Chapter 10
Cultivated Lands within Urban Area:
Cultural Heritage Dying out or New Environment Chance for the Town? The Case of Trieste (Northeastern Italy)

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ABSTRACT

Several studies put in evidence the relevant role of cultivated lands in the urban areas. Using GIS methodologies in order to map agricultural areas near or within the town, it is possible to analyze their relationship with the urban area. In this study, the author used several different cartography sources, like digital cartography and orthophotos, in order to locate the urban domestic gardens and the terraced landscapes accurately. The study area is a medium city of a North-East Region of Italy, Trieste. Built on a hill morphology, it had a great and fast growth in the 19th and 20th centuries. These changes deeply transformed its landform, mainly reducing its surrounding cultivated lands. At present, the residual terraced landscapes are mainly placed in the north side of the city and they represent a kind of "cultural heritage." On the contrary, the most important garden areas are located in the terrain embankments of the south suburban areas.

INTRODUCTION

Although green urban areas has several roles improving the city environment, the urban growth minimizes the presence of the vegetation. The countryside and its way of life (*genre de vie*) disappears gradually from the periphery to the town centre. Characterized by low building density, the suburban areas neighbouring a town and separating it from rural landscapes are generally named as periurban spaces (Dematteis, 1993). The decay of these green (but peripheral) urban areas continued still in the last decades of the XX century when new international laws supported their sustainable development in order to improve the life quality inside the town.

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This paper puts in evidence the present situation of Trieste, the main city of a North East Region of Italy, Friuli Venezia Giulia. The fast growth of this urban area (mainly between the XIX and XX centuries) and the change of its essential economic sectors (from secondary to tertiary) are the two main conditions actually decreasing the extension of cultivated lands. So until recently the growth of Trieste occurred also on these areas. Generally they were "built" agricultural landscapes, like terraced or terrain embankments. Placed close to the city, also in the Province of Trieste the terraced landscapes have been often neglected (Mauro, 2011). So, like almost everywhere in the Mediterranean basin, reforestation and landslides are widespread problems in this region too. Moreover, the urban growth can produce property speculation on these particular environments, since as they are generally placed in panoramic sites. So, the old terraced areas are continuously transformed into residential neighbourhoods. However, recent hydrological events (due to the meteorically phenomena) proves how the landscape changes (regarding also the hydraulic network) can be sometimes dangerous also for the local settlements.

In this paper, we analyzed several cartographic sources, (orthophotos and digital cartography, at medium and high scale) in a GIS environment in order to locate residual terraced areas and relevant domestic gardens, within or near the urban area of Trieste. We identified the main nucleus of agricultural areas within the study area using the Kernel Density Estimation. Then we described their basic geometric characters, like extension and fragmentation.

CULTIVATED LANDS IN THE URBAN AREAS: ROLES AND PERSPECTIVES

The strong metamorphism and the high dynamicity, distinctive of the peri-urban areas, decreases the contrast between urban and rural landscape, mainly in the "rural-urban fringe" (Pryor, 1968). The environmental, cultural and socio-economic roles, provided by the cultivated lands neighbouring the town are commonly recognized (e.g, Bianchi, 1982; Colding *et alii*, 2006; Fagnano, 2009). Generally, in this geographical context farms are small and family managed, but they put in evidence a high productivity. They show a low degree of competitiveness, due mainly to their little dimensions and to the quality of manpower (often part-time and "hobbyist" workers). Moreover, the influence of the near urban market on these farms is very reduced, actually (Zerbi, 1975). However, in the last decades the peaceful and charming countryside surrounding the town have increased its attractiveness. So, Donadieu (2006) proposed to invert the direction of landscape planning, focusing on the cultivated lands: the countryside can influence the growth of the urban area. Developing extensive and interconnected tracts of green spaces, sometimes domestic urban gardens can improve the environment where the people is living, as a sort of "urban green belt" bordering the urban sprawl. When these vegetated segments have linear character through an urban area, they represent a "green wedge" breaking a continuous residential texture. They could be also a kind of "greenway" within the town, linking the urban area with the neighbouring countryside or forests (Valentini, 2007).

When the urban area is placed in a hill or mountain region, domestic gardens are usually replaced by the agricultural terraced landscapes. As suggested from Varotto (2008), it symbolizes an important European cultural heritage, a sort of "middle landscape" as result of an environmental, social, economic and aesthetic mediation. However, now they are generally problematic areas: induced by the decline of agricultural terraces, common problems are landslide, erosion, natural reforestation or property speculation, specially near to the town. The widespread overbuilding can cause environmental impacts, like hydrological problems, mainly when the constructions are