Agriculture will need to plan for (and largely implement) transformative changes in the coming years. Adaptation to climate change requires the reorganization of the agribusinesses to adapt to new conditions of production and services provision, temporally and locally. Among the important issues of today's environmental and economic challenges facing the agricultural sector are the management of water, soil, nutrients, energy and greenhouse gas emissions. The farmer is therefore being asked to manage a range of issues without the necessary knowledge and skills, while the changes around him are rapid. This problem is being addressed partly by digital tools, which, in addition to the above-mentioned contribution, ensure correct and accurate consultancy and thus appropriate crop management, as they have been developed on the basis of scientifically accepted principles and theories. And here comes the question: How accurate and scientifically sound are the digital tools? The main problem on which this question is based is that the equations and algorithms used by the tools, e.g. for the fertilization advisory or the calculation of the carbon and water footprint, come from published research studies and studies of international bodies (e.g. IPCC, FAO), and their definition has application limitations, such as for example climatic zones, or soil properties.

This study was developed in the framework of the CypruSaves project, funded by the H2020 DEMETER "Empowering farmers" project, and presents the steps implemented for the development of a web-based GIS tool for the estimation of Water Footprint of vineyards, customized to the particularities and specific requirements of fourteen (14) vine varieties, growing at the south-western part of Cyprus.