development through the increase of working places in the fields of conservation, research and fruition of cultural and environmental heritage;

world of knowledge and



To promote the economic development through the increase of working places in the fields of conservation, research and fruition of cultural and environmental heritage;

To increase the value of material culture in order to develop local and tourism economy;

world of knowledge and



To stimulate the participation of the inhabitants in the local activities in order to consolidate the relationship between Man and Environment;

the world of know-how



To stimulate the participation of the inhabitants in the local activities in order to consolidate the relationship between Man and Environment;

To do a spin off in order to identify the state, define strategies and construct the scope for develop educational projects and working places.

the world of know-how



environment representation structures

project leader
Prof. Arch. Carmine Gambardella

knowledge network
ars benecon



acoustic mapping
acoustic area division
big areas acoustic
acoustic power measuring
building acoustic measuring
psychoacoustics
artificial lighting design
alternative energy
co-generation
building energetic certification
air, water, soil quality
electromagnetic fields
physical - technical materials measurements
biology and ecology for environment preservation
environmental requalification
landscape impact evaluation
eco-museum
facilities eco-design
environmental sustainability technologies
urban and environmental systems maintenance
bioclimatic technologies

multicriteri@ land analysis
multi dimensional relief of architectural, monumental and historical-artistic heritage
LIDAR system scanning
hyperspectral survey system CASI
SLAR system marine pollution detection
aerial platform remote sensing
satellite remote sensing
three dimensional land scanning
three dimensional seafloor scanning
archeological site submerged and non relief
landscape radiological surveys
DTM/DSM processing
punctual 3D models processing
georeference
numerical cartography
numerical simulations
orthophotoplans
hydrogeological disaster monitoring
coastal erosion monitoring
landslide movement monitoring
rapid prototyping
territorial marketing

materials, elements and structural components testing
dynamic features testing
videodenscopy inspections
tests with flat jacks
masonry structures surveys
steel structures surveys
structural reliefs
pacometric investigations
experimental investigations
georadar surveys
reinforced concrete structures surveys
destructive testing
non destructive testing on masonry
non destructive testing on reinforced cement structures
semi-destructive testing on masonry
sonreb method investigations
digital thermography
ultrasonic and sonic investigations
surveys on wooden structures
structural monitoring

Environment analysis and diagnosis are aimed at monitoring the existence and the intensity of physical (acoustic, light and electromagnetic pollution), chemical, biological impacts and experimentally create/verify solutions for a sustainable use of resources. Investigation fields are: energetics, light, acoustic, electromagnetic fields, air, water and soil quality analysis.

Land and environment representation are based on a scientific multicriteri@ methodology of a patented software Benecon Carta Uni.Te.Mi.Ca. (minimum catalogued land unit charter). The platform implements the knowledge network through discretization and measure of all material and immaterial features of natural and built environment.

Structural, functional and technological adjustment and the consolidation and refurbishment of buildings suppose a quali-quantitative knowledge that can be acquired through measures, analysis and experimental testing that allow the understanding and documentation of the investigation object in its complex layout.

environment representation structures

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81031 Aversa (CE) tel/fax+39 081 81 49266/81 41593
ars fabbrica immateriale Via I maggio, Frignano (CE)
www.benecon.it • benecon@unina2.it



P.O.R. Campania 2000/2006 "Il progetto è stato realizzato con il cofinanziamento dell'Unione Europea" Misura 3.16. Promozione della ricerca e del trasferimento tecnologico nei settori connessi alla crescita ed allo sviluppo sostenibile della Regione Campania.

Anechoic chamber • Artificial sky Mirror sky • Solar simulator "Heliodon" • Psychoacoustic analysis system • Acoustic holography system • CCD video photometer for photometric, radiometric and colorimetric measurements • CM26000 spectrophotometer • Water analysis system • Air quality monitoring junction box + PM10/2,5 powder analyzer + NO-NOx analyzer • Gas chromatographer Perkin Elmer • Noisemonitoring net • Automatic micrometeorological station tas • Landscape impact evaluation system • Thermal shock chamber + remote air condenser

CS1000A spectroradiometer • Automatic climate monitoring station • Detection mobile unit + electromagnetic field meter + automatic sequential station + microclimatic junction box + digital lux meter + phonometer + probe digital multimeter kit + thermometer • Radon gas detection system e-perm • Multi Gas Monitor, analyzers and SW • FT-spectrometer - IR NICOLET 740 PE • Micro-climate junction boxes • Analysis tools VIA-SWGABI 4 PRO+BWAL e IKP/PE • Climate chamber with 600 LT - 40/+180°C capacity • Dry Corrosion Test Cabinet DCTC • Rain and gelivity testing chamber • TOBI x 50 Eye-Tracker ergonomic observation chamber • Domestic cogeneration system • Ultrasound device with 360° volumetric measuring probe • Extruder • Point Load Tester • Portable monitor for Radio measures • Solar box • STUR • Data elaboration center with 7 workstations + SW LWA Bruel & Kjaer + SW for buildings energetic evaluation

Aero transported Laser Scanner LIDAR ALS50II • Hyperspectral aero transported system ITRES CASI 1500 • Hyperspectral aero transported system ITRES TABI 320 • SLAR aero transported system • Multibeam system RESON SEABAT 8125 • Laser Scanner 3D Zoller & Froehlich • Aerofotogrammetric digital camera LEICA ADS 40 • Laser scanner system 3D LEICA HDS4500 • Remotely operated underwater vehicle • Acoustic positioning underwater system and Sub Botton Profilers and parametric echosounder • Portable MicroTac + computerized tomograph + ecographic probe + 3D images acquisition and Elaboration system • Mobile lab Sprinter Mercedes 380D CDI • ThermoCAM SC 3000 • Thermacam Nikon NECTH 7102 MV • Seismograph • FAD Platform

DVP400 Complete stereo station • 3D vision system for computers • Aerial triangulation compensation modulus • DVP Station bracket • SW Photogrammetric LPS • GPS net reference station • Laser 3D total station without prism • Total station GPS detection • Data elaboration Center featuring 40 workstations • software Autodesk Map, ER Mapper Professional, Image Web Server Corporate Cart@net Enterprise Edition, ArchInfo (ArcView and ArcEditor), ArcView - GIS ESRI Platform, 3D Analyst, Tracking Analyst, Erdas Image - Leica Virtual Explorer, JRC 3D Reconstructor

1000 kN MTS Dynamic actuators • 1150 kN capacity drilled flatjacks • Data control and acquisition system • Contrast cyclic test system • Overhead travelling crane with a 5t capacity • Yale lift truck with a 2,5 t capacity + capacity accelerometers + movement transducers • Sprinter Mercedes 380D CDI Mobile Lab

Ultrasonic system CMS • Station for deformability tests with flat jacks • High precision digital pacometer for reinforced concrete structures surveys (COVER MASTER CM9) • LPBAS Data acquisition control unit system for slit measuring devices • Videodenscope • Structural investigations Radar system with DATA LOGGER (Georadar) • Equipment for semi-destructive and non destructive testing on masonry: RIS K2 system; Infrared thermacam • Digital oscilloscope

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To do a spin off in order to identify the state, define strategies and construct the scope for develop educational projects and working places.

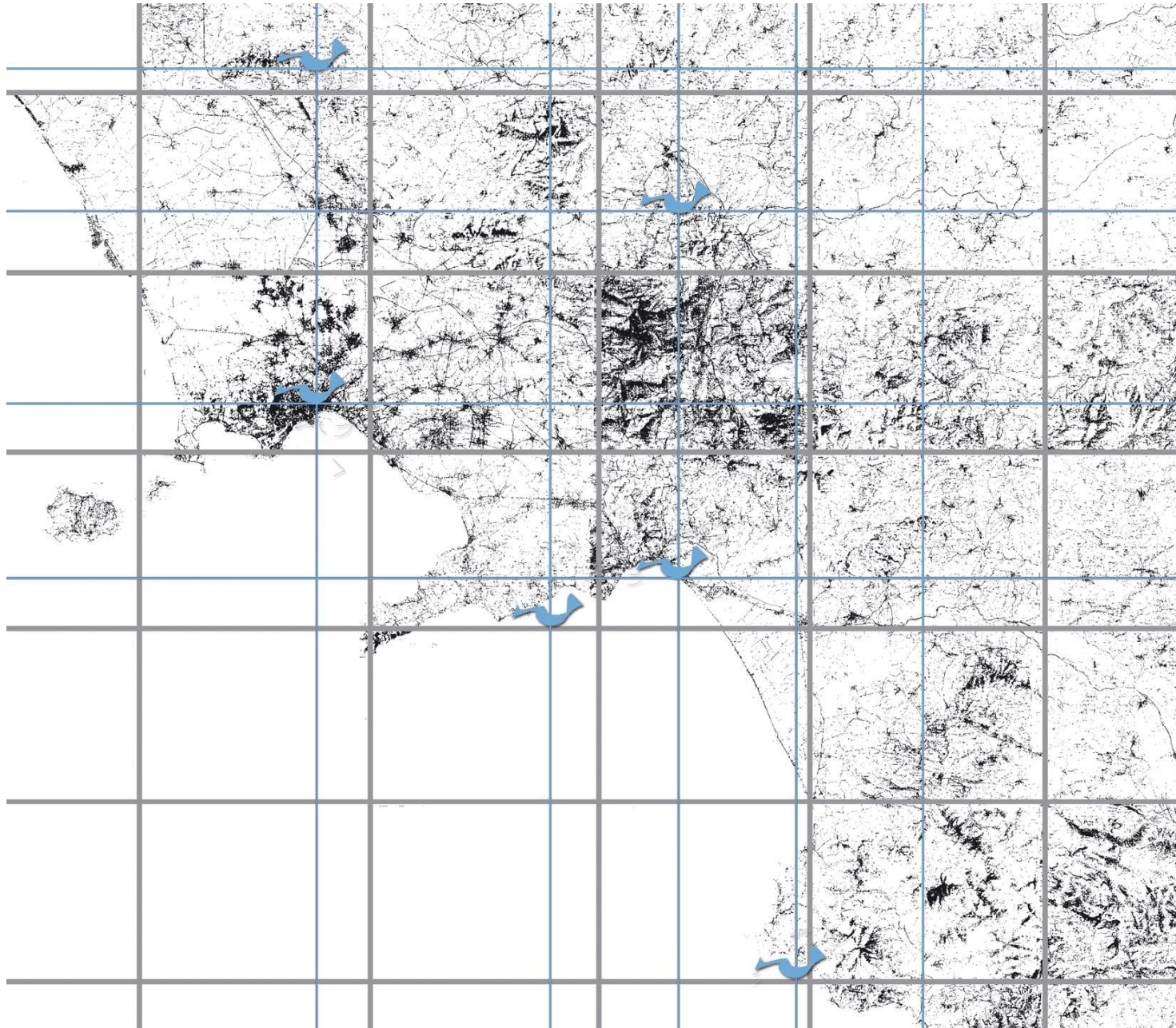


benecon a bridge between the world of knowledge and the world of know-how

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