



POLITECNICO
DI TORINO

Honours thesis

COURSE OF TERRITORIAL, URBAN, ENVIRONMENTAL
AND LANDSCAPE PLANNING

Abstract

**Data infrastructure and Regional planning:
the case-study of the Vineyard Landscape
of Langhe-Roero and Monferrato**

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by

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The aim of this study is to investigate the relationship between the use of Geographic Information Systems and the Planning System in the Italian context. Through the examination of the activities developed by the Association for the Heritage of the Vineyard Landscapes of Langhe-Roero and Monferrato it was possible to identify the role played by local geodatabases within site management as a complementary tool to the planning practice.

The first part of the dissertation explores the concepts that define the geographic information and the role of data infrastructure in the spatial planning and management system. This section presents the territory as a result of a systemic process of development, with the essential need to establish a consistent data infrastructure able to enclose all types of geographic information in all its levels of production and employment, in order to particularly enable data interoperability.

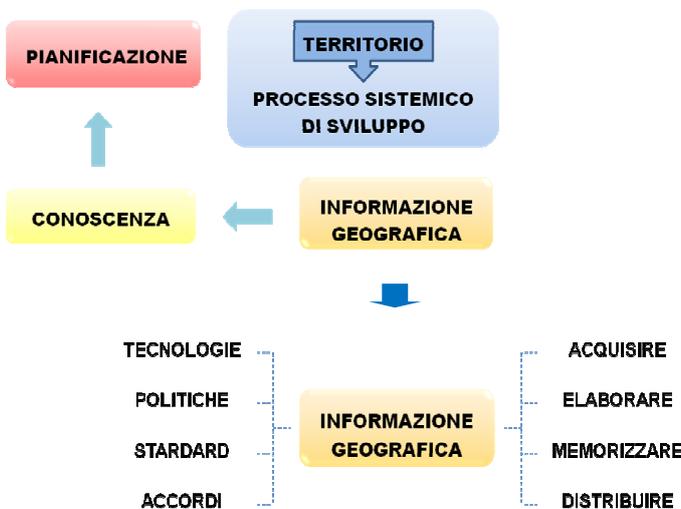
The study also takes into consideration projects and policies developed throughout the years that apply the abovementioned concepts in both national and international levels. Among these, IntesaGIS and Codice dell'Amministrazione Digitale were crucial for the development of the sector in Italy. Following the national direction, in the Piedmont Region the project BDTRE is of great value in defining a data infrastructure regarding land use information that covers all regional territory; the information produced by the local administrations are verified through GeoUML data models to guarantee that data specifications determined by the Region will be applied in accordance with the national terms of IntesaGIS and C.A.D.

However, it was possible to observe how the efforts in the Italian context have been mostly focused in the land use information, in contrast with the international perspective of European Directive INSPIRE (2007/2/EC), which classifies 34 themes of geographic information. Additionally, Geographic Information Systems offers a vast possibility for the interconnection of unique information associated to territorial elements that are related to each specific place. The research allowed to conclude that guidelines to the production of this type of information are still missing in the Italian context; as a result, this kind of geographic information is produced by local actors, generating relevant data that cannot be shared due to the inexistence of a common data infrastructure.

In order to further understand the role of the work developed by local actors in producing inherent geographic information, the second part of the dissertation describes the project "Enhancement of wine architectural structures" developed by the Association for the Heritage of the Vineyard Landscapes through the year 2016 in collaboration with SiTI (Higher Institute on Territorial Systems for Innovation). The project was financed by the Italian Law 77/2006, which is intended for the protection and fruition of Italian sites included in the World Heritage List. One of the outcomes of the project is a database that contains the inherent information of the site related to the wine-making system. In this case, other than identifying the localization of elements among the territory, the project inserts added information that is intrinsic of the site and of each type of element.

The Association worked in partnership with the Piedmont Region to define a minimum structure for the database; nonetheless, the dataset still presents some problems of topological rules and data infrastructure since there is no formal reference from administrative bodies for the production of this type of data. Finally, through the analysis of the current planning activities needed for the property, it was possible to see how the database produced still becomes a central tool in providing the municipal administrations and other local actors with information that could not be otherwise acquired in such a coherent and homogeneous form. It would thus be possible to affirm that such database is integrated into the planning practice of the site.

Fig. 1 – Geographic information and data infrastructure



Luoghi della conservazione domestica					
ID	cod Istat	progressiv	categoria	tipologia	
▶	004013		Luogo della coltivazione	Ciabot	Cia
	004013		Luogo della coltivazione	Ciabot	Ciabot 002B
	004013		Luogo della coltivazione	Ciabot	Ciabot 003B
	004013		Luogo della coltivazione	Ciabot	Ciabot 004B

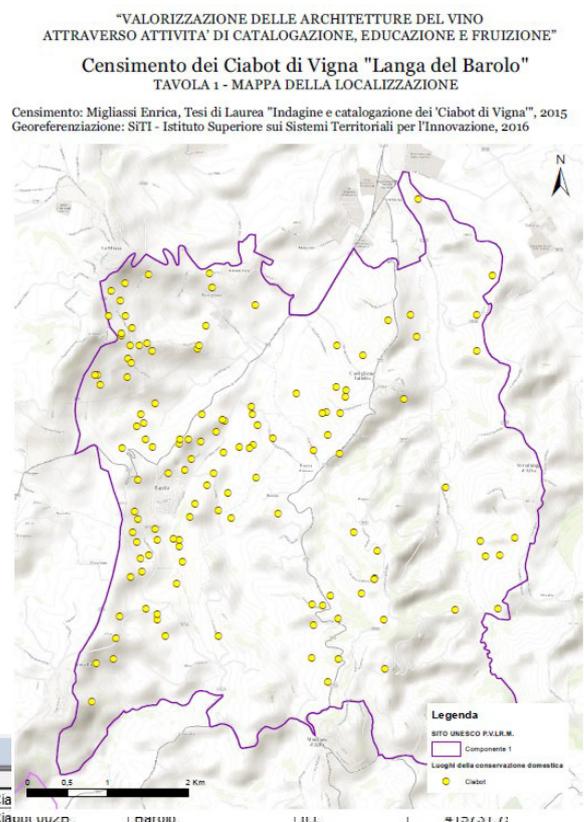


Fig. 2 – Wine architectural structures database: Ciabòt

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