

UNDERWATER AND COASTAL CULTURAL HERITAGE

The session “Underwater and coastal cultural Heritage” covers specific aspects of the tangible and intangible cultural heritage concerning the coastal areas and related seabeds. A wide spectrum of archaeological, historical, geographical, landscape subjects is considered both in a multidisciplinary and in diachronic perspective.

The papers here published were selected by the Symposium scientific Committee either for oral or poster presentation at the meeting. They investigate several Italian districts applying different approaches and cover a wide chronological range from Prehistory to the present.

Archaeology, landscape archaeology, urbanism, territorial planning, architectural, anthropological/identity studies are represented and thoroughly linked with the coastal heritage development and protection.

Following an ideal chronological thread of the contents, in this brief introduction I highlight *just some of the topics* that make each of these contributions worthy of attention by researchers and local authorities with various expertise.

In *Making a site otherwise inaccessible accessible: 3D laser scanner scanning of the Grotta dei Cervi di Porto Badisco in Otranto (LE)* Giovanna Muscatello and Carmine Mitello focus on the famous numerous pictograms which decorate part of the cave. They are dated to the 5th-4th millennium BC and interpreted as propitiatory scenes of deer and wild boar hunting, initiation and religious rites. The 3D laser scanner survey performed in the cave provides a complete digital archive of the complex and relates it with the external environment. The extraordinary corpus of collected images allows the digital preservation of the very fragile figurative apparatus. Moreover it provides scholars, policy makers and the public with extensive documentation for further studies and the enhancement of the cave. In other words, an inaccessible site becomes virtually accessible.

In *Natural Resources and Coastal Productive Settlements in Southern Puglia* Patrizia Tartara examines the substantial results of systematic researches in the Tavoliere and the Salento peninsula which largely increase our knowledge of coastal sites often dated from the Ancient Bronze Age to the modern one. Contacts with the Aegean world are documented since the early Bronze Age. Very consistent heaps of murex (*Phyllonotus trunculus*) associated with large quantities of specific ancient finds document the collection of molluscs and the subsequent production of purple in several sites. The author examines productive/economic

activities connected with purple in a longterm perspective including the Roman period and Late Antiquity. Such sites are particularly at risk because of tourism and uncontrolled urbanization, therefore these researches are fundamental also to document and safeguard the coastal heritage.

In *The port of Neapolis: memories and traces of the coastal landscape in ancient times*, Clelia Cirillo , Giovanna Acampora, Luigi Scarpa, Marina Russo, Barbara Bertoli and Loredana Marcolongo stress the importance of the archaeological excavations and related geognostic surveys carried out in Naples on the occasion of the construction of two new subway lines in the late 20th-early 21stcenturies. The digs were conducted and thoroughly published by the Soprintendenza Speciale per i Beni Archeologici di Napoli e Pompei. These complex archaeological interventions remain exemplary for the technical complexity, the relevance of the scientific acquisitions and the strict relationship with public works. To be noted: they were carried on long before the current rules governing public works came into force and brought extremely significant acquisitions for the knowledge of the ancient city; e.g. the Greek-Roman port re-emerged with its docks and wrecks. As shown by the integrated researches, the transformations of the Neapolitan bay shorelines depended on anthropic and natural phenomena including bradyseism and silting.

In *The building materials of "Rocca Vecchia" ("Old fortress") in the Gorgona Island*, Fabio Fratini, Francesca De Vita , Daniela Pittaluga and Silvia Rescic focus on the construction materials used to raise the Rocca Vecchia (Old Fortress), built by the Republic of Pisa in the Gorgona Island in the 13th century. Special attention is given to the composition of the bricks, bedding mortars, plasters and renders, in order to identify the various phases of construction and the origins of the raw materials. The research shows they come partly from the island and partly from the opposite Tuscan coast. These results will be useful both for historical studies and for future preservation and restoration works. The latter could be part of a project of activities in which to employ a group of the local jail prisoners, who could also be dedicated to the subsequent maintenance.

In *The Torre del Marzocco and the widening of the entry channel to the industrial port of Livorno*, Enrico Pribaz, Ilaria Lotti, Raoul Raffalli and Pietro Chiavaccini describe an important plan drawn up by the North Tyrrhenian Sea Port Network Authority. It regards the Marzocco tower and part of the harbour area north of the city. The well known watchtower, dated to the 15th century and subject to the Italian laws for the protection of the historical and cultural heritage, symbolizes the past, the present and the future of the city, rooted in its port activities. The project aims to redevelop and renovate the ancient marine landscape area: a water basin will be created around the Marzocco tower basement

and the entry channel to the port will be widened, in order to secure the access of the great ships of new generation to the industrial area of the port.

In *Territorial transformations, landscape and architectural features of the "Tenuta di Isola Sacra" in the reclamation of the early 1900s*, Maria Chiara Alati examines the transformations of the territory of Isola Sacra (Agro Romano) in the period between the earliest reclamation actions started by the Genio Civile around 1885 and the complex reclamation works aimed at promoting agriculture carried out by the Opera Nazionale Combattenti (1920-1950 ca.). Based on graphic and photographic archive documentation, Alati recomposes a diachronic picture of this territory located between the archaeological/environmental system constituted on one side by ancient Ostia, Portus and the imperial Ports of Claudius and Trajan, and on the other by the international airport Leonardo da Vinci. Here many relevant architectural and landscape features were cancelled by uncontrolled transformations in the last decades. The research provides data of particular importance for the preservation and enhancement of this area characterized by extraordinary potentialities of a sustainable valorization but exposed to strong anthropic pressure.

In "*Massa Lubrense coast and its modifications during the twentieth century*" Barbara Bertoli, Marina Russo, Loredana Marcolongo and Clelia Cirillo analyse the anthropogenic activities that have modified the landscape in some stretches of the Massa Lubrense (NA) coast embracing the two sides of the Sorrento and Salerno gulfs, naturally divided by Punta Campanella. The exceptional landscape values of this district began to be altered in the early 20th century due to the progressive emergence of new models of economic development. Quarries opened for the extraction of limestone in some of the most beautiful inlets of this coastal stretch, easily accessible by cargo boats, modified the coastal structure. They were closed only in the 1970s. In the second half of the 20th century the building activities related to seaside tourism have definitively transformed the landscape and the environmental values of the district. The research is based on documents preserved in the Archivio storico of the Massa Lubrense Municipality and in other archives, and on the vast repertoire of images related to mass tourism.

In her paper "*...In finibus Lucaniae. Historical cartography of the Thyrrenian coast and demographic fluctuations*" Antonella Pellettieri focuses on the coastal stretch located on the border between Basilicata and Calabria, more precisely between Castrocucco di Maratea (Basilicata) and Praia a Mare-Fiuzzi with the opposite island named Dino (Calabria). Pellettieri examines the history of the settlements and their population. She investigates the birth, depopulation and disappearance of some sites, and the cases in which the population settled on the

coast abandoning the high ground sites or vice versa, as well as the impact of recent cultural and seaside tourism.

In her paper *Tuna: underwater natural and cultural heritage. The Tunèa case study, a project for the re-connection between coastal community and marine ecosystem*, Maria Pina Usai faces a cultural/anthropological/economical problem: the progressive thinning of the traditional strong relationship between a coastal community, in the specific case Carloforte (San Pietro Island, Sardinia) and the sea, caused by the changes in fishing regulations and the resulting tuna market at a global scale. The Carloforte tonnara is one of the last fixed tuna traps in the Mediterranean Sea, located on the route of the Eastern Atlantic Bluefin Tuna (*Thunnus thynnus*). Tuna fishing and the tonnara practice have strongly linked the culture and some specific buildings of Carloforte to its sea. The project *Tunèa* was created by Usai in order to involve the entire community and a group of artists and researchers in understanding if and in what ways it is possible to re-create the relationship between a coastal community and the marine ecosystem, with a view to sustainable development from an environmental, social and economic point of view.

As mentioned above, this concise Introduction is aimed at highlighting only some central topics covered in the various contributions to researchers and local authorities with various competencies.

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