

Abstract (max 400 words)

Title

The Indicator of Land Consumption Risk (ILCR): a methodological approach to manage periurban areas

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Abstract

Periurban areas are constantly subjected to the pressure of urbanization and the permanence of agriculture is the most important mean against soil consumption, but only competitive farms can protect green open spaces competing with the urban growth and sprawl. Soil is a non renewable resource because the time of degradation is quick, but the regeneration process, when it is possible, is very slow (EC, 2006). The permanence of agriculture can play a fundamental role for the economic and environmental sustainability of local development.

This work considers the farm as the unit of analyses and, finding different factors which influence the efficiency of farms, creates an *Indicator of Land Consumption Risk (ILCR)*, that measures the vulnerability of periurban areas. Factors could affect the farm in relation to the soil loss both positively, if they back up and promote the farm performances, and negatively, if they reduce farm functionality. At the same time, the factors could be endogenous, if they depend directly on the farm management, and exogenous, if they depend on external pressures.

By integrating and summarizing these factors an Indicator of Land Consumption Risk at farm scale was created and a *Spatial Multicriteria Analysis* approach based on GIS technologies was used to produce maps showing different levels of risk consumption due to fragility of agriculture. This methodology is based on economics and social data at farm and municipality scale and propose different kind of scenarios, projecting the effect of chosen policy on the land.

The study area is the Province of Milan, Lombardy, Italy, where competition between urban and rural areas, property speculation, demographic pressure increase the land consumption risk and are threats to the existence of the peri-urban agriculture. The average rate of urbanization is around 35% in the whole province, in the municipality of Milan it's around 69%, but in some areas it reaches the 82%, especially in the North of Milan (ONCS, 2009).

Main result of the work is the *Map of Land Consumption Risk* of the Province of Milan that identifies the areas where fragility of agriculture and land consumption risk are higher.

ILCR is a new instrument of governance to manage green open space in periurban areas where agriculture has particular features due to her relationship with the urban place. This tool could be an important support to policies and institution to planning and government of periurban contest.

Bibliography

European Commission, Directive n.232/2006

AAVV, Primo Rapporto 2009, Osservatorio Nazionale sui Consumi di Suolo, Maggioli 2009