The protection of heritage elements against landscape evolution: Defining a secondary forest typology to guide management towards their integration

Many economic and demographic factors, such as changes in rural economies and declining birth rates are causing dramatic changes in land use, especially in European mountain areas. The development of secondary woodlands and scrublands in previously cultivated or grazed lands is often a typical result of these changes. The secondary woodlands tend to be located in accessible areas, close to human settlements, and are thus served with relatively good infrastructure. Therefore they become an increasingly important component of the forest resource in marginal areas. Simultaneously the interruption of the traditional maintenance practices linked to the former agricultural and pastoral uses could lead to the loss of heritage landscape features, such as terraces, trails, and ditches or other traditional drainage system. Moreover, secondary woodlands can dramatically change the visual character of the landscape and obstruct the view of important natural, architectural and historic features, especially when they develop around resorts and touristic sites.

The definition of a typology of secondary woodlands, based on the processes underlying their development and evolution but also on the frequency of occurrences of heritage elements could be a useful tool in guiding secondary forest development toward desirable conditions and to optimise the good and services they provide.

A study on secondary woodland was conducted in the Northern Italian alpine region of Trentino (6000 km²). A two stages inventory design was adopted and a multi-temporal comparison of aerial photos taken in 1973 and 1999 was carried out. A total of 296 sample points were later surveyed in the field according to a comprehensive protocol. The characterisation of each secondary forest stand type resulted from an integration between natural and human components of the landscape. The management guidelines were also developed to preserve heritage features. The extent of the integration between the above-mentioned components was finally evaluated.

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