Marginal areas identification to support bio-energy supply chains in Southern Italy contexts

Elena Cervelli1\*, Pier Francesco Recchi1, Ester Scotto di Perta1, Antonio Mautone1, Massimo Fagnano1, Stefania Pindozzi1

1 Department of Agricultural Science, University of Naples Federico II, via Università 100, 80055 Portici (NA), Italy

\*tel. +390812539427 e-mail elena.cervelli@unina.it

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**Abstract.** Amongst European landscape there are wide areas without simple or easily definable characters and structure, in spatial, functional, and perceptive terms. These areas generally characterized by close interactions urban/rural, or fragmentation, abandonment, pollution or low level of productivity, etc., were in first studies identified as “marginal lands” with a negative meaning. Nevertheless, they are increasingly recognized as important areas providing solutions and opportunities in landscape maintenance and management, thanks to landscape care of traditional social structures, as well as a multifunctional basis for other economic sectors. As a consequence, their environmental, social and economic sustainability assessment is needed. Many studies deal with the definition of marginality and the possible recovery of marginal territories without achieving a common framework for their identification. The present work intends to contribute to the definition of the criteria for identifying marginality condition in support of the bio-energy supply chains. The study area extends on three regions of southern Italy. A specific action framework was developed, which, based on typical land-use planning approaches -the Spatial-MultiCriteria Decision Analysis- integrates various factors and clusters of criteria. The results show that almost 15% of the study area can be classified as marginal, allowing identifying macro-areas suitable for the establishment of dedicated supply chains. The approach aims to support: i. decision-makers in identifying possible critical areas and their conversion into strategic resources; ii. landowners in new opportunities assessment. The present work proved to be useful in the meta-analysis study-phase for identifying marginal land with a significant reduction in costs and times. Further developments will concern the validation of the proposed framework and the definition of specific intervention lots, through site-specific surveys. Although the study is focused on a specific Mediterranean context, the methodology used can also be extended to other contexts, thanks to scientific approach which integrates the different landscape aspects (environmental and socio- economic ones).