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SPECIAL ISSUE
N. ONE 2019

LUCIANOEDITORE

*RICONOSCERE E
FAR CONOSCERE
I PAESAGGI FORTIFICATI*

*RECOGNIZING AND
MAKING KNOWN
FORTIFIED LANDSCAPES*

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**SPECIAL ISSUE
N. ONE 2019**

**a cura di Marina FUMO
e Gigliola AUSIELLO**

RICONOSCERE E FAR CONOSCERE I PAESAGGI FORTIFICATI


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INDICE

Introduzione10

Indagine storico-critica

Il paesaggio torrito e i percorsi sotterranei della costa d'Amalfi

Antonio Amitrano.....12

Paesaggi fortificati e tratturi. segni dell'interdipendenza visiva

Gigliola Ausiello, Domenico Fornaro15

The value of DMZ in Korea

Doo-Won Cho.....25

Il Paesaggio Fortificato nel Regno di Sicilia

Federico II e la Costituzione del Demanio Sistema Castellare ed Amministrazione dei Castelli svevi d'angioini

Valeria d'Alessandro.....31

La geografia come strategia di difesa

Claudia Lombardi.....37

Una lettura dell'antico borgo fortificato di Alvignano

Marica Merola.....41

Las fortificaciones del pueblo de Capua entre los siglos XVI y XIX: un lugar de experimentación para las ciudades del nuevo mundo español *Olimpia Niglio, Margherita Cicala, Luigi*

Guerriero.....45

Fortified landscapes in Cuba

Julio Cesar Perez Hernandez.....51

Un castello molto forte, e difficile ad espugnarsi.

La cittadella dell'Annunziata a Massa Lubrense

Giuseppe Pignatelli.....57

Indagine storico-critica Analisi socio-percettiva Il sistema fortificato del Doss Trento. Tracce di militarizzazione dall'epoca napoleonica alla grande guerra

Joel Aldrighettoni.....63

Presidi del territorio nell'Italia meridionale. Il grafo territoriale delle masserie fortificate nel Salento

Antonio Bosco, Roberto Bosco.....71

Il paesaggio fortificato di un territorio di confine: il caso del Roccamonfina

Gennaro Farinaro.....75

Paisaje cultural fortificado de Quito

Mariluz Isabel Paredes Barragán83

Indagine storico-critica

RilevamentoRappresentazione

Potenza: un 'luogo' fortificato

Paolo Cerotto.....89

The fortified landscape in Trentino, Italy. The experience of the APSAT project - environment and landscapes of the high-ground sites in Trentino

Giorgia Gentilini, Elisa Possenti, Isabella

Zamboni.....95

Indice

Indagine storico-critica **Abbandono-Degrado**

- A 'guardia' del Volturno: storia di un castello e di un paesaggio negato
Raffaele Amore.....103
 Capua. Città fortificata tra storia e paesaggio urbano
Adriana Luciano, Paolo Liguori, Rossella Marmo, Francesco Polverino.....109
 Velletri e i frammenti delle sue mura
Rossana Mancini.....117

Indagine storico-critica **Conservazione-Riuso**

- Paesaggi fortificati della Costa d'Oro (XV-XVIII secolo). Conoscenza, recupero e valorizzazione dei forti del Ghana
Angelo Bertolazzi, Giorgio Croatto, Umberto Turrini, Giovanni Santi.....123
 Una rassegna delle tipologie di siti e manufatti della Guerra Fredda in Italia
Simona Bravaglieri.....131
 Il Torrione di Forio d'Ischia, monumento simbolo di una comunità
Francesca Capano.....137
 Lettura delle opere di difesa delle piazzaforti del Friuli-Venezia Giulia secondo il pensiero di Semper: il caso del Monte Ercole
Aldo De Marco143
 Criterios de protección y conservación de los paisajes fortificados en España
M. Aurora Flórez de la Colina, Cristina Pilar Izquierdo Gracia149
 Le architetture fortificate napoletane nel paesaggio e nel contesto urbano
Luigi Maglio.....157
 Leggere un paesaggio militarizzato. Temi e approcci metodologici per il riconoscimento delle stratificazioni
Alessandra Quendolo, Joel Aldrighettoni.....161

Indagine storico-critica **Restauro-Recupero**

- Paesaggi fortificati "feriti": danni, lacune, nuove configurazioni. Il caso del terremoto del Friuli Venezia Giulia
Nicola Badan.....169

- Le fortificazioni dello Stato dei Presidi-OrbetelloMonte Argentario, Area di Grosseto (Toscana-Italia); Cinte bastionate, forti, e torri costiere: relazione tra strutture architettoniche ed ambiente
Francesco Brogna.....175
 Establishment of the naval base young kingdom of italy In La Maddalena estuary: 1886 - 1896
Pierluigi Cianchetti179
 Paesaggi culturali di Terra di Lavoro: l'insediamento fortificato di Castel Volturno
Luigi Guerriero, Roberto Bosco, Nicola Chiacchio187

Indagine storico-critica **Valorizzazione**

- Il parco archeologico di Serra di Vaglio. un insediamento fortificato dell'Italia antica
Gigliola Ausiello, Immacolata Piscopo.....193
 Peschiera. Fortezza veneziana di terraferma tra il Garda e il Mincio
Alessandro Bazzoffia.....199
 Abruzzo: sistemi fortificati e paesaggio "munito"
Federico Bulfone Gransinigh, Claudio Mazzanti.....205
 Landscape and identity of fortified villages in the province of Rieti: anticrisis resources for the apennines' internal areas
Paolo Camilletti.....211
 Ischia: da Castel Gerone a Castello Aragonese. Una fortificazione privata per la cultura
Alessandro Castagnaro219
 Storia di una fortificazione in Val di Chiana: il castello di Montecchio Vesponi tra ricerca archeologica, valorizzazione e fruibilità pubblica
S. Cipriani, F. Colangeli, F. Giovannini, P. Orecchioni, P. Piani, M. Polvani.....227
 Quarant'anni per il castello di Montecchio Vesponi (AR). Diario di un'esperienza di restauro e valorizzazione
Orietta Floridi.....233

Indice

Architectural and landscape solutions for the fortification of the castle and old town of Gesualdo (Campania, Italy) <i>Fabio De Guglielmo</i>241	<i>Giuseppe Trinchesi - Giuseppe Mollo</i>321
Le postazioni del telegrafo ottico nella difesa delle coste adriatiche in epoca napoleonica <i>Vittorio Foramitti</i>247	Indagine storico-critica Gestione Le masserie fortificate in Basilicata <i>Vincenzo Ciruzzi</i>331
Paisajes fortificados del periodo hispánico en el caribe. El caso de Venezuela (1498-1821) <i>Francisco Pérez Gallego, Rosa Maria Giusto</i>255	Indagine storico-critica Comunicazione L'architettura rurale fortificata in Sicilia <i>Andrea D'Amore</i>339
La città fortificata di Norba: storia, contesto paesaggistico e azioni di valorizzazione <i>Stefano Gizzi – Stefania Quilici Gigli</i>263	Analisi socio-percettiva Fortificazioni delle città contemporanee: il camouflage delle barriere urbane a Nizza dopo l'attentato terroristico del luglio 2016 <i>Giovanni Gugg</i>345
Monteverde: strategie di valorizzazione di un borgo sull'Ofanto <i>Noemi Iacobucci, Francesco Ricciardi</i>269	Considerazioni generali sul paesaggio in Calabria e la sua percezione come sistema fortificato <i>Francesco Saverio Mollo</i>357
Il sistema paesaggio-forti. Dalla conoscenza ai primi progetti di valorizzazione. Una ricerca ancora in fieri <i>Sara Isgrò</i>273	Analisi socio-percettiva Valorizzazione Castel Sant'Elmo: un connubio tra architettura fortificata e arte contemporanea <i>Maria Maio, Federico Minelli</i>365
Le case fortezza di terra cruda del Fujian (Cina): tipologia, costruzione e tutela <i>Leccisi Fabrizio, Nisticò Paola Francesca, Yapeng Ou</i>283	Isolamento ed otium musicale: Montelapiano e il Guitar Education & Research <i>Alessio Pino; Maurizio Villa</i>371
Le linee difensive italiane tra l'inverno del 1915 e l'autunno del 1918: lo sviluppo delle tecnologie belliche innovative che militarizzarono il paesaggio <i>Liliana Ninarello</i>291	Paesaggi fortificati e valutazione: il valore economico dell'architettura militare <i>Domenico Tirendi</i>377
Evoluzione dei paesaggi fortificati rurali. Il caso dell'Agro Materano <i>Antonello Pagliuca, Donato Gallo, Pier Pasquale Trausi</i>299	Analisi socio-percettiva Comunicazione Fortifications urbaines aux défenses psychiques: un rapport inverse? <i>Bisson Thierry</i>395
Finalborgo e Forte San Giovanni: un paesaggio fortificato nell'enclave spagnola nel XVII secolo <i>Alice Pozzati</i>305	Rilevamento-Rappresentazione AbbandonoDegrado Dal Timau al Timavo. Il paesaggio fortificato del confine orientale
La Costa dei Trabocchi: un paesaggio limitato da torri di difesa dalla povertà <i>E. Serena Sansevierio</i>313	
Paesaggio e incastellamento dell'Agro nolano nel De Nola Opusculum di Ambrogio Leone	

Indice

- Roberto Petruzzi*.....401
UFC and Ion Chromatography characterization of
Cartagena de Indias' Walls
*Manuel Saba, Edgar Eduardo Quiñones-Bolaños,
Luigi Guerriero, Juan Manuel Lizarazo
Marriaga, D., Fajardoc*.....411
- Rilevamento-Rappresentazione Valorizzazione**
La Bandiera Arancione del Touring Club Italiano: uno
strumento di valorizzazione dei borghi italiani
Isabella Andrighetti.....417
Il bunker antiatomico del monte Soratte
Cesira Paolini, Marina Pugnaletto.....421
Il rifugio ipogeo del monte Soratte
Cesira Paolini, Marina Pugnaletto.....427
- Abbandono-Degrado Conservazione-Riuso**
Rehabilitation and Conversions/Reconversions of
Medieval Defensive Architectural Ensembles from
Romania (fortresses, castles, fortified enclosures,
citadels etc.); Successes and Failures
*Teodor Octavian Gheorghiu, Smaranda Maria
Bica*.....463
Managing the defensive system of fortified cities,
XI'an (china) and Naples (italy) as cases
Yapeng Ou, Marina Fumo.....469
- Conservazione-Riuso Restauro-Recupero**
Architettura fortificata e paesaggio: la destinazione
museale per la valorizzazione della fortezza di
Cortona
Gioconda Cafiero, Bianca Gioia Marino.....479
Technologies and restoration of fortifications. A
comparison between some Italian and Moroccan
archeological sites
Gainluigi De Martino, Paola de Joanna485
Valorizzazione e recupero dei paesaggi fortificati: i
borghi medievali Terminio-Cervialto
Benedetta Verderosa.....495
- Castelli dalla costa salernitana all'entroterra
casertano. Tra paesaggio antropizzato e degrado, le
sfide del recupero e della valorizzazione
Mariangela Buanne, Lorenzo Santoro.....433
La fortezza di Trento: conservazione, valorizzazione e
abbandono
Maria Paola Gatti, Giorgio Cacciaguerra.....439
- Conservazione-Riuso**
Napoli e i suoi castelli: memoria e identità storica della
comunità. Le esperienze di Castel Capuano e di
Castel Nuovo
Aldo Aveta.....447
Rocca Colonna a Castelnuovo di Porto: un presidio
fortificato nel paesaggio della valle
Tiberina
Claudia Aveta, Sabrina Coppola.....455
Villaggio Hanok nel cuore di Seoul
Domenico Ziccardi.....501
- Conservazione-Riuso Valorizzazione**
M.A.P. Minor Archaeological Parks. The fortified
landscape of Calvi Risorta. Integrated studies and
design for the protection and enhancement of cultural
sites in southern Italy. Interactions between natural
environment, archaeological finds and anthropic
actions
Emma Buondonno.....507
Il fianco meridionale delle mura di Segni: un progetto
di ricerca e di recupero urbano
Elena Ciotti.....513
The fortified saxon churches from Transylvania seen
as fortified landscape
Elena Codina Duşoiu.....519
La rete delle fortificazioni della città metropolitana di
Reggio Calabria nel sistema dei parchi tematici urbani
e periurbani
*Concetta Fallanca, Natalina Carrà, Antonio
Taccone*.....527

Indice

- The town walls of Pizzighettone:
a fortified settlement crossed by a river, through six
centuries of history
G. Gambarelli, G. Cardani, R. Pizzoli.....535
- Il recupero del sistema fortificato della Laguna di
Venezia mediante l'impiego delle misure di
compensazione, conservazione e riqualificazione
ambientale del sistema MOSE
Andrea Grigoletto.....541
- Il recupero del sistema fortificato dalla valle
dell'Adige alla Lessinia: memoria e paesaggio
Fiorenzo Meneghelli, Andrea Meneghelli.....551
- Nuove progettualità per un uso contemporaneo del
rudere di strutture fortificate
Francesco Novelli.....557
- Il paesaggio fortificato di Messina nel XVI sec.
Ipotesi di valorizzazione del Castello Gonzaga
Elena Sottile, Fabio Todesco.....563
- Il forte di Pietole a Mantova. La macchina im-perfetta
Valerio Tolve.....571
- Restauro-Recupero**
- I paesaggi urbani delle città fortificate in
Sardegna: permanenza e trasformazione
*Bruno Billeci, Maria Dessì, Michele Ciudino,
Alessandro Giua*.....579
- Il restauro della Torre Faraglione di Aci Castello:
utilizzo combinato di un approccio conservativo e
della metodologia BIM
*Santi Maria Cascone, Stefano Cascone, Nicoletta
Tomasello, Giuseppe Russo*.....585
- El paisaje fortificado de Cartagena de Indias,
Colombia. Acciones en pro de su valoración,
Ricardo A. Zabaleta Puello591
- Restauro-Recupero Valorizzazione**
- Forte Aurelia Antica. Dalla mimetizzazione alla
riemersione della memoria
Bruno Buratti.....599
- Esplorazioni di ricerca e didattica sul sistema
difensivo di La Maddalena
*Giovanni Marco Chiri, Donatella Rita Fiorino,
Pasqualino Iannotti, Assunta Maria Pastò*.....607
- Borghi dell'Alto Casertano, esempi di paesaggi
fortificati da rigenerare attraverso la promozione
culturale delle tradizioni tecnico-artistiche del
territorio: caso studio Ruviano (CE)
*Gianfranca Mastroianni, Amelia Maris,
Gabriella Saudella*617
- Le azioni di restauro nelle politiche di conservazione
dei borghi: la torre Volpe di Prignano a Melito,
Prignano Cilento
Michele Sarnataro, Mario Volpe di Prignano.....621
- Restauro e ri-animazione di un tratto del sistema
bastionato della città rinascimentale di Padova, dal
bastione Arena al torrione Venier
Patrizia Valle.....629
- Restauro-Recupero Gestione
Valogno borgo d'Arte, la città dei murales
Alessio Pino.....635
- Valorizzazione**
- Fortified cityscapes: from the materiality of the past to
the vision of the future
*Caterina Frettoloso, Rossella Franchino,
Francesca Muzzillo, Antonella Violano*.....639
- Torri in Festa Torri in Luce: un format innovativo per la
valorizzazione del paesaggio fortificato di Ischia
Aldo Imer.....647
- Fortezze medioevali e connessioni contemporanee -
Il Castello di Teggiano
Benedetto Migliaccio.....649
- Il restauro conservativo e statico del castello Giusso
di Vico Equense
*Domenico Ricciardi, Francesca Ricciardi,
Giuseppe Amatilli*.....659

RICONOSCERE E FAR CONOSCERE I PAESAGGI FORTIFICATI

Il Centro di Ricerca Interdipartimentale CITTAM con la propria attività di disseminazione scientifica si prefigge anche di offrire occasioni di messa in luce e di confronto delle attività in atto in ambito mediterraneo, ma anche nel più ampio contesto mondiale. Il tema proposto per il prossimo incontro, fissato nei giorni 6 e 7 giugno è un tema caro agli studiosi CITTAM, in quanto si tratterà di paesaggi, e specificatamente quelli fortificati.

Cosa intendiamo come paesaggio?

Recenti documenti internazionali ne hanno dato definizione, ma già nella Carta Costituzionale Italiana è citato all'art. 9.

Cosa intendiamo come fortificazione?

Se partiamo dall'etimologia latina, ci interessa tutto ciò che rende più forte ovvero più sicuro un sito abitato.

Cosa intendiamo come paesaggi fortificati?

Paesaggi urbani oppure paesaggi naturali scarsamente antropizzati oppure paesaggi culturali che abbiano specifiche modalità di impianto e di adattamento ai luoghi a scopo difensivo.

Cosa vi proponiamo?

Di incontrarci a Napoli per esporre i vostri casi di paesaggi fortificati al fine di condividere ciascuna conoscenza con tutti i partecipanti al convegno proposto.

Quale opportunità offre il convegno?

Far incontrare le persone che, a vario titolo e con diversi interessi, si occupano di paesaggi fortificati affinché si rafforzi la rete di conoscenza e si confrontino esperienze su casi specifici.

Chi è invitato a partecipare?

Chiunque abbia imparato a riconoscere un paesaggio fortificato ed a valorizzarlo sia attraverso azioni istituzionali che imprenditoriali, politiche, associative, commerciali o altre ancora.

A cosa servirà il convegno?

A porre in evidenza situazioni locali ignote ai più, a far conoscere buone pratiche esemplari attuate da enti pubblici o da privati cittadini, allo scopo di trarre utili indicazioni operative per far conoscere al meglio i nostri innumerevoli e differenti paesaggi fortificati.

Ci sarà memoria dei contributi presentati?

Come di consuetudine, anche i contributi degli Atti del prossimo Convegno CITTAM 2019 saranno pubblicati e distribuiti all'apertura dei lavori e questa volta in edizione scientifica riconosciuta dall'ANVUR.

KNOLEDGING AND MAKING KNOWN THE FORTIFIED LANDSCAPES

With its activity of scientific dissemination, the CITTAM Interdepartmental Research Center also aims to offer more chances to highlight and compare the ongoing works both in the Mediterranean area and worldwide.

The subject that has been suggested for the next congress is very dear to CITTAM's scholars concerning landscapes, especially the fortified ones.

What do we mean by "landscape"? Which definition are we agreeing on?

Recent international documents have defined the landscape as well as older documents as the Italian Constitutional Paper, where is to be found in the 9th article.

What do we mean by "fortification"?

If we start from the Latin etymology of the word, we talk about all the elements that make a populated area stronger and safer.

What do we mean by "fortified landscape"?

Urban landscapes, scarcely inhabited natural landscapes, cultural landscapes, all showing peculiar forms of settlement and adaptation to the places for defensive purpose.

What do we propose you?

To meet us in Naples in order to expose cases of fortified landscapes that you may know of and share them with all the people that will be attending the Congress.

Which opportunities does the Congress offer?

To bring together people who, for different reasons and interests, deal with fortified landscapes.

Strengthen the network of knowledge and compare experiences of specific cases.

Who is invited to attend the Congress?

Anyone who is able to recognize a fortified landscape and to enhance it through institutional, entrepreneurial, political, commercial and associative actions.

What is final the purpose of the Congress?

To highlight local situations and good practices by public authorities or private citizens that are unknown to the most and to gain useful operational directives to make our countless and different fortified landscapes better known.

Will there be a record of the submitted contributions?

As usual the proceedings of the next CITTAM's Congress will be published and distributed in a ANVUR's certified scientific edition at the beginning of the works.

RECONOCER Y DAR A CONOCER PAISAJES FORTIFICADOS

El centro de investigación interdepartamental CITTAM, con su actividad de divulgación científica, también tiene como objetivo dar oportunidades para resaltar y comparar las actividades en curso en el área del Mediterráneo, y en el contexto mundial más amplio. El tema propuesto para la próxima reunión, que se celebrará los días 6 y 7 de junio, es muy apreciado por los académicos de CITTAM, ya que se tratará de paisajes y, específicamente, de aquellos fortificados.

¿Qué entendemos por paisaje?

Los documentos internacionales recientes lo han definido, pero antes ya había sido citado en el Artículo 9 de la Carta Constitucional italiana

¿Qué entendemos por fortificación?

Si empezamos de la etimología latina, nos interesa todo lo que hace que un sitio habitado sea más fuerte o más seguro.

¿Qué entendemos por paisajes fortificados? Paisajes urbanos o paisajes naturales poco antropizados o paisajes culturales que tienen métodos específicos de planificación y adaptación a lugares con fines defensivos.

¿Lo que proponemos?

Para reunirse con nosotros en Nápoles para exponer algún caso de paisaje fortificado de su conocimiento para compartirlo con todos los participantes en la conferencia propuesta.

¿Qué oportunidad ofrece la conferencia?

Reunir a personas que, por diversas razones y con diferentes intereses, se ocupen de los paisajes fortificados para que se vuelva más fuerte la red de conocimiento y comparar experiencias en casos específicos.

¿Quién está invitado a participar?

Cualquiera que haya aprendido a reconocer un paisaje fortificado y a mejorarlo a través de acciones institucionales, políticas, empresariales, asociativas, comerciales o de otro tipo.

¿Cuál será el objetivo de la conferencia?

Para resaltar situaciones locales desconocidas para la mayoría de las personas, para dar a conocer las buenas prácticas ejemplares implementadas por organismos públicos o ciudadanos privados con el fin de establecer buenas direcciones operativas para dar a conocer nuestros innumerables y fortificados paisajes.

¿Habrá un registro de las contribuciones presentadas?

Como es habitual, también las contribuciones de las actas de la próxima conferencia CITTAM se publicarán y distribuirán en la apertura de los trabajos y esta vez en una edición científica reconocida por ANVUR.

CONNAÎTRE ET FAIRE CONNAÎTRE LES PAYSAGES FORTIFIÉS

Le centre de recherche interdépartemental CITTAM, avec son activité de diffusion scientifique, vise à mettre en lumière et comparer les activités mises en œuvre au sein du bassin méditerranéen, mais aussi dans le plus vaste contexte mondial. Le thème proposé pour la prochaine rencontre, fixée les 6 et 7 juin, est un thème cher aux chercheurs du CITTAM dans la mesure où il s'agira de paysages et plus spécifiquement, de paysages fortifiés.

Qu'entend-on par paysage? De récents documents internationaux en ont donné une définition, mais déjà dans la Charte Constitutionnelle Italienne, la notion de paysage est citée à l'article 9.

Qu'entend-on par fortification? Si on part de l'étymologie latine, tout ce qui rend plus fort, à savoir plus sûr, un site habité, nous intéresse.

Qu'entend-on alors par paysages fortifiés? Paysages urbains, paysages naturels faiblement anthropiques ou encore paysages culturels qui répondent à des modalités spécifiques d'implantation et d'adaptation aux lieux à visée défensive.

Que vous proposons nous? De se rencontrer à Naples pour exposer quelques cas de paysages fortifiés que vous connaissez, afin de la partager avec tous les participants à la conférence proposée.

Quelles opportunités offre la conférence? Faire se rencontrer des personnes qui, à divers titres et avec des intérêts différents, s'occupent de paysages fortifiés de manière à renforcer le réseau de connaissance et à confronter des expériences autour cas pratiques.

Qui est invité à participer? N'importe qui ayant appris à reconnaître un paysage fortifié et à le valoriser, que ce soit au travers d'actions institutionnelles, entrepreneuriales, politiques, associatives, commerciales ou autre.

A quoi servira la conférence? A mettre en évidence des situations locales souvent méconnues du plus grand nombre, à faire connaître de bonnes pratiques mises en œuvre par des organismes publics ou des citoyens en privé en vue d'en tirer de bonnes indications opérationnelles pour faire connaître au mieux nos innombrables et divers paysages fortifiés.

Se souviendra-t-on des contributions présentées? Comme le veut la coutume, les contributions de la prochaine conférence CITTAM seront également publiés et distribués à l'ouverture des travaux et cette fois, en édition scientifique reconnue comme telle par l'ANVUR.



THE FORTIFIED LANDSCAPE IN TRENTO, ITALY. THE EXPERIENCE OF THE APSAT PROJECT – ENVIRONMENT AND LANDSCAPES OF THE HIGH-GROUND SITES IN TRENTO

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Abstract

The APSAT project has been funded by the autonomous Province of Trento in the framework of the “Great projects 2006 resolution G.P. 3790/2006”. The Study University of Trento (project coordinator), the Department of Archaeology of the Study University of Padova, the IUAV University of Venice, the Foundation Bruno Kessler, the Castello del Buonconsiglio, Provincial Monuments and Collections, the Museum of Customs and Traditions of the Trentino People have partnered in the project. The study developed in the span of years 2009-2013 and started, following a multidisciplinary approach, with the in-depth research on the historical data provided by the written sources, both cartographic and toponymic. The data of the analysis have been put in relation with the set of information obtained through the remote sensing (aero-photo-interpretation and LiDAR scanning) and with the archaeological data obtained on-site derived from the surveys, excavations and stratigraphic analysis of the architectures, with the aim of going back over the main transformations in the landscape.

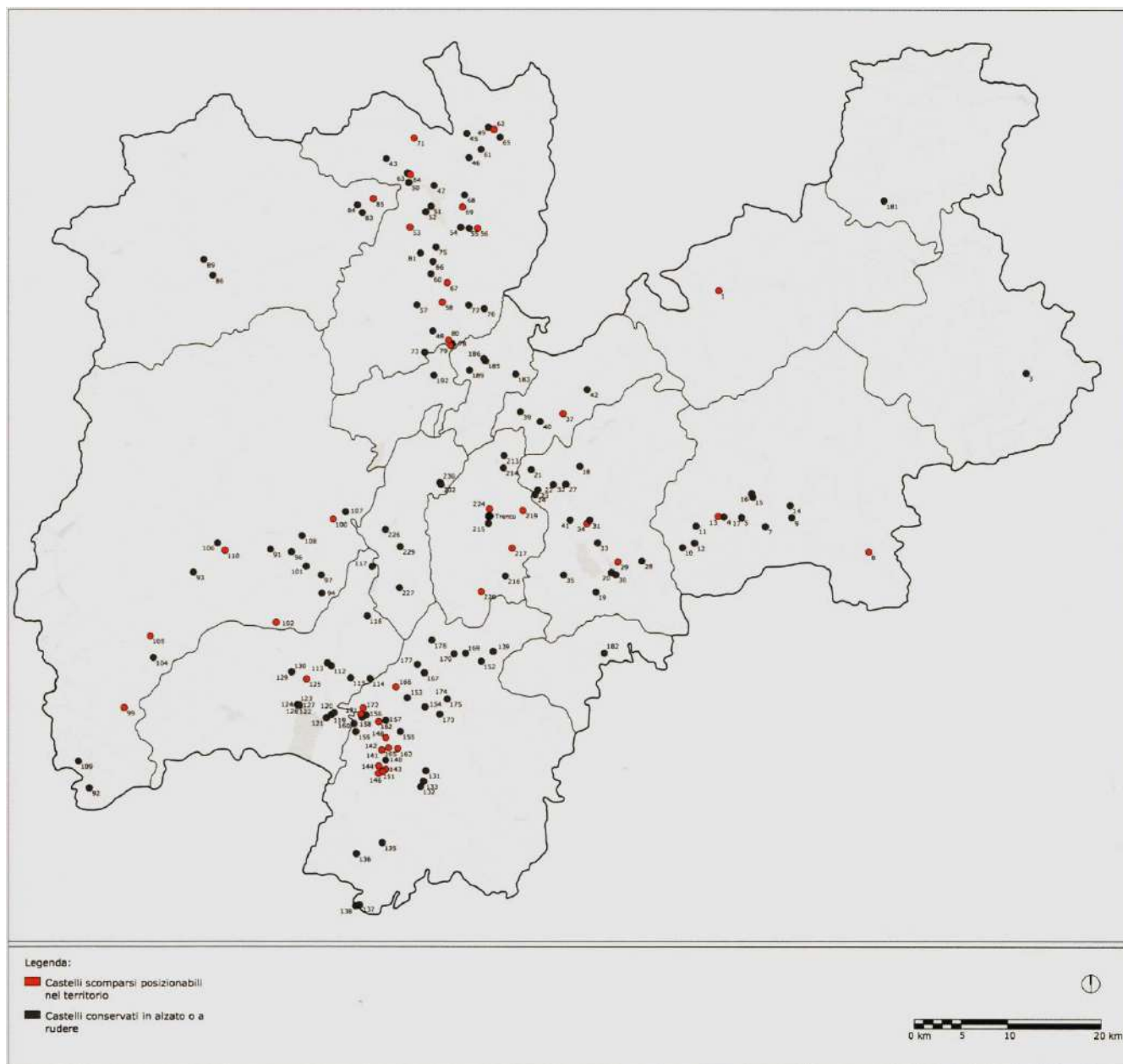
The most widespread main generator elements have been detected in the road system and the settlement web (settlements, fortifications, places of worship, productive activities, ...). A research line has gone deeper into the themes pertaining to the defence systems between the late ancient age and the Middle Ages. Starting from these premises the work on the castles has been conducted by identifying two sectors complementary to each other: a former which is the census and the collection of the data of the single sites in a specific corpus, a latter comprising some in-depth studies and a first balance of the collected data. The real advancement with respect to the previous studies on the Trento castles has been the interdisciplinary approach which has availed itself of the following research methods: 1. The collection of data on the documentary sources; 2. The attention paid to the stratigraphic-architectonic fact and then to the most accurate as possible reconstruction of the buildings timing; 3. The mere archaeological component linked to the material fact, both as far as structures and constructions and the discovered finds are concerned; 4. The connection of the site with the researches on the territory and on landscapes concurrently developed inside the APSAT project. The study has produced 234 cards relative both to rural castles and to urban fortifications, both well preserved and disappeared or present as ruins. The decision of considering the fortified Trentino landscape as a whole has been generated by the intention of comparing the diverse types of fortifications which show analogies, although different as for location and function, from the point of view of the material fact and the building techniques. The APSAT project has turned out to be an occasion of confrontation on the research and appreciation methods of the historical heritage of the autonomous Province of Trento.

INTRODUCTION

The APSAT project started in 2009 under the funding provided to the Trento University by the autonomous province of Trento in the framework of the “Great projects 2006 resolution G.P. 3790/2006”. As a whole it has involved over seventy researchers coming, besides from the Trento University, from Padova and Venezia, from the

museum of the Castello del Buonconsiglio in Trento, from the Museum of the Customs and Traditions of the Trento People in San Michele all'Adige and from the Foundation Bruno Kessler in Trento¹.

The study developed in the span of years 2009-2013 and has aimed at defining a global and thorough knowledge² of the historical landscapes through a multidisciplinary



Pic. 1 Distribution chart of the Trento castles. As developed by Matteo Rapanà

method which has proved to be fundamental for the project strategy. At an operational level the research has started from the provincial area as a whole, inside which some

“sample areas” have been identified. At a more general level the historical sources have been investigated (written sources, cartography, toponymy) and a systematic

campaign of remote sensing has been carried out (from aero-photo-interpretation to LiDAR), whose results have been later assessed on site. Inside the sample areas those research lines have been specified according to which the set of information has been studied more accurately, making reference to different disciplines such as geo-archaeology, archaeology, palaeobotanic, history of architecture, history of the written sources, historical cartography, toponymy. Eventually the diverse research areas have been compared in order to find out some relations and links to the ones investigated with the aim of protecting and enhancing them³. In agreement with the Superintendence for the Book and Archive Heritage on one side and for the Architecture Heritage on the other, some themes have been identified, cross-cutting the sample areas, which were thoroughly investigated and documented on the whole provincial area. More specifically the churches (from the origins up to 1250) and the castles (from the late ancient age up to the beginning of the modern age) are concerned, for which both Superintendence offices have made available their own material, even the unpublished one. The research lines have been differentiated on the basis of the reference themes and of the span of years taken into consideration:

1. The churches (end of IV century – half XIII century). The main problem has been that some of the detected buildings have turned out to have been plastered after the restoration works occurred over several years. At any rate the study of these architectures has made it possible to define a territorial network of buildings belonging to different clients and with diverse destinations: from churches with care of souls to funereal oratories, from hermitages to monasteries.

2. The castles object of the study have been distinguished on the basis of relevant construction period: first generation fortifications, built between the end of the IV and the VI century with the purpose of stopping the barbaric incursions along the Adige river and the lake Garda and the Giudicarie area, and the second generation castles built in connection with the bishop power and the confirmation of some prominent families⁴.

Besides churches and castles (Pic. 1), systematically investigated over the whole provincial territory, also the residential architectures have been documented in some specific sectors according to two different modalities: the study of a whole building and the in-depth study of a single

building. The application of the stratigraphic analysis has made it possible to establish a knowledge reference basis⁵ in relation to which some innovative approaches have been proposed, with a newer approach than preservation and restoration, rather related to the concepts of vulnerability, risk and resilience⁶.

THE TOOLS AND THE INNOVATION IN THE WORKING METHOD

As aforesaid, the study has been carried out according to a method which is different from the past one as for the targets and the innovative methods employed. Firstly, a swap has been effected from a site-centric perspective – whose main aim is that of starting from a pre-established model which is later verified on a territory – to the experimentation of a global and thorough knowledge of the historical landscapes. This method has also promoted the multidisciplinary and the interdisciplinarity so that to foster the connection and overlapping of the information coming from the different disciplines, thus getting a global vision on the themes examined. Secondly, the landscape study has been carried out using the traditional tools coming from the historical sources (cartography, toponymy, and so on) and from on-site surveys, but these results have then been brought together with the LiDAR images available for the whole provincial territory. LiDAR is considered one of the most innovative tool in the archaeological field as it makes it possible to determine the surface evidences, even and above all in those areas where visibility is jeopardised by massive vegetation. The supports deriving from this technique are DSM (Digital Surface Model) representing the earth surface including anthropic and vegetation elements thus defined by the calculation starting from the first pulse – and DTM (Digital Terrain Model) representing the shape of the ground without the surface elements. This latter is calculated on the basis of the last pulsed values. The resolution of these images can vary from 1x1 in the area of the valley bottom to 2x2 in the mountain areas above 1500 meters height⁷.

The LiDAR system and the scanning from aircraft can be then employed to interpret and investigate the landscape. Peculiar interfaces allow for enhancing the tracks detectable on the ground through differently scaled approximations, thus detecting the smallest

morphological anomalies in relation to the simulated light which hits them. These interfaces can be the Hillshade, the Slope analysis, the PCA (Principal Component Analysis) and the SVF (Sky View Factor). As already stated, the system allows for determining the earth surface regardless of the elements which are present on it. Particularly in the mountain areas of Trentino this innovative tool has revealed some elements which couldn't have been detected in any other way. It has made it possible to detect traces of ancient settlements and to reconstruct some phases in the history of the agricultural landscapes with the support of the maps from the Habsburg Cadastre of 1859. It has been possible to provide a sequence of the reduction to farmland of some sample territories such as Sommolago, the Giudicarie, the Val di Non, the Valsugana and the Vallagarina⁸.

THE FORTIFIED LANDSCAPE

In the Article 131 of the Cultural and Landscape Heritage Code (L.D. 22nd January 2004 N. 42) under paragraph 1 the landscape is defined as "the territory expressing identity, whose main features derive from the action of natural and human factors and from relevant interrelations".

The research strand relative to the fortified architecture between late ancient and the Middle Ages has developed by identifying two complementary sectors: the former pertains to the census and to the collection of the data of the single sites in a dedicated corpus, the latter pertains to some in-depth studies and to a first assessment of the collected data. The interdisciplinary approach in this project turns out to be a strength with respect to the previous studies about the Trentino castles. Following up this method some main intervention sectors have been identified:

1. the collection of data on the documentary sources;
2. the focus on the stratigraphic-architectonic fact and consequently on the most accurate as possible reconstruction of the timing of the buildings;
3. the strictly archaeological component connected to the material fact relative both to the structures and the constructed bodies and to the discovered finds;

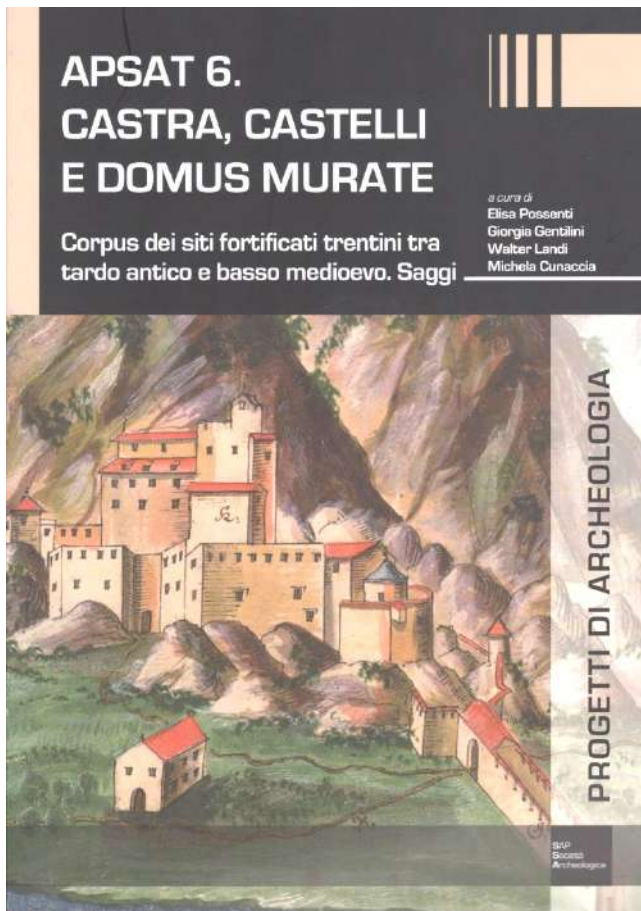
4. The link of the site to the research studies on the territory and on the landscapes concurrently developed inside the APSAT project.

The study has produced as a whole 234 cards relative both to rural castles and to urban fortifications, both well preserved and disappeared or present as ruins. These cards provide an insight into different aspects and involve different competences and qualified experts. First of all each single building has been localised inside the provincial territory and dated with respect to the first mention. The study of the toponymy has been carried out as well and the toponymic reference of the site has been subsequently provided. Of a peculiar relevance among the information available is the preservation status of the castle which can be more or less complete, a ruin or can have even disappeared. This notification is indeed a sign of the presence or absence of wall structures to read and interpret also in consideration of the restoration works which can have been carried out in a more or less remote past. Consequently there is the possibility to determine the construction sequence of the building with the support of the historical and archaeological sources. This sequence is translated into periods and phases during recording.

When the preservation status has not allowed any definition of an accurate temporal sequence, a more generic description of the complex has been made. The plans with the construction phases have been processed on the basis of the documents made available by the Superintendence for the architectonic and archaeological Heritage of the Province of Trento. As a general rule the recording items are the following⁹:

- Geographical references (Municipality, cartographic references);
- First mention;
- Toponymic fact;
- Historical sources and identification;
- Settlement context;
- General data (description of the complex and of the construction sequence);
- Mobile finds;
- Critical remarks.

In the Essays¹⁰ volume the relationship between castle and surrounding landscape is studied more accurately (Pic. 2).



Pic. 2 Cover of the volume APSAT 6. Castra, castelli e domus murate. Corpus dei siti fortificati trentini tra tardo antico e basso medioevo. (Castra, castles and walled domus. Corpus of the Trento fortified sites between late ancient and late Middle Ages)

An example is provided by the specific study of the Val di Non¹¹ whose morphology features uplands interrupted by deep canyons with rivers flowing through them. The residential settlements are mainly located on flat countries and exposed to the sun. In this valley a massive number of fortified architectures is present, homogeneously spread out on the territory, keeping for the most part a dominant and detached position (from 214 to 3690 meters) with respect to the town centres they are referred to.

For this in-depth study the applied method has been

that of the multidisciplinary approach as mentioned above, entering the data provided by different sources on the net: 1. Aerial Pic.s and LiDAR scans; 2. Present maps with different scales; 3. Historical maps on a big scale and on topographic scale; 4. Archive files; 5. Macro- and micro toponymic names, current and historical.

Basing on the results obtained it has been possible to differentiate the types of landscape in relation to the location of the castle inside it:

1. Fortified landscape of the early middle ages;
2. Fortified landscape aimed at controlling the territory and the road network;
3. Fortified landscape aiming at exploiting the agrarian territory.

In the medieval fortified landscape the castle has been accounted in an isolated place, naturally surrounded by the site conformation on three sides, whereas the fourth side guarantees the only possible access. In this case besides the landscape also the archaeological finds allow us to understand that the main function of this fortification could be of a military nature or of a local public administration nature. The settlement typology seems not to have any relation to the town centre and for this reason does not seem to have brought about any peculiar modification of the territory for agricultural purposes.

The second typology too considers the castle in a remote position with respect to the settlement. In this case though the concept of fortified landscape is generated by the function of road control which these castles had to perform. The fortification is indeed in a dominant position with respect to the main communication lines. This typology acquires a particular meaning in the late Middle Ages.

Dating back to the same period, with different functions though and in connection with the growing importance of the noble Trentino families, is the third typology which is also the most widely spread. It is a fortified landscape where the castle is located closest to the town, preferably not far from a river or in correspondence with small bumps. These constructions are generally surrounded by cultivated soils or wood.

With reference to this latter typology documented in Val di Non it is interesting to point out how the comparison



Pic. 3 Ortho-photo of the castel Bragher area



Pic. 4 Ortho-photo of the castel Cles area

between the documentary sources and the LiDAR system has been able to define the development and the morphing of the landscape all around the castle. In some cases (Castel Bragher and Castel Cles, Pics. 3-4) it has been possible to recover the pertinences of the complex and the different types of land exploitation in the course of time (wood, fruit trees or grapes cultivation, Pics. 5-6).

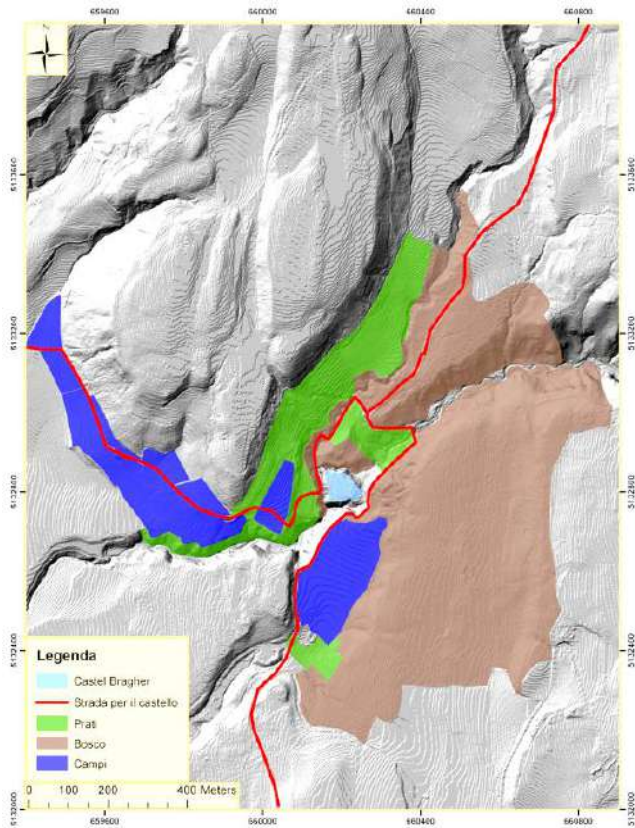
In conclusion the APSAT project has turned out to be an occasion of confrontation on the research and appreciation methods of the historical heritage of the autonomous Province of Trento¹².

As for the fortified architectures, the multidisciplinary study has allowed for bringing together the different types of fortification, showing in detail the analogies between the material fact and the construction t

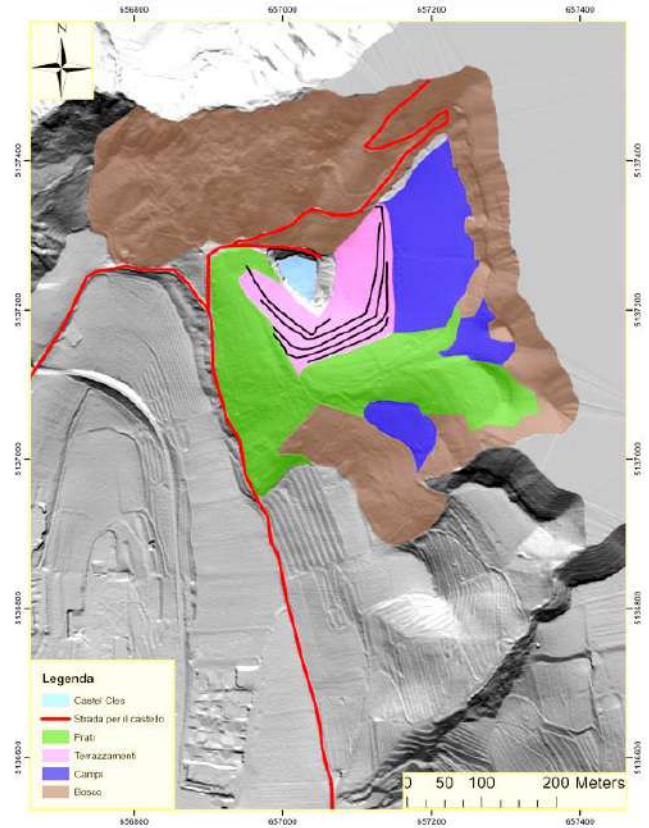
echniques and, in the general contest, providing the guidelines to define the historical landscape.

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Pic. 5 Castel Bragher: use of the land. As developed by Katia Lenzi



Pic. 6 Castel Cles: use of the land. As developed by Katia Lenzi

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² G.P. BROGIOLO, in L'Archeologia dell'Architettura in Italia nell'ultimo quinquennio (1997-2001), «Arqueología de la Arquitectura», I, pp. 19-26;

³ G. P. BROGIOLO, APSAT 1, in "Introduzione", pp.5-6.4 G. P.;

⁴ BROGIOLO, APSAT 7, in "Dal progetto APSAT una nuova prospettiva per i beni culturali del trentino?", pp.19-24.

⁵ The new studies have made it possible to implement what already published in: G. CHINI G. 1922, I castelli della Vallagarina, Rovereto; A. GORFER 1967, Guida ai castelli del Trentino, 4 voll., Trento; G.M. TABARELLI, F. CONTI F. 1974, I castelli del Trentino, Milano;

⁶ G.P. BROGIOLO, P. FACCIO, in APSAT 12. Carta del rischio e conservazione dei paesaggi e delle architetture, pp. 5-14;

⁷ A. COLECCHIA. P. FORLIN, APSAT 2, in "Visibilità e interpretazione del record archeologico in aree d'altura. Le potenzialità dell'analisi del LiDAR DTM", pp.41-42;

⁸ G. P. BROGIOLO, APSAT 7, in "Dal progetto APSAT una nuova prospettiva per i beni culturali del trentino?", p. 21;

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⁹ E. POSSENTI, G. GENTILINI, W. LANDI, M. CUNACCIA, APSAT 4, in "Introduzione", pp. 11-12;

¹⁰ E. POSSENTI, G. GENTILINI, W. LANDI, M. CUNACCIA, APSAT 6. Castra, castelli e domus murate. Corpus dei siti fortificati trentini tra tardo antico e basso medioevo. Saggi, SAP, Mantova, 2013;

¹¹ E. POSSENTI, G. GENTILINI, W. LANDI, M. CUNACCIA, APSAT 6. Castra, castelli e domus murate. Corpus dei siti fortificati trentini tra tardo antico e basso medioevo. Saggi, SAP, Mantova, 2013;

¹² M. NUCCIO, APSAT 7, in "Il valore del patrimonio culturale trentino", p. 9;