



## **Eco-efficiency in the Portuguese wine production sector**

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The wine production sector is one of the more important and widely distributed agriculture sectors in Portugal, representing 555972600 liters in 2011 for the entire country (excluding the islands), in 146490 vineyards, representing a wide range of exploration dimension, that cover a total area of 175 773 ha. The wine sector accounts for 526820000€ of exports in 2005, and constitutes a high technology and highly competitive agricultural sector. The wine production systems vary from region to region, reflecting the property systems and the soil and climate conditions. Homogeneous wine production areas are often demarked and constitute a wine region with particular environmental and productive characteristics.

Under the ECODEEP project, a set of energy and mass balances are being assessed for various Portuguese wine regions, namely Bairrada, Dão, Távora-Varosa and Alentejo. These wine regions vary in a number of characteristics, such as the use of irrigation, and the cultural practices.

This work performs an analysis of yields and the use of energy and productive factors for different size vineyards and cellar processing methodologies for the above mentioned wine regions. The exhaustive survey is the basis for a LCA analysis that allows the comparison of different practices and highlights the more efficient and environmental friendly solutions, that will be presented.

We give a particular attention to the comparison of more intensive vineyard conduction with the integrated protection ones.