



FEEDBACK DOCUMENT OF LIFE RENDER PROJECT ON THE PRODUCT ENVIRONMENTAL FOOTPRINT CATEGORY RULES FOR DAIRY PRODUCTS

This document has been developed in the context of the **LIFE RENDER project** (Promoting the Implementation of Product Environmental Footprint Methodology in the European Dairy Sector), which was funded by the **LIFE Programme** under the Grant Agreement LIFE16 ENV/ES/000173.

LIFE RENDER seeks to promote the implementation of the Product Environmental Footprint Methodology at European level as a key tool to assess and to communicate life cycle environmental performance to business consumers and stakeholders. For this purpose, LIFE RENDER demonstrated under real conditions the technical, environmental and economic feasibility of the RENDER tool enabling the realization of PEF and PEF-CR-compliant studies by European Dairy Companies.

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Within LIFE RENDER project a large-scale demonstration was performed, by assessing the environmental footprint of **42 dairy products** in France, Spain, Portugal and Greece of 11 dairy products (SMEs and large companies).

The main objective of this document is to provide to the European Dairy Association (EDA) feedback on the implementation of Product Environmental Footprint studies by SMEs of the Dairy Sector and a series of recommendations for future reviews of the Dairy PEF-CR, based on the LIFE RENDER pilots.

Feedback on the experimentation and Recommendations

✓ Extending the **Scope of the Dairy PEF-CR**:

- In its current version, the Dairy PEF-CR scope is limited to dairy products (liquid milk, dried whey products, cheeses, fermented milk products, butterfat products) and does not consider **other dairy products** such as dried milks, creams, sweetened or flavoured milk-based drinks, whey drinks, ice creams, etc
- According to new market trends, an increasing number of actors within the Dairy sector are manufacturing products incorporating **raw materials from plants** (such as plant milks, plant-based proteins or fats, etc.): this switch towards plant-based raw materials is more and more considered by Dairy companies as an efficient lever to decrease their environmental impacts e.g. the GHG emissions of their products or organization, and can even be an important aspects of companies' "carbon neutrality" strategies.

In order to allow Dairy companies to deploy the PEF methodology to a broader part of their product portfolio, the current PEF-CR Dairy should be either: (i) Amended to cover a wider range of dairy products; including non-cow milk based dairy products (goat, ewe milk...) and (ii) Completed with new PEF-CRs covering plant-based products or mixed products

✓ Adding a harmonized **Carbon Sequestration methodology** in the Dairy PEF-CR. One of the concerns of dairy companies which have performed PEF studies is the possibility to integrate carbon sequestration in their analysis. Once a scientific consensus about carbon sequestration modelling will be ready, it seems to be crucial to implement it in the Dairy PEF-CR or directly in the EF milk secondary datasets.

Indeed, currently, pasturage and extensive systems are considered as more carbon intensive than maize feed system although pasturage is recognized as a high carbon sequestration potential land. Moreover, It exists in France a recognised LCA tool for farms called CAP'2ER® which already include carbon sequestration in Climate Change indicator. That is why French dairy companies expect to calculate their own Carbon sequestration based on their milk system mix thanks to the future version of the Dairy PEF-CR.



- ✓ Difficulties have been encountered to manage data collection with a **multi-plant approach** (e.g. Cream is produced at Plant A and is processed to produce butter in Plant B). There is a need to collect data on both dairy plants and to adapt the system boundaries. This case is not mentioned in the Dairy PEFCR.
- ✓ The PEF method only takes into account the purely **material aspect, process logistics and not human**. Indeed, to run a workshop and therefore produce butter, there are employees, who arrive by their own means (public transport, car) an administrative operation linked to the workshop (papers, computers etc). All of this affects the product's footprint. Although aware that taking them into account would represent an extremely detailed study, it is nevertheless remarkable that other data entered is just as important.
- ✓ Dairy processes are often characterised by the production of a high number of product and co-products. During the LIFE RENDER project, several participant Dairy companies experienced difficulties to **loop the mass balance** (at the company scale) between the raw milk entering the company and the output products and by-products.

Several reasons can explain such difficulties: (i) The potential losses of matter during the various process steps; (ii) Raw material and products stock management and (iii) The approach required in the PEFCR to allocate the environmental impacts using the mass of dry matter is not the one usually used by Dairy companies to monitor their production indicators.

The lack of guidelines for “mass balance” looping make companies doing assumption on this key parameter that can influence greatly the final PEF results: in some cases, the amount of entering raw milk can be inferior to the amount of output products and by-products, which makes no sense in physical terms.
- ✓ Linking PEF studies to existing **“carbon neutrality” guidelines and standards**: In the frame of the European Green Deal, the European Commission proposed on 4 March 2020 the first European Climate Law to enshrine the 2050 climate-neutrality target into law. In addition, EU Member States are required to develop national long-term strategies on how they plan to achieve the greenhouse gas emissions reductions needed to meet their commitments under the Paris Agreement and EU objectives.

In this context, there is an increasing involvement of economic actors into the development of carbon neutral strategies. However, the link between the PEF approach and its potential use for the development of carbon-neutral strategies is not clear: the compatibility of PEFCRs requirements (especially on Climate Change related aspects) with existing guidelines or standards dealing with carbon neutrality should be studied.

The adoption of the PEF approach could be enhanced if additional requirements on the opportunities to use PEFCRs to develop companies “carbon neutral” strategies were added in the PEF guidance or in the PEFCRs.
- ✓ Supporting the development of **sectoral calculation tools**: Development of PEFCRs is recognised as a required first step in order to ensure a good harmonization of the practices in terms of environmental impacts quantifications (in addition to current LCA standards such as the ISO 14040-44 standards). However, dairy SMEs stressed out that PEFCRs alone are not sufficient to make sure that PEF studies are performed correctly: for non-expert profiles, implementing the rules described in the PEFCRs is not straightforward and still requires support from LCA experts.

In order to overcome this issue, the development of sectoral calculation tools is strongly appreciated by SMEs, and should be encouraged by the European Commission.

The Life RENDER project also put in relief that some of the specific features of the PEFCRs can be challenging to implement in calculation tools, such as the Data Quality Rating (DQR) calculation. Hence the development of sectoral tools could be supported by the publication of specific guidelines (e.g. through ready-to-use plug-ins, detailed technical specifications, etc.) allowing to implement properly some common features of the PEFCRs.

Finally, a **tool review process** should be developed in order to ensure that the calculation tools are compliant with the PEFCRs requirements.