

Tasting the Landscape

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SHORT PAPER

Filone tematico n.2: Tasting the Landscape's benefits

BIODIVERSITY LANDSCAPE: ECOLOGICAL NETWORKS IN LOCAL PLANNING

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The biodiversity of populations and ecosystems is an essential component of their resilience, considered as their capability to respond effectively to natural and anthropic pressures. Compatibility of human development with biodiversity and natural resource conservation is mostly assured by the implementation of environmental policies aimed at the development of ecological networking.

Conservation of biodiversity and landscape quality strongly depend on the choices in urban planning, considering it as a tool to conform the property in a process of control of the land transformation dynamics.

The ongoing processes of biodiversity loss and trivialization of landscapes should induce the planner to evaluate not only quantity and type-morphological quality of new settlements, but also their spatial distribution. The addition of shares, through limited, of urban settlements can lead to disruptive effects, even multiplicative, on ecological functionality and on environmental services, as well as on the landscape quality of territories.

The project "Rete ecologica" (Ecological network) of Città Metropolitana di Torino CMT, supported by specific Guide Lines for the Green System elaborated by ENEA, opens to new scenarios for urban and land planning. Starting from the assumption that it is necessary to adopt land government tools useful for the global conservation of environmental functionality, it is stated that the improvement of ecological networking should acquire the role of guiding principle not only for natural and seminatural areas, but also for the best planning and management of settlement systems and infrastructures.

Therefore, the goals of conservation and improvement of ecological networking, beside leading to the protection of biodiversity can also guide in a virtuous route of general improvement of life quality through the development of sustainable human uses of natural land resources.

CMT and ENEA's project is based on a bio-ecological approach for the design of the ecological network.

This approach identifies habitats, reference ecological structural unities, as the core elements of the network, as they represent integrated unities describing a complex ecosystem portion. Habitats become both goal and means for the overall conservation of ecological integrity.

A procedure was defined for the improvement of ecological networks which, starting from the analysis of the existing networking, guides the planner to the establishment of routes and priority levels in the design and realization of the ecological network, with the adoption of a clear and easily replicable process. This process starts from the analysis of land use (available at a regional scale with the fourth level of CLC, Land Cover Piemonte) which makes it possible to qualify the 97

regional use typologies in terms of Naturality, Relevance for Conservation, Fragility, Extroversion (Impact) and Irreversibility.

The integrated reading of land use Naturality and Relevance for Conservation in CMT territories depicted a zonation of the area in 4 levels of ecological functionality (high, moderate, residual, none) which characterize land ecological networking: areas with high and moderate ecological functionality constitute the Structural elements of the ecological network; areas with residual functionality are defined as Possible expansion areas, the remaining areas do not participate to the realization of the network.

Inside the areas of possible expansion of the network it is possible to identify the Prioritarian expansion areas through a procedure fixing the large scale Connecting directions, which can be detailed and mapped at local scale as Connection ambits.

Experimentations made it possible to involve local administrators and stakeholders in the process of ecological networking improvement, even if it resulted clear that it is necessary to include structural elements of the ecological network in urban planning systems as invariant elements of the territory impossible to be transformed and matched with specific conservation and improvement measures.

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