

POLYTECHNIC OF TORINO
FACULTY OF ARCHITECTURE
Degree in Architecture
Honors theses

The protection of open space: variation of landscape

by Paola Romano

Tutors: Pompeo Fabbri; Donatella Meucci

Aim of this work has been test a methodology of territory analysis based on principles of landscape ecology, discipline that studies relations of space and of time between the various parts of landscape.

The validity of this methodology is manifold, because it lets value modifications that territory has undergone in course of time; lets dimension concretely landscape components in function of environment need check in the planning;; at last lets check presumptively the very project through simulation of proposed actions and through evaluation of their environment projection.

Following this plan the work is articulated in a first phase of analysis at two historical different sections, respectively to 1881 and to 1998, with achieving evaluation of evolutive dynamics, through patterns and indexes of control; in a second phase where, located the disconnections existing on the territory, have done hypothesis of intervention.

This analysis has been applied at a portion of province of Biella, around 35500 hectares; after have represented a cartography of the area (paper of use soil), in relation to the two historical sections, have been applied some indexes of control.

1881

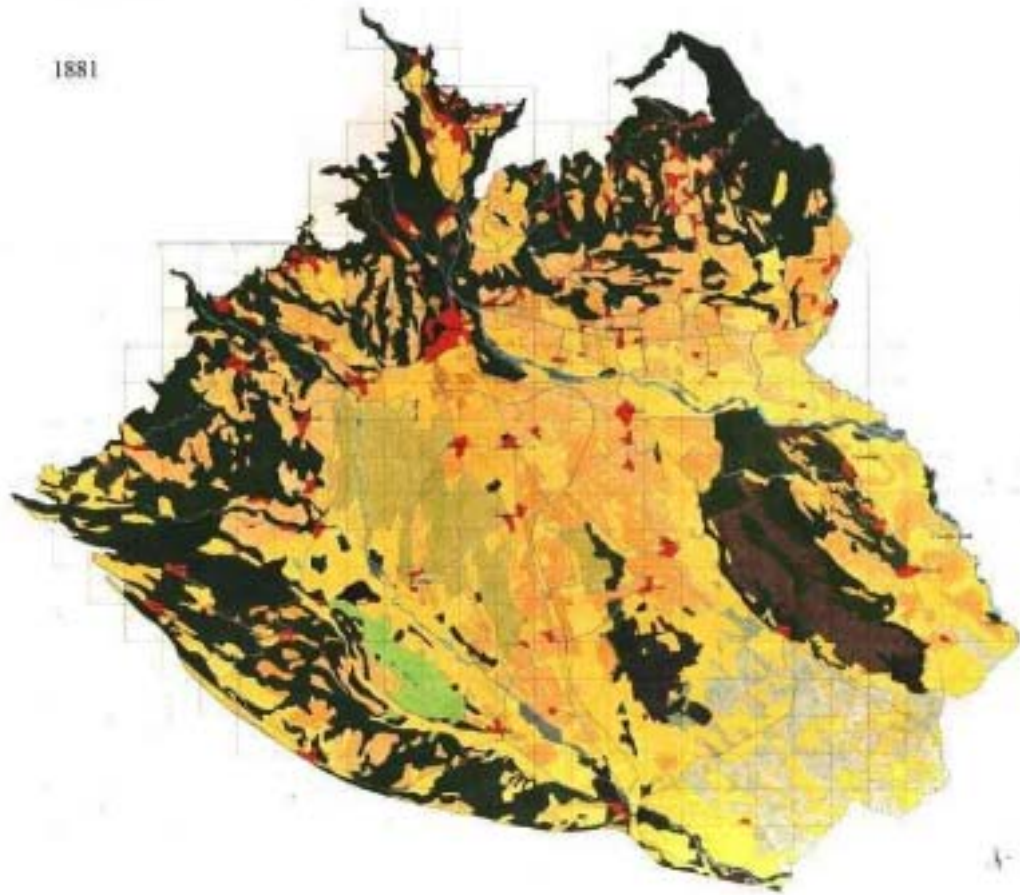


Fig.1: Paper of use soil (1881)

LEGENDA	
USO DEL SUOLO	
[Red]	ABITATO DENSO
[Yellow]	INFRASTRUTTURE
[Orange]	SEMINATIVO SEMPLICE, PRATO, PASCOLO
[Light Green]	SEMINATIVO ARBORATO ED FRUTTETI
[Dark Green]	CAMPI CHIUSI
[Light Blue]	RESAIE
[Orange]	VIGNETI
[Black]	BOSCHI
[Dark Green]	BOSCHIERA BOSCATI
[Light Green]	BOSCHIERA NUDA
[Light Green]	AREE SCARSAMENTE VEGETATE CON RICCIA
[Dark Green]	CORPI GILIAIOSI/SABBIOSI FLUV. COLONIZZATI E NON
[Blue]	AREE LUNDE
[Blue]	Fiumi e Laghi

legenda

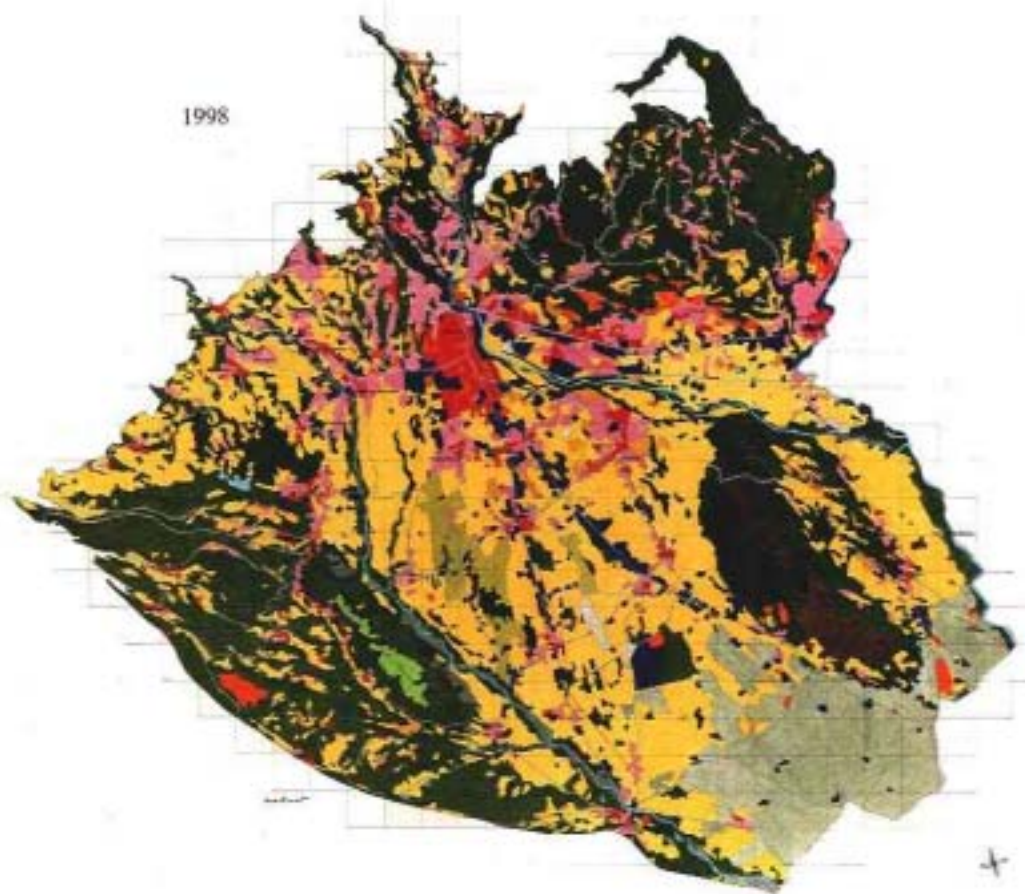


Fig.2: Paper of use soil (1998)

Biological Territorial Capacity (BTC): greatness that values flow of solar energy matabolized by vegetable system through the photosynthesis joint to balance capacity of parts of territory. It has measured in Mcal/mq a.

This index has been applied, in a first time, at the whole territory; passing from the generals to the particulars, has estimated the value of BTC of human and natural habitat and even more of the habitat apparatus; so has been possible valuing in deeper way the evolutive

dynamics.

Habitat Standard: ecological standard referred to human habitat, utilized to individuate taking capacity of a territory. Concept of human habitat, if put in relation to density specific of population, is useful town-planning parameter that innovate on ecological bases, concept of geographic and territorial density.

$HS=HU/inhabitants$

Percolation: physical and neuter pattern; physical because it was born to describe properties physical of the polymers and of vitreous substances and constitutes base for study of flow of liquids through the material aggregated; neuter, because hasn't got unit but values probability that biotic communities pass along the whole Landscape Mosaic. If cells occupied by natural and semi-natural system are about 60%, it has percolation.

The use of these indexes has consented to individuate and estimate phenomena and processes that have transformed territory from 1881 until today. Analysing separately and at any historical section, two common, with anthropic characteristics one, and naturals

the other, has noted that there are more disconnections today than 1881. Analysing the paper of percolation has elaborated the project; presence of anthropic energetic flows, however necessary for survival of town, and energetic natural flows, given from system of woods and rivers, isn't enough for the balance of landscape. It is necessary creating an energetic natural flow that connect the great natural area. (System A, System B - *Fig. 3*).

On this consideration have been done some hypothesis of project. Also management of territory assumes a sure role in the optical of landscape reclamation: agroecosystem, if correctly managed, can represent a precious resource for creation of wildlife corridors.

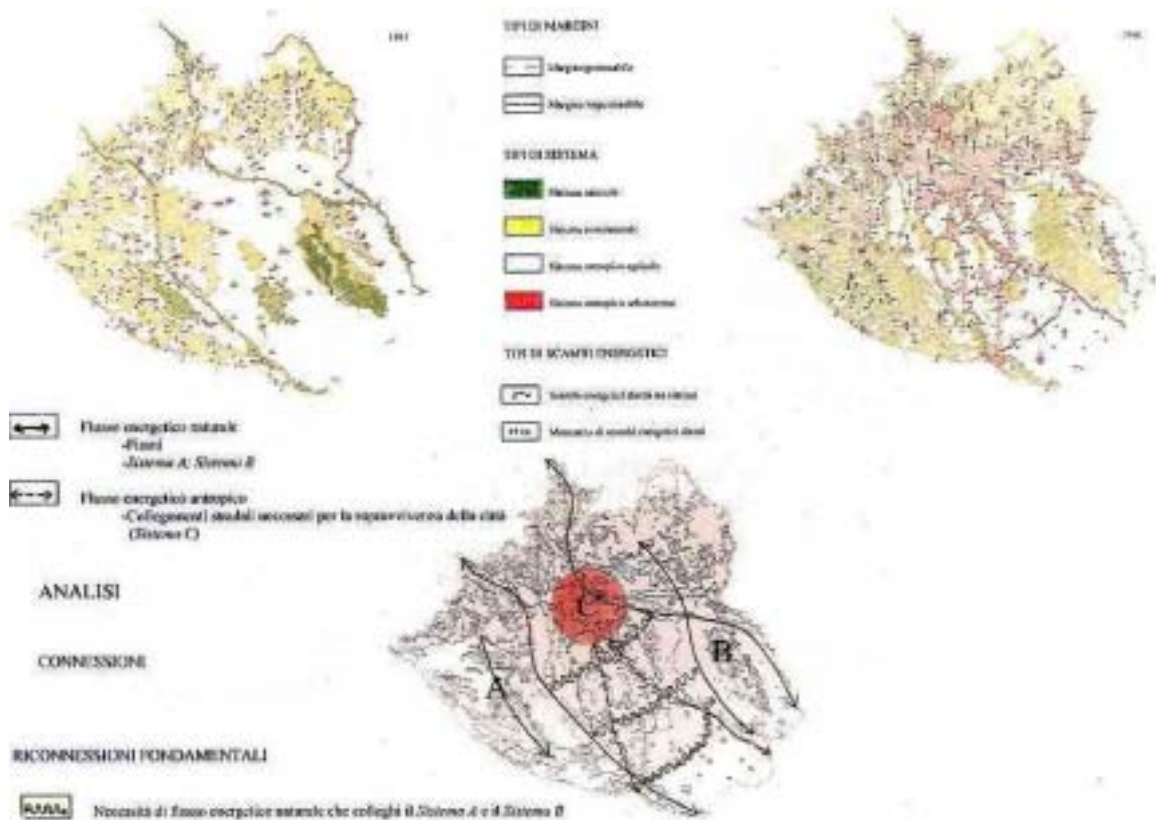


Fig. 3: paper of project

PAPER LIST

- 1 - Territorial organization (1:100000)
- 2 - Landform (1:25000)
- 3 - Use soil 1881 (1:25000)
- 4 - Use soil 1998 (1:25000)
- 5 - Percolation 1881 (1:25000)
- 6 - Percolation 1998 (1:25000)
- 7 - Use soil of Zubiena and Vigliano Biellese (1:25000)
- 8 - Project

For methodology applied to Biella's province see also thesis of:
 Grammariani Paravicini (February 1998), Andrea Garrione (February 1998)