

The Geosites of the province of Venice

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Department of Soil
Defence
Geological Survey



Italian Society of
Environmental
Geology



The data base

- The data base, together with the recently published volume, comes from a tight cooperation between the Province of Venice and the SIGEA (Italian Society of Environmental Geology). The researchers of the University of Padova contributed to the study.
- The Province of Venice it's the first one in Veneto Region to face the study of its geosites.



Salt marshes along the Cenesa Canal

The targets

- ◉ Setting up of a data base of the geosites for didactic and spreading purposes.
- ◉ Assessment of the environmental impact affecting the geosites in order to limit the human effects and to remediate to former injuries.
- ◉ Embedding the geosites into projects for the improvement of the geological heritage, promoting a controlled and educative utilization.

Criteria for a choice

ADOPTED CRITERIA FROM THE SCIENTIFIC INTERNATIONAL COMMUNITY

- ◉ Scientific value
- ◉ Geological evidence
- ◉ Landscape or geomorphological relevance
- ◉ Scenic characteristics
- ◉ Educational or touristic attraction.



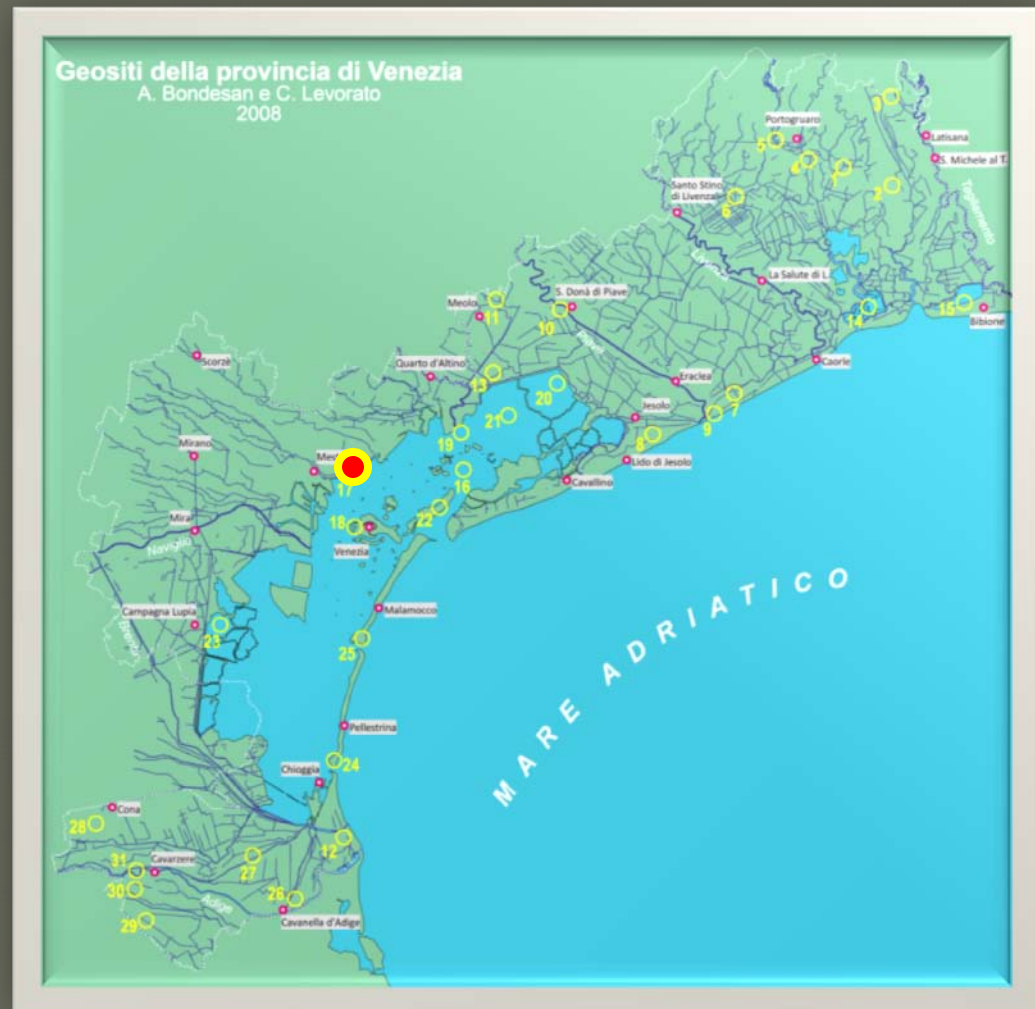
Salt marshes at Campalto

List of the 31 geosites

- Palude le Marice;
- Laguna di Caorle;
- Laguna di Bibione;
- Canale lagunare Cenesa;
- Gorgo della Beba;
- Isola lagunare di S. Erasmo;
- Barene sulla pianura pleistocenica (Campalto);
- Barene Scanello;
- Lama del "Mort";
- Caranto (Campalto);
- Paleoalveo del Piave in laguna;
- Dune fossili Alberoni;
- Dune fossili Ca' Roman;
- Bosco Nordio;
- Meandro abbandonato del Piave;
- Dosso del Po;
- Delta fluviali endolagunari;
- Paludi di Loncon;
- Centuriazione di Adria;
- Risorgive;
- Scarpate di Summaga;
- Valle Averno;
- Cordoni di Jesolo-Cortellazzo;
- Paleoalveo del Brenta vecchio;
- Valle sepolta di Concordia;
- Tagliamento romano;
- Paleoalveo ghiaioso pleistocenico;
- Meolo vecchio;
- Paleodelta del Piave di Torre di Fine;
- Paleocanali lagunari;
- Duna fossile di Valcerere Dolfina.

The map of the geosites

PALAEO RIVERS
LITTORAL
ENVIRONMENTS
WETLANDS
SALT MARSHES
DUNES
SPRINGS
BURIED FLUVIAL
INCISIONS
PALAEOSOILS
ISLANDS
DELTA



Cenesa Canal (Northern lagoon)



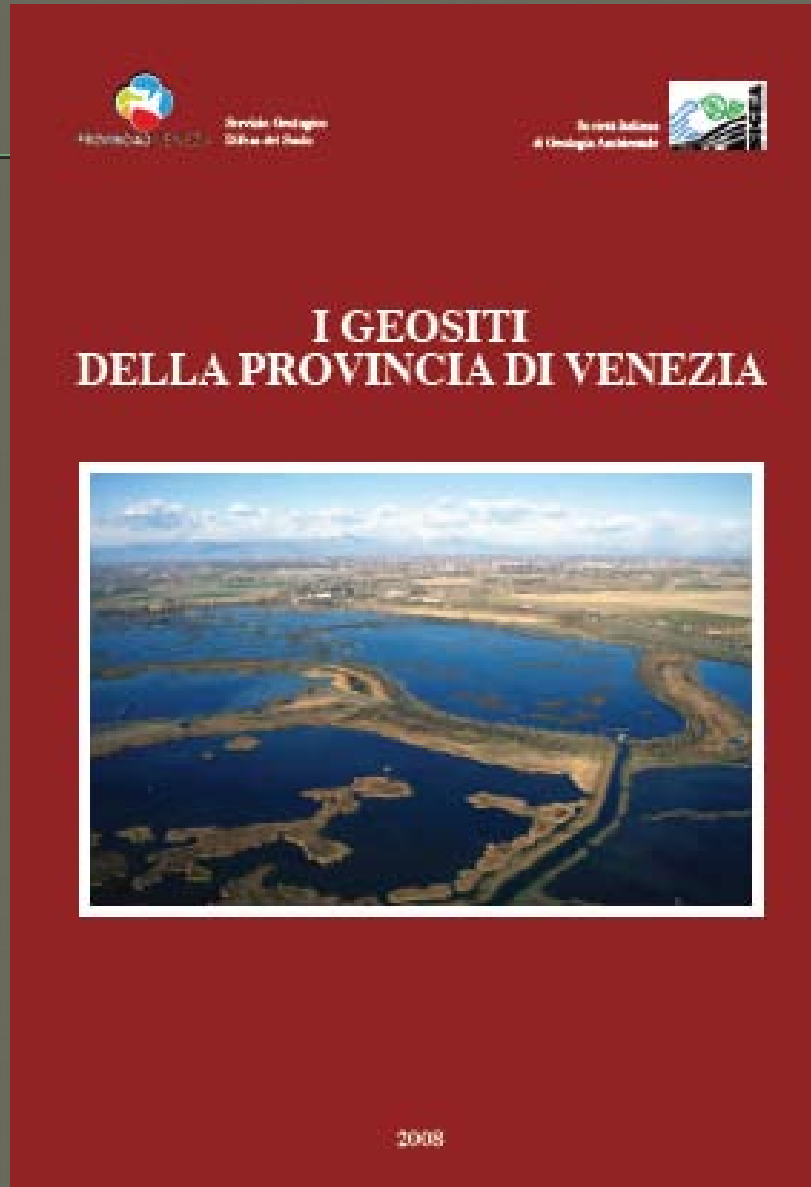


Abandoned meander of the River Piave (Musile di Piave)



Averno Fishery

The volume



- Only part of the whole work has been published
- The data base of the Province (not included) contains many further data available through authorization from the provincial offices

Banca Dati Imago

N° scheda

Titolo originale o alt.:

Autore

Secolo

Datazione

Banca Dati Imago - Collocazione

Sede conservazione

Fondo

Serie

Sottoserie

N° archivio

Coll. Archivistica

Coll. Fotogr. Neg.

Coll. Fotogr. Pos.

Laguna di Caorle

ID Scheda Ubicazione Int. scient. Descrizione El. caratterizz. Tipologia Fruizione Suolo/Vincoli Stato/Tutela Commenti Bibliogr.

Fotografie da terra

	Data	Esecutore	Direzione di ripresa	B/N, col	Foto
Foto 1	28-olt-03	Chiara Levorato	ovest	colori	GEOBIT\FOTO\Foto da terra\
Foto 2	28/10/2003	Chiara Levorato	ovest	colori	GEOBIT\FOTO\Foto da terra\
Foto 3	28/10/2003	Chiara Levorato	ovest	colori	GEOBIT\FOTO\Foto da terra\
Foto 4	28/10/2003	Chiara Levorato	ovest	colori	GEOBIT\FOTO\Foto da terra\
Foto 5	28/10/2003	Chiara Levorato	ovest	colori	GEOBIT\FOTO\Foto da terra\

Laguna di Caorle

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Fotografie aeree

	Data	Esecutore
Foto 1	18/05/2004	Aldino Bondesan
Foto 2	18/05/2004	Aldino Bondesan
Foto 3	18/05/2004	Aldino Bondesan
Foto 4	18/05/2004	Aldino Bondesan
Foto 5	18/05/2004	Aldino Bondesan

Rilevatore

Nome

Cognome

Luogo di nascita

Data di nascita

Indirizzo

Città Prov.

Recapito tel.

email

URL

Titolo di studio

Esperienze

Ente

Denominazione

Indirizzo

Città Prov.

Recapito tel.

email

URL

Finalità del censimento

Acquisizione dati da rilevatore

Acquisizione dati da bibliografia

Codice scheda

Data scheda

Scheda collegata

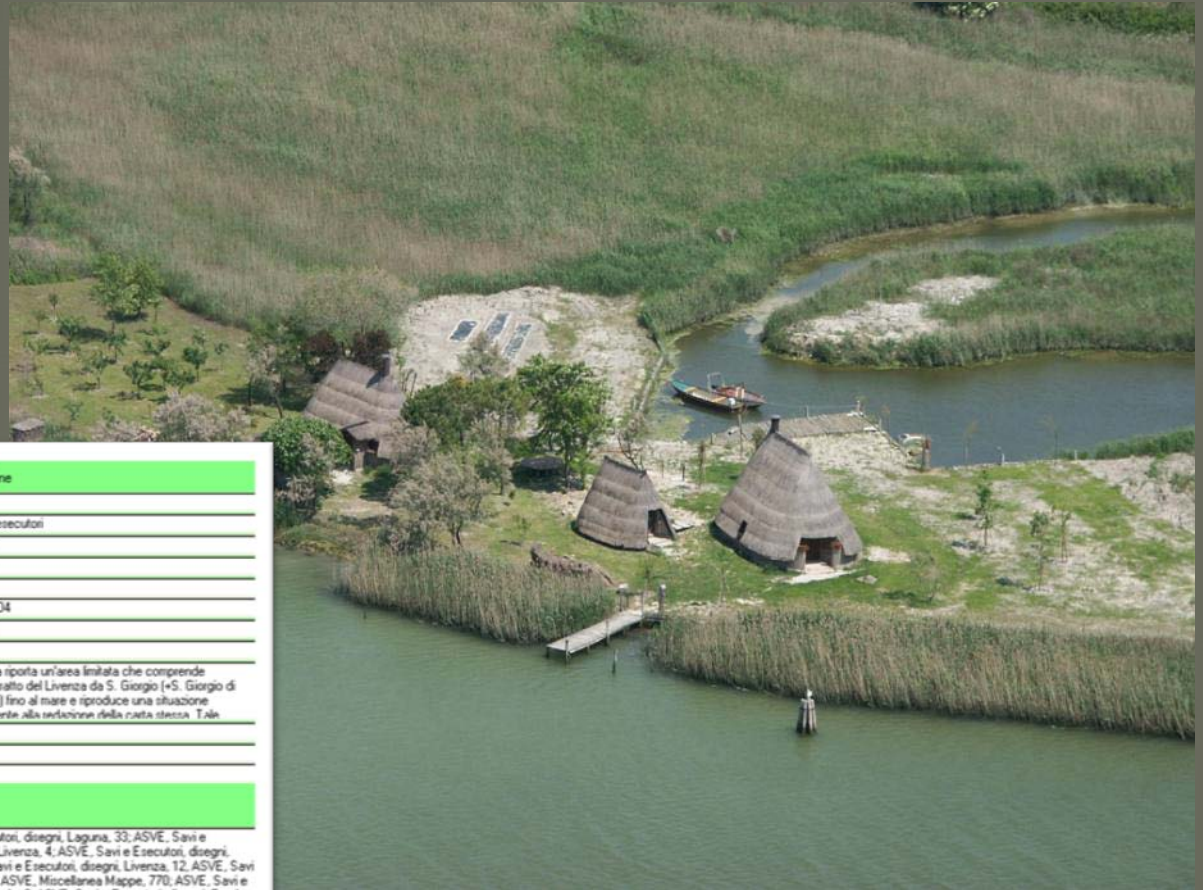
Nome del geosito

The data base

The data base contains cartography, photos, videos; archaeological, geomorphological and touristic data, etc.

The mask is organized according to the Italian Geological Survey (ISPRA)

Caorle typical fisherman's houses



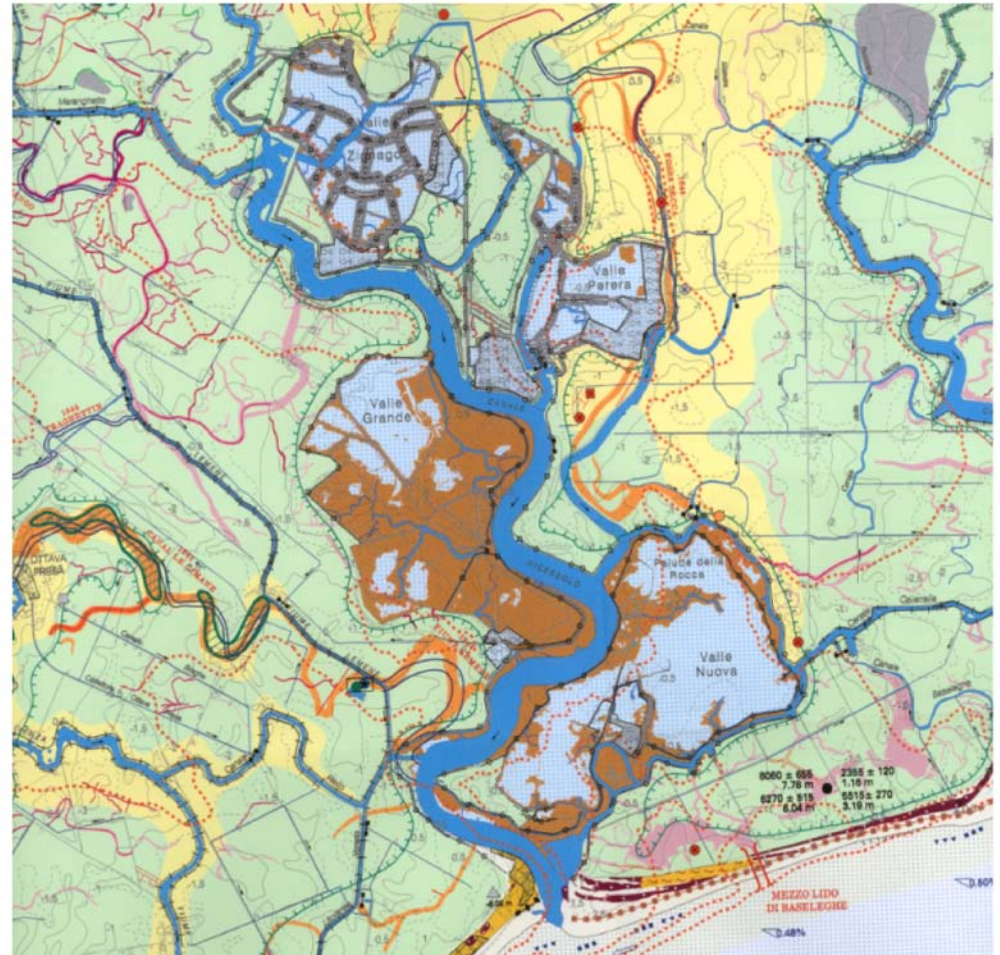
Banca Dati Imago		Banca Dati Imago - Collocazione	
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Titolo originale o alt:	<input type="text"/>	Fondo	Savi e esecutori
Progetto per la diversione del Livenza	<input type="text"/>	Serie	disegni
Autore	<input type="text"/>	Sottoserie	Fondo
Zandini Bernardino, pubblico matematico.	<input type="text"/>	N° archivio	9
Secolo	XVIII	Coll. Archivistica	busta 604
Datazione	1725	Coll. Fotogr. Neg.	11323
		Coll. Fotogr. Pos.	1587
		Descrizione	La carta riporta un'area limitata che comprende l'ultimo tratto del Livenza da S. Giorgio (+S. Giorgio di Livenza) fino al mare e riproduce una situazione riscontrabile alla cartina della carta stessa. T. All.
Immagine generale	GEOSTIT/Imago/Caorle.jpg		
Immagine particolare	<input type="text"/>		
Immagine georeferenziata	<input type="text"/>		
Altre carte Imago	ASVE, Savi e Esecutori, disegni, Diversi, 129; ASVE, Savi e Esecutori, disegni, Laguna, 33; ASVE, Savi e Esecutori, disegni, Laguna, 108; ASVE, Savi e Esecutori, disegni, Livenza, 4; ASVE, Savi e Esecutori, disegni, Livenza, 7; ASVE, Savi e Esecutori, disegni, Livenza, 8; ASVE, Savi e Esecutori, disegni, Livenza, 12; ASVE, Savi e Esecutori, disegni, Livenza, 17; ASVE, Miscellanea Mappe, 100; ASVE, Miscellanea Mappe, 770; ASVE, Savi e Esecutori, disegni, Fondo, 15; ASVE, Savi e Esecutori, disegni, Fondo, 8; ASVE, Savi e Esecutori, disegni, Fondo, 9		

Field surveys
Helicopter flights
Video recording



The geomorphological map of the province of Venice

Data were gathered from many original studies performed by the Province: among them the Geomorphological Map of the Province of Venice



The archaeological framework

When the site was located in an archaeological area, all the related data were reported.



Roman agricultural grid of Adria ("Centuriation")

The aerial photographs

The vertical aerial photographs from the Province Archives were collected:

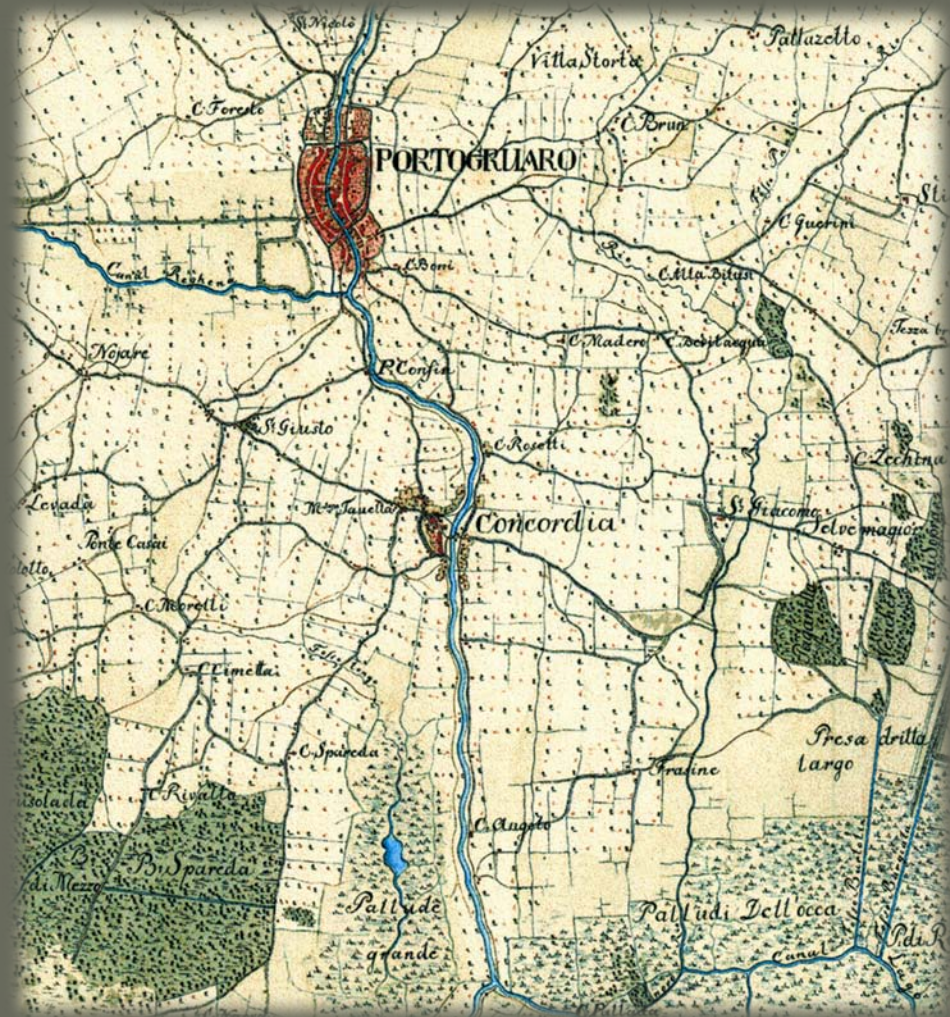
- In color and B/W
- At diverse scales
- From flights executed in different years



XVIII century cartography and “IGM “ (Military Geographical Institute) maps

Landscape evolution through
the XVIII century
cartography

- Historic series of the 1:25.000 scale “IGM” official maps.
- The map by A. Von Zach (1798–1805).
- The Topographical Map of the Lombardy–Veneto Kingdom (1833).



Historic, literary and artistic anthology

Relations between the geological sites and the artistic expression in its different aspects (poetry, fiction, books of journey, guides; historical, scientific and popular literature, ect.) and the images (nineteenth-century landscape painting and twentieth-century representationalism in painting and historical photography)



The geosites as elements for the provincial planning



Between knowledge and protection

The criteria of choice for allocation of status of geosite at municipal scale are fundamental for the consequent implications in terms of protection ...



**but all the Geosites
have to be protected
in the same way?**

A problem of scale

- From regional to local geosite

Example:

Lagoon of Venice

Canal

Salt marshes



An aerial photograph of a salt marsh environment in the lagoon of Venice. The image shows a complex network of winding, dark-colored canals and channels that meander through a landscape of dark, vegetated marshland. Interspersed among the canals are numerous irregular, light-colored patches of bare earth or sand, which are likely exposed during low tide. The overall pattern is highly irregular and organic, characteristic of a natural tidal wetland system. The text "SALT MARSH ENVIRONMENT IN THE LAGOON OF VENICE" is overlaid in the upper right quadrant in a bold, yellow, sans-serif font.

**SALT MARSH
ENVIRONMENT IN
THE LAGOON OF
VENICE**

**“GORGO” (CREVASSE
LAKE)**



Between preservation and availability of the landscape

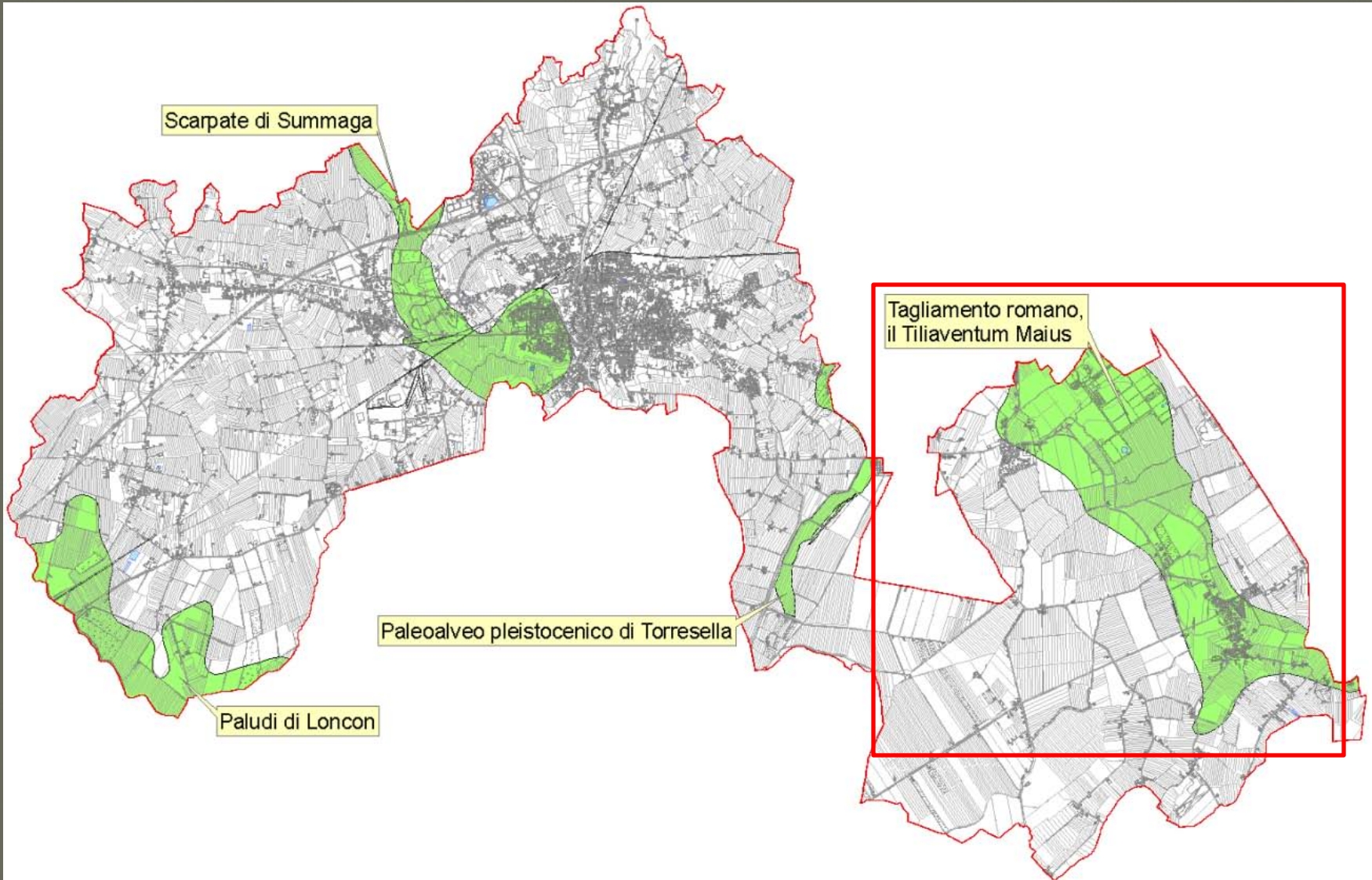
The promotion of the main geosites is very important.

The Communes may establish and preserve the representative sections.

Spreading knowledge: use of plates, environmental education, didactic itineraries, booklets, etc.

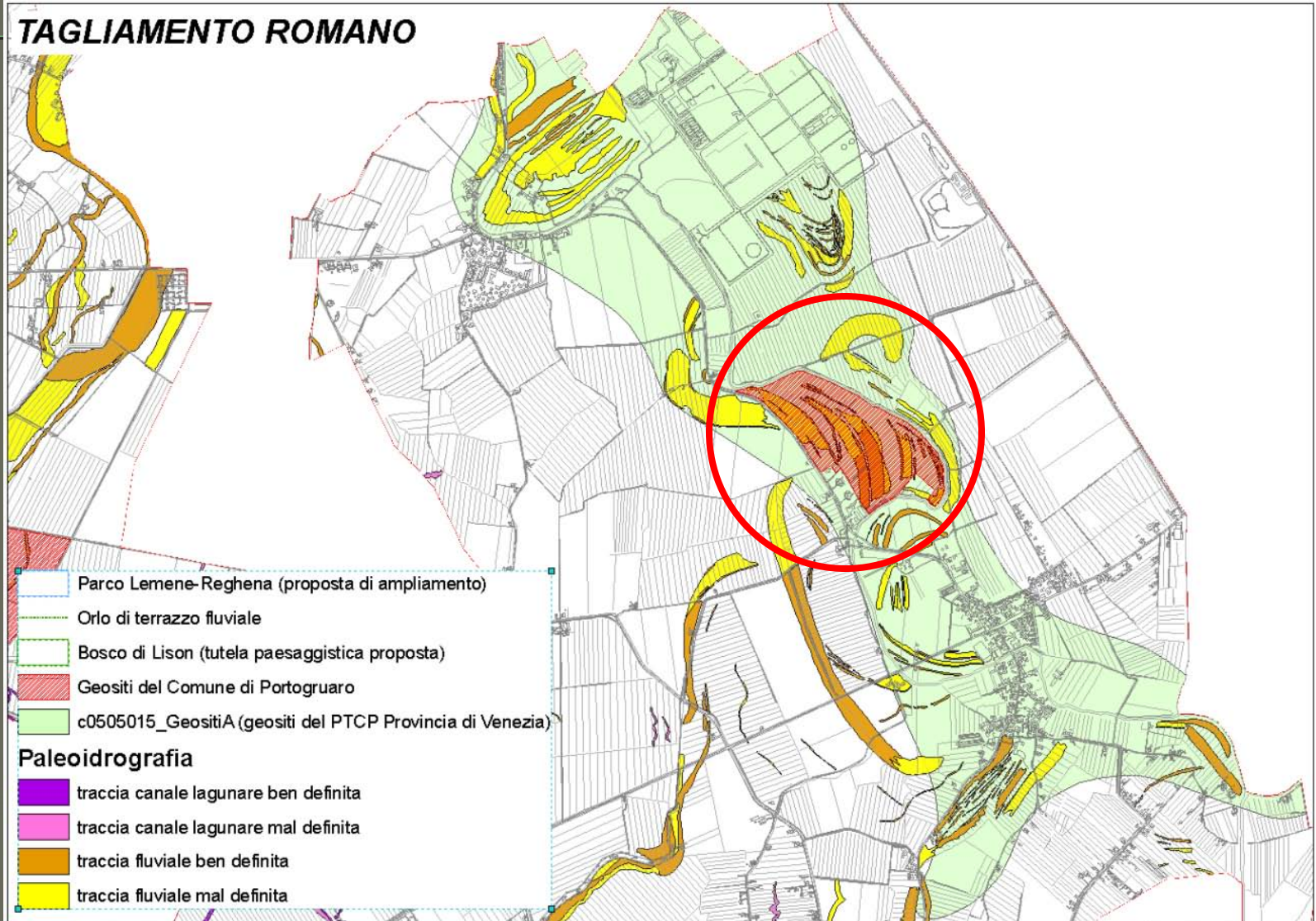
Archives and implementation of the data base.

Example: geosites of the Province at local lower scale



Bordering the protected areas (in red)

TAGLIAMENTO ROMANO



CONCLUSIONS

- ◉ The volume is a fundamental tool for knowledge and communication of the best and the less known geosites of the Province.
- ◉ The data base is particularly rich in information and useful for the management of the territory at all levels (regional, provincial and communal).
- ◉ It's also important for the didactic and divulgative experiences

Further information at aldino.bondesan@unipd.it

12/03/09



Dune di Ca' Roman (laguna sud)

Duna fossile di Valcerere
Dolfina (Cavarzere)





Gorgo di Ca' Labia
(Cavarzere)



Bocca di un canale lagunare
(laguna di Caorle)



Barene Scanello (laguna nord)



Barene Scanello
(laguna nord)

Meolo vecchio



Paleomeandro del Piave (Musile di Piave)





BARENE SCANNELLO



M. Balaban '70









BRENTA VECCHIO



VALLE DELL'AVERTO





BOSCO NORDIO



CA' ROMAN

CAMPALTO.

L' O S E L L I N O

Argine dell' Bressino che serve di Contaminazione alla Laguna

Barene

Barene

Barene

L A G U N A

CAMPALTO

BARENE DI CAMPALTO





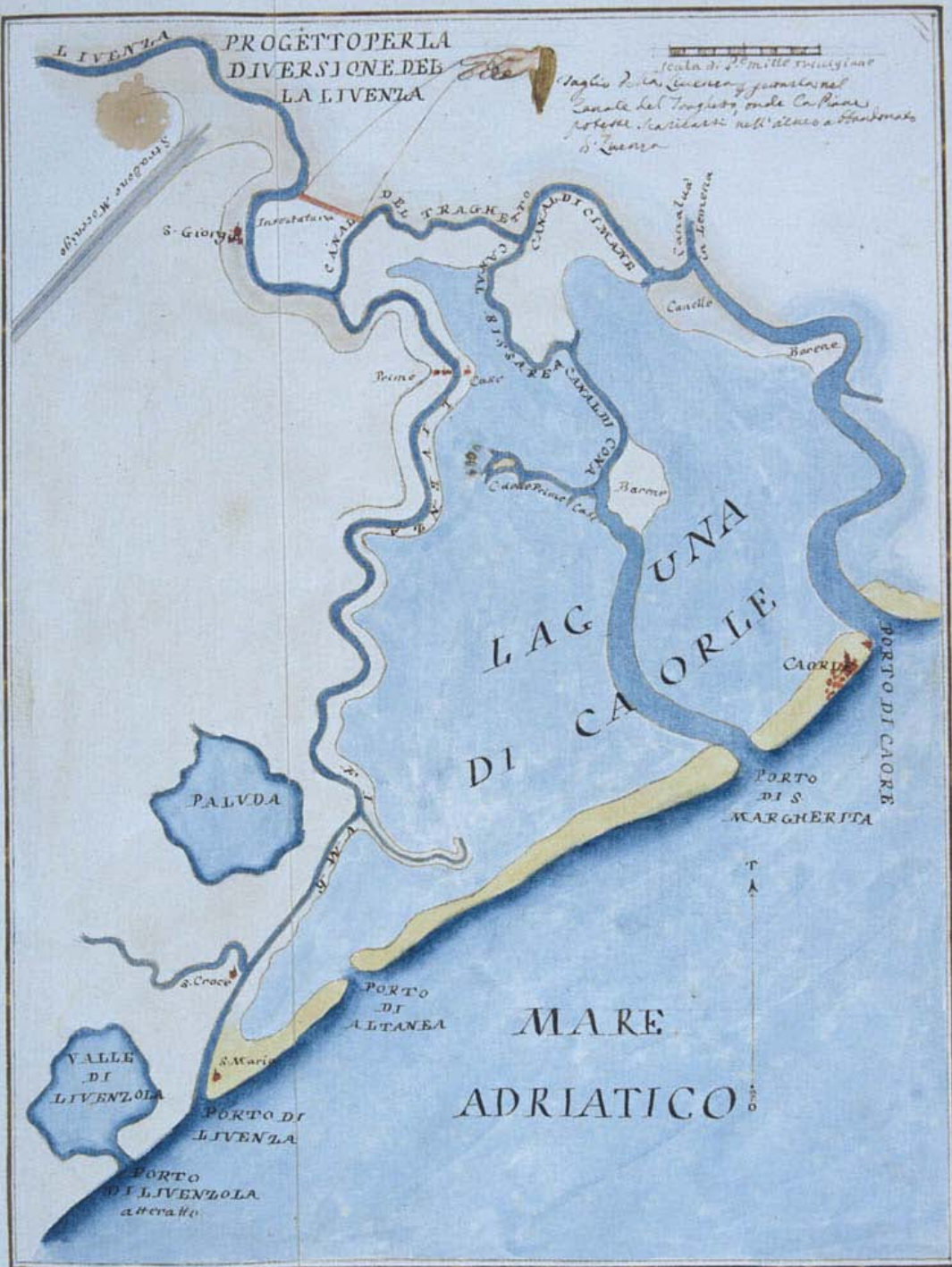
CANALE CENESA



CA' ROMAN



CANALE CENESA





DELTA DEL SILE



BOSCO NORDIO



LE MARICE -CAVARZERE



S. ERASMO



LAGO MORTO PASTI



LE MARICE



PALEOALVEO DI SAN DONA'



MEOLO VECCHIO



RISORGIVA FRATTINA



PALEOPIAVE IN LAGUNA



BURANO



S. ERASMO



CENTURIAZIONE DI ADRIA



PALEOPIAVE - DELTA DI TORRE DI FINE