Deliverable 2.2: Database of Wine Products and Processes for LCA

WP2. Tuning up a self-assessment tool for wine (LCA-LCC based).

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ECO-PROWINE - Life Cycle perspective for Low Impact Winemaking and Application in EU of Eco-innovative Technologies

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1 Introduction

The present document aims at giving an overview of the work performed in the framework of task 2.1 of the Project (Database replenishment). To this end the document, which stands as an accompanying short report of Deliverable 2.2 is attempting to provide a quick overview of the contents of the database and the way they are linked to each other.

2 Overview of Deliverable D2.2

The Self-Assessment Tool Database comprises the main component that supports and gives life to the operation of the overall tool. The database is the "place" where all collected data reside, while being the repository where all new data are inserted and stored prior to and after being processed.

More specifically, the database incorporates two main types of data:

- Data collected prior to the actual operation of the tool, which provide the necessary input for the benchmarking capabilities of the tool, while enabling its operation through links created between each other in order to offer the final user the desired functionality, knowledge, guidance and ease of use.

- Data collected during the actual operation of the tool and have to do with generic data about the wineries, data related to the quick and detailed self-assessments performed by the wineries (inputs, stages involved, etc.) and information about the evolving status of the system's users towards the acquisition of the ECO-PROWINE Label.

The following chapters give an overview of the different types and quantities of data included in the ECO-PROWINE Self-Assessment Tool Database.

3 ECO-PROWINE Database Contents

3.1 Fundamental Data Types

This category of data, refer to data types collected and stored in the database, prior to the actual operation of the tool, comprising the corner-stone for the smooth and successful realization of the self-assessment functionality of the tool. This category includes the following types of data:

3.1.1 Generic Project and Tool Data

- Introductory Information about the tool and its scope.

- Information about the project, the consortium synthesis and its overall objectives.

- Information to appropriately support users during the actual operation of the tool (Handbook Guide)

- Information about the support provided by the project partners in the form of telephone and e-mail helpdesk, so as to resolve any difficulties, problems, questions, etc. arised during the conduction of the sustainability self-assessment by the users.

3.1.2 Data Supporting the Operation of the tool

This type of data, comprises the most important element under this category, since it sets the basis for the overall operation of the tool. The following data types are included:

- Survey Inputs Data: 41 Survey Inputs for the Quick Assessment and 82 Survey Inputs for the Detailed Assessment.

- Functional Units, linked to each survey input, along with different sub-inputs and their conversion factors to the basic functional unit (per survey input).

- Indicators data: 13 Indicators for the Quick Assessment and 43 for the detailed assessment with their respective units.

- Functions data: Functions used for the calculation of the individual indicators of the two different types of assessment are stored in a different database table and create the link between inputs, characterization factors and indicators. Functions data, also include a wide range of various standard values that support the calculation, normalization and "localization" of all indicators of the detailed assessment.

- Data from existing commercial and free databases (e.g. EcoInvent, ELCD) / characterization factors from impact assessment methodology ReCiPe by using the SimaPro software the : These are the factors used for the detailed assessment and more specifically for the calculation of the 18 midpoint indicators from ReCiPe impact assessment methodology, while contributing to the calculation of the 7 aggregated indicators, including the global indicator which defines the eligibility of a winery, in terms of sustainability performance, to obtain the label. Over 800 data elements referring to Characterization Factors have been included in the ECO-PROWINE Database.

- The stages/processes (22) of the overall wine-making process and their links to the detailed assessment inputs and suggested improvement measures.

- Data from studies and previous research projects referring to Improvement measures, defined per input of the detailed assessment and process/stage of the overall wine-making process. 314 improvement measures data elements have already been included in the ECO-PROWINE Database (Deliverable 2.5 Report on prioritised best practices).

- Other information that define specific functionalities of the tool, like the thresholds for obtaining or retaining the label, the validity time period of the label, the survey repeat allowance time period following a negative result, etc.

- The data coming from the questionnaires filled in by the participating in the project wineries (Deliverable 2.1 Results of on-line questionnaire for LCA-LCC wine database) (66 wineries, at the time this report was written). Questionnaires data, are actually data referring to responses given by the wineries participating in the project, with regards to the inputs of the quick and detailed assessment of the tool. This type of data perform a significant role in the operation of the tool, since they set the baseline for the benchmarking performed each time a new winery accesses the tool and applies for the acquisition of the ECO-PROWINE label, through a process that includes both the conduction of the quick and detailed self-assessments. To this end questionnaires data are vital for:

  o Giving a detailed picture of a new winery's performance, on the basis of 56 different indicators, that are benchmarked against worst, best, median and average values of the respective indicators, as they are calculated with the use of the questionnaires data.

  o Providing insights to problematic inputs of a new winery taking the quick and detailed self-assessments, based on input-specific benchmarking against respective inputs of the sample wineries participating in the project.

  o Qualifying or not a new winery for the label acquisition, on the basis of benchmarking the winery's performance against the global aggregated indicator which sets the threshold (resulting from the sample wineries) for the successful or not characterization of the detailed self-assessment of the new winery (Deliverable 4.9 Guideline for label employment).

- The ECO-PROWINE Label, as a dynamic picture that incorporates the graphic design of the label and the Unique Code Area, for the addition of each successful winery's unique code as a means to provide consumers with detailed information about a labeled winery's sustainability performance (Deliverable 4.8 Label Brand (Logo + content).

3.2 Actual Operation Data Types

This category of data refers to data not currently included in the database. It actually comprises data collected during the actual operation of the tool and, even though not within scope of the current document, includes the following types:

- Winery-related data

- Winery input data

- Winery results data

- Winery status data

- Activity logs for the winery

- The unique code of the winery, to be used as part of the label.

- The unique label generated for each winery.

- Payment details for each winery