

order to evaluate one product, for example wine, also (I could say particularly) for what it represents outside of the bottle content. Consequently for us, and probably not only for us, for example a bottle content should be evaluated, drunk for getting high of a territory, for delighting, for "TASTING" and enjoying, drinking the territory, "PLACE" of origin, which as already publicised by us (Cargnello G. 1997), comprises all its resources: pedological, climatic, vitivinicultural, cultural, and coltural, monumental, hystorical, environmental, human, commercial...etc...: and for more information and completing the "filiera" consult: Cargnello G., 2003. Naturally going beyond wrapping, stamping and else. If its true, as its true, what above explained, zoning should be done, in order to taste and enjoy the territory while drinking wine, and TASTE A PLACE of provenience in its globality and in "filiera" taking account at least of the product (organoleptic quality), of consumer (preference and price), of producer (profit), of respect and protection of the environment in the whole sense and thus in particular way to "Taste a place" of product provenience; as concretises by information methodology CIMEC presented with success at international level. This is philosophical and methodological "innovative" contribute we would like to concretise in a so called "GREAT ZONATION", approaching PLACE of origin of wine to wine and zonation, in order to drink and TASTE the territory.

Method for the Evaluation of Climatic Changes Envisaging the Protection of Grape-Growing Terroirs: The Géoviticulture MCC System in the Evaluation of the Potential Impact of the Construction of Hydroelectric Power Plants on Viticulture

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The research, conducted in 2002, has aimed at estimating, a priori, how the mesoclimatic change, conditioned by the construction of 3 hydroelectric power plants, will affect the qualitative potential of the grape-growing region of the Serra Gaúcha (Rio das Antas Valley), Brazil. The power plants will begin to operate between 2004 and 2007, and their total capacity will amount to 360 MW. The total inundation surface will be 11,4 km². The vine growers requested to get an idea about how a possible climatic change, caused by this man-made action, could affect the vineyard potential of this region. According to the Géoviticulture Multicriteria Climate Classification System (Géoviticulture MCC System), the region has the climate IS₂ IH₊₁ IF₋₁ ("humid, temperate warm, with temperate nights"). The system, which offers several tools for viticultural zoning studies on different scales, employs 3 viticultural climatic indices of reference (Dryness Index – IS, Heliothermal Index – IH, and Cool Night Index – IF). These indices are representative of the variability of the viticultural climate related to the requirements of the grape varieties, the quality of the grapes (sugar, color, flavor) and the characteristics of the wines. In a first stage of the study, numerical climatic modeling with the RAMS (Regional Atmospheric Modeling System), version 4.3, was employed at the meso- and macroclimatic level in the region of the power plants. Four situations were simulated: vineyard at the foot of the valley – FV – (location right at the riverbanks) – (1) Current Climate (CA-

FV) and (2) Future Climate (FC-FV); at the top of the valley – HV – (416m higher and at a horizontal distance of 102m in relation to FV) – (3) Current Climate (CA-HV) and (4) Future Climate (CF-HV). The CF demonstrates the situation with the strongest potential impact where the surface to be flooded is the largest. Equally, a study on the evolution of the climatic change was conducted starting from the river up to the disappearance of these effects in the region. The climatic variables, concerning the temperatures (minimum, maximum and average), rain, Rg, insolation, air humidity and speed of the wind were modeled at a monthly rate. The potential evapotranspiration was calculated. In the following, the indices IH, IS and IF were calculated, using the functions of the System, for CA as well as for CF in the situations FV and HV. The results have shown that the viticultural climate does not change class in the future climate. For IH at the foot of the valley, the value 2.488 (CA-FV) changes to 2.483 in the future climate (CF-FV). At the top of the valley the IH changes from 2.451 (CA) to 2.433 for CF. In this way, no significative influence on IH was observed. For IF it is not possible to observe a climatic change in the period of reference of the index (March) except for the period from December to February, with an increase of 0,1 to 0,2°C in the future climate for the two situations (FV and HV). The IS shows values between 4 and 6 mm higher in the future climate when compared with CA, be it for FV or HV. The result is above all a consequence of a slightly higher precipitation and of a slightly weaker ETP in the future climate. The study has allowed to estimate that the construction of the three hydroelectric power plants will not change the macroclimate, but should cause a change at the level of the local climate (topoclimate), as an effect of an increase of the IS and of the reduction of the IF, restricted to internal areas (slopes of the Rio das Antas Valley). The change tends towards zero at a certain distance from the valley (more than 1000m distance from the river). This change is potentially negative for the qualitative characteristics of the grapes. However, it is of very weak intensity. A 3D chart of the power plants region with the surface to be flooded has been produced. A study on the long-term climatic conditions is currently being performed aiming at the evaluation of the real climatic change and its influence on the viticulture.

Landscape Typology as a Zoning Tool

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The question of the zoning of vineyard areas may have different goals (agronomy, oenology, land distribution, tourism, etc). The landscape approach corresponds to the perception of the forms that vineyards can have. It is an analysis which refers to a group of "laws" of perception. The objective consists of highlighting the common features of these original rural landscape, and defining different outstanding types. This typology constitutes a reference system, with which one can distinguish the wine-growing identities by similarity, complementarity, or, on the contrary, by opposition. These landscape types with their specific characteristics result from combinations of slope, planting density, row orientation and the trellising system. This typology can be a tool for reading but also for planning the landscape: protection, reconstruction, enhancement, etc.