Green Infrastructures and wine landscapes: a case study in Bordeaux.

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**Abstract.**

In the last fifty years, an excessive land use based on uncontrolled urbanization affected landscapes leading to fragmentation and loss of biodiversity. Useful countermeasures consist of green infrastructures (GIs), a network of natural and seminatural areas, connected by environmental elements of various shape, which provide many ecosystem services (ESs) or benefits to people’s wellbeing. GIs could be a strategic tool for enhancement and protection of important rural landscapes. In the case of wine landscapes, GIs could provide many ESs including: i) stopping biodiversity decline, ii) improving soil physical and chemical characteristics, and iii) offering recreational and cultural services.

In this study, we focus on the wine-growing areas of Bordeaux, Nouvelle Aquitaine, France, as they are a vivid symbol of the cultural heritage of the city. In many cases, these agricultural areas have been incapsulated in the metropolitan area of Bordeaux and are very vulnerable, with respect to recent urbanization processes. In this situation, landscapes need protection from the continuous development of the city. In addition, the vineyards are characterized by intensive, conventional, and mechanized viticulture, thus are questioned by many residents, who are worried for health issues related to the intensive use of pesticides.

We propose a Green Infrastructure (GI) able to protect and relaunch the ecological patches through their inclusion in a complex network providing the community with relevant direct and indirect Ecosystem Services (ESs), including ecological connectivity and tourist facilities. from those ecologic to touristic services. This GI is designed for the protection of urban vineyards located in Pessac, in the metropolitan area of Bordeaux.

We start from the identification of already existing GIs and proceed by detecting natural and seminatural candidate green areas to be included, according to the set of ESs selected. We obtain interesting results and present some preliminary discussions.