SPATIAL PLANNING CRITERIA FOR RELATION ENHANCEMENT BETWEEN URBAN AND NATURAL LANDSCAPE OF THE EAST ADRIATIC COAST

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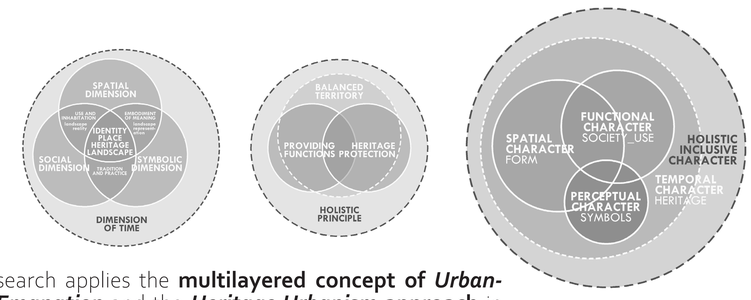
INTRODUCTION

The research phenomenon of the 'urban and natural landscape relation' **testifies to 25 centuries of urban culture in the Mediterranean**. It is a **multidimensional changeability process** that integrates spatial, temporal, and perceptive dimensions, as well as functional and holistic principles fostered by the spatial planning point of view. The research is induced by the premise that **urbanity emerged from the landscape, transforming and intertwining the natural with the cultural and urban landscape**. Problems of extensive urban spread into natural resources indicate the **disrupted relations** of the urban and natural landscape. These relation problems are intensified in the Adriatic Coast where **cities are settled between two strong natural elements** – the sea and the mountain that restrain spatial development and guide spatial planning.

Research design and structure of the doctoral thesis

Levels	Sections	Evidence		Chapters / Subchapters	METHODOLOGY Research structure and Catalogues
THEORETICAL LEVEL	INTRODUCTION SECTION	THEORETICAL EVIDENCE	Introduction	Introduction	**STRUCTURE** and organisation of the **SCIENTIFIC RESEARCH**
				(State of the Art) Overlapping different approaches to understanding landscape relations	**LITERATURE REVIEW STRUCTURE** of relevant sources on urban and natural landscape connections
				Research approach and methodology	Structure of **APPLIED RESEARCH APPROACHES** on landscape relation
				Existing theory-based criteria of urban and natural landscape relations	Catalogue of **LANDSCAPE RELATION CHARACTERS** (groups) Catalogue of **SPATIAL PLANNING STAGES** for enhancing landscape relation
SPATIAL LEVEL	RESULTS SECTION	EMPIRICAL EVIDENCE		Mediterranean scope of the urban and natural landscape relation	Catalogue of **MEDITERRANEAN OVERVIEW EXAMPLES**
				Comparison of Adriatic Research Cases	Catalogue of **ADRIATIC RESEARCH CASES** Historical overview of **TRANSFORMATION OF LANDSCAPE RELATIONS** in Adriatic
SPATIAL PLANNING LEVEL				Perception of the urban and natural landscape relation Field research comparison of (3) Representative Research Cases	**FIELD RESEARCH** Catalogue of **REPRESENTATIVE CASES** – Reading urban and natural landscape and perceiving their relation using photographs as a tool
		RESULTING EVIDENCE		Verifying proposed spatial planning criteria for relation enhancement of landscape relation on spatial planning documentation of representative cases	Structure of **RESEARCH RESULTS APPLICATION OF CONSEQUENCES** (new spatial planning criteria) on the natural site of the East Adriatic Coast
	CONCLUSION SECTION			Discussion	Structure of **UN/CONFIRMED HYPOTHESIS, RESEARCH GAPS AND INCENTIVE** for further research
				Conclusion	Structure of **SCIENTIFIC AND PRACTICAL APPLICATION** of the research results

RESEARCH APPROACH



Overlapping different pespectives in research of urban and natural landscape relations

The research applies the **multilayered concept of *Urbanscape Emanation*** and the ***Heritage Urbanism*** **approach** in establishing identity factors, evaluation criteria, and enhancement models for planning the holistic balance between urban and natural landscape. The research overlaps different perspectives in **theoretical analysis** of existing knowledge and **spatial comparison of case studies** with **field research of perceiving landscape relations** to **evaluate spatial planning through enhancement criteria**..

THEORY-BASED RESEARCH OF EXISTING ENHANCEMENT CRITERA

MEDITERRANEAN SCOPE OF LANDSCAPE RELATION

Setting evaluation criteria (catalogue content) of urban and natural landscape relation within the Mediterranean Overview Examples and Adriatic Research Cases:
_**Administrative setting** (location)
_**Geographical setting** (macro-, regional, and micro-, urban spread)
_**Historical setting and continuity** (historical origin, changes of setting)
_**Heritage setting** (International UNESCO, regional protected heritage)
_**Spatial planning setting** (historical and contemporary plans and strategies)

LANDSCAPE RELATION OF THE ADRIATIC

FIELD RESEARCH WITHIN ADRIATIC REPRESENTATIVE CASES

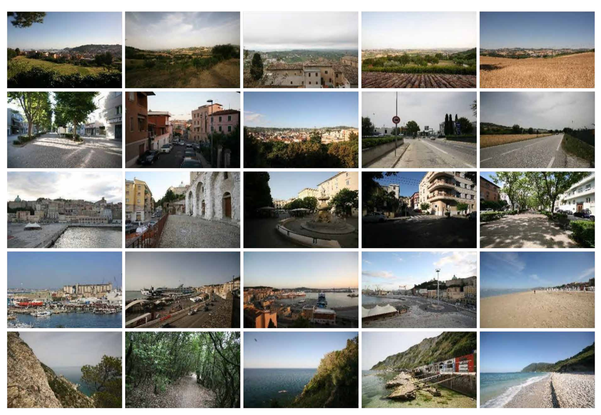
Objectives and hyotheses of the research:
O1: To identify and define the relation problems between urban and natural landscape.
O2: To identify and define identity factors and establish evaluation criteria for the relation between urban and natural landscape.
O3: To develop spatial planning criteria for planning the enhancement of the relation between urban and natural landscape of the East Adriatic Coast.

H1: The changeability process of the relation between urban and natural landscape is a spatial, temporal and perceptive phenomenon.
H2: Identification and definition of identity factors contribute to establishing evaluation criteria for the relation between urban and natural landscape.
H3: Spatial planning criteria contribute to planning the enhancement of the relation between urban and natural landscape of the East Adriatic Coast.

The research compares landscape relations on multiple Mediterranean (26) and Adriatic (36) case studies presented in **tables and photographs**. Spatial planning criteria for relation enhancement integrate **settings evaluation** and **relation problems** that are verified on **representative case cities of Ancona, Italy; Rijeka, Croatia; and Budva, Montenegro**.

Landscape setting (of the city) is the relation of the urban and natural landscape within the research scope of Mediterranean Overview Examples (26), Adriatic Research Cases (36), and Adriatic Representative Cases (3).

Geographical setting of **Ancona** with position of characteristic view photographs that present layers of perceiving urban and natural landscape



1 View from hills of Borghetto park towards Ancona	2 Culture landscape of cultivated hills (*Colline Basse*) and historical towns (*borghi*)	3 View from historical town of Fermo into cultivated landscape	4 View from agroturismo towards the valley of Chienti	5 Cultivated landscape of inland hills
6 Corso Carlo Alberto as origin of the Axis North – South and a second centre of Ancona	7 Housing settlements along the Axis North - South	8 View from Cittadella hill on the south suburbs of Ancona	9 Industrial and commercial sprawl along the Axis North - South	10 Housing and commercial sprawl along the valley of river Marganetto occupying fertile fields
11 View on ancient and historical Ancona from the port	12 Area of ancient and medieval Ancona along the port	13 Piazza Roma in Historicist (19th century) Ancona	14 Housing of Historicist Ancona along the Viale della Vittoria	15 Walkway of the Viale della Vittoria as axis of the Historicist Ancona
16 Industrial landscape of Ancona port	17 View from foothills of Cittadella on Ancona port and historical centre	18 Ancona port from Caldeto hill	19 Port as waterfront of Ancient and Medieval Ancona	20 Semi-natural beach of suburb Falconara Marittima towards Ancona
21 Cliffs of Monte Gargano towards maritime rock of Due Sorelle	22 Natural mountain landscape of Monte Conero	23 Cliffs of Monte Conero in Ancona	24 Bathing area of Spaggiola in foothills of Monte Gargano cliffs	25 Natural beaches of Monte Gargano

PERCEIVING RELATION OF URBAN AND NATURAL LANDSCAPE OF ADRIATIC REPRESENTATIVE CASES

_ **Interlacing** of man-made and natural **networks (Ancona)**

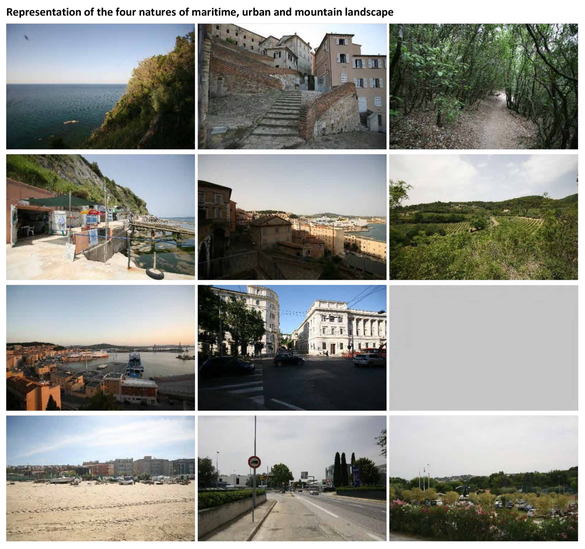
Network of urban and man-made structures in natural landscape

Network of natural elements in urban landscape

_ **Landscape transformations as natures of landscape (Ancona)**

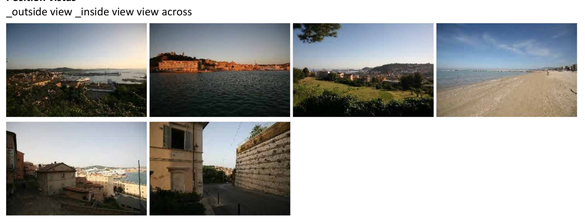
Maritimescape	Urbanscape	Mountainscape
(First) Origine / Primeval nature of landscape		
(Second) Transformed / Evolved nature of landscape		
(Third) Designed / Planned nature of landscape		
(Forth) Negated / Deprived nature of landscape		

Representation of the four natures of maritime, urban and mountain landscape



_ **Visual landscape system (Ancona)**

Position vistas
_outside view _inside view view across



View corridors (corridors from urban into nature that enable access and perception of landscape relations)
_corridors parallel to coast _corridors vertical to coast _corridors set along the natural flows

Spatial contrasts (results of changes, seasonality, ephemera)
_spatial contrasts in maritimescape _in urbanscape _in mountainscape

Evoking overviews (views that carry imaginability and identity of urban and natural landscape relation)
_interaction of urban and natural

_ **Communication system (Ancona)**

Historical roads

Traditional paths

Communications along the coast

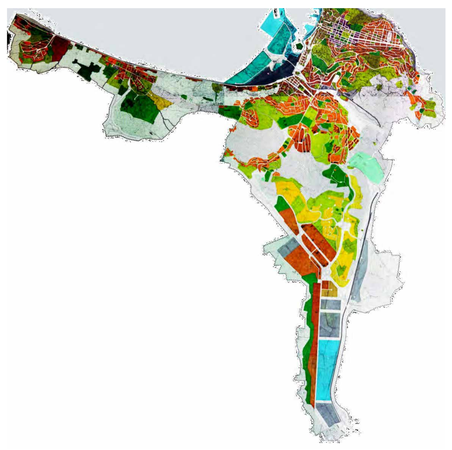
Communications along the hinterland
/

Communications connecting coast and hinterland

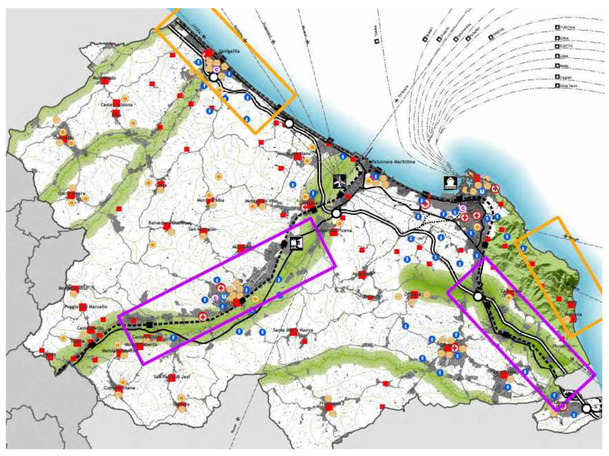
Important mountain passes
/

SPATIAL PLANNING PRACTICES OF ADRIATIC REPRESENTATIVE CASES

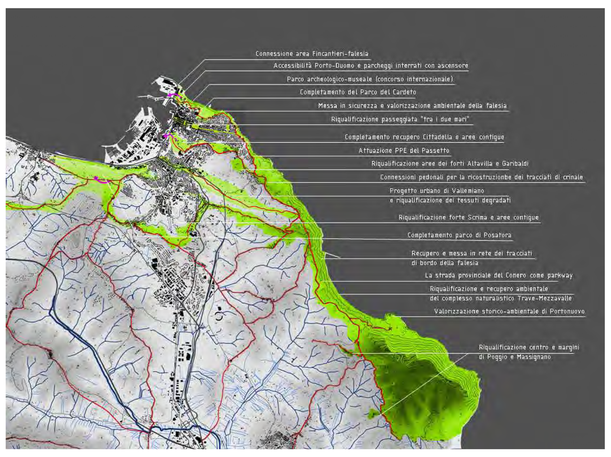
Piano Regolatore Generale, **Ancona, 1973**



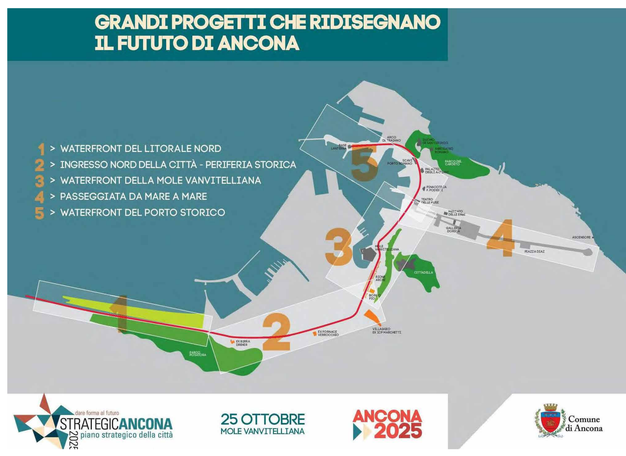
Middle Adriatic Metropolitan Area (AMMA), **Ancona, 2013**



Strategic **Ancona** 2025 – Strategic plan of the city, 2015



Urban Agenda – Programmatic Document, **Ancona, 2016**



RESULTS SYNTHESIS

Interpretation of spatial planning and relation levels of the urban and natural landscape

Spatial levels of urban and natural landscape relation	Regional	Micro-regional	Local
Interpretation of spatial planning levels	Inter-regional/county spatial plans	Inter-municipal/province spatial plans	Inter-urban plans
Interpretation of relation levels of urban and natural landscape	**Interconnection of coast and in(hinter)land**	**Interrelation of city and natural setting**	**Interaction of societal and ecological networks**

Spatial planning objectives explained through approach methods and paradigm shifts regarding relations transformations of urban and natural landscape in the Adriatic Coast.

Paradigm shift	Approach	Spatial planning objectives
Landscape an interaction of culture and nature	Landscape Observatory	Aware **Landscape Transformations**
Green transition	Natural Networks Green Infrastructure	Interconnect **Urban and Natural Landscape**
Sustainability	Spatial Planning	Direct **Landscape Sustainability**
Community engagement	Local interventions	Promote **Landscape Quality**
Phenomenology	Conceptual approach translates ideas	Education and Communication on **Landscape Values**

CONTRIBUTIONS

Research contributions regarding evaluation and enhancement of the urban and natural landscape relation integrate **conceptual, methodological, and contextual contributions** that **advance scientific, professional, and educational** fields. Topics opened during the research that surpass the research focus itself, introduce future research interests and prove the research relevance. New **topics that arise from the research** of the urban and natural landscape within the Adriatic scope advance spatial planning practices by adopting: **landscape archetypes**, cultural places of **intangible heritage**, **degrowth** principles, **directing by planning**, and by fostering **landscape without boundaries**.

CONCLUSION

The conducted theoretical, case study, and field research acknowledged the urban and natural landscape relation as landscape setting which encompasses twelve (12) distinct categories: (i) **Administrative setting**, (ii) **Geographical setting**, (iii) **Continuity of historical setting**, (iv) **Heritage setting**, (v) **Interaction of anthropogenic and ecological networks**, (vi) **Transformations of landscape setting**, (vii) **Visual setting**, (viii) **Communication setting**, (ix) **Identity setting**, (x) **Vivacity setting**, (xi) **Endogenous setting**, and (xii) **Spatial planning setting**. These setting criteria for planning the relation enhancement of the urban and natural landscape promote resilient development, sustainable planning goals, foster the quality of life, and raise awareness of landscape values.

SOURCES _ Antrop, M.; Van Eetvelde, V. [eds.] (2017). Landscape Perspectives – The Holistic Nature Of Landscape, Springer, Haarlem.
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