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WATER FOOTPRINT OF THE WINE CHAIN: COMPARISON BETWEEN TWO PORTUGUESE CASE STUDIES

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Water scarcity caused by climate change and its implications on grape production and quality have raised concerns among wine producers. The adoption of sustainable practices is now a goal of winemakers since the efficient use of resources allows them to reduce production costs. The WineWaterFootprint project evaluated the water footprint in the wine industry through the development of a methodology applied to two case studies, along two years of monitoring. The results show that the water footprint of the vine is the production phase with the greatest impact, representing more than 98% of the total value. In the case study I the green water footprint is the most relevant component while in the case study II is the blue water footprint, accounting for about 70% and 55% of the total value, respectively**.** Overall, the water footprint ranged from 370 to 610 L of water per bottle of wine produced (0**.**75 L) and is therefore similar to other studies reported in the Mediterranean region. The evaluation of the sustainability of the water footprint, through the analysis of life cycle, allowed also the identification of critical points. Water reuse is a way of reducing the impact of wine production on natural resources.

Key words: wine waste water, life cycle analysis, water use efficiency, irrigated vine