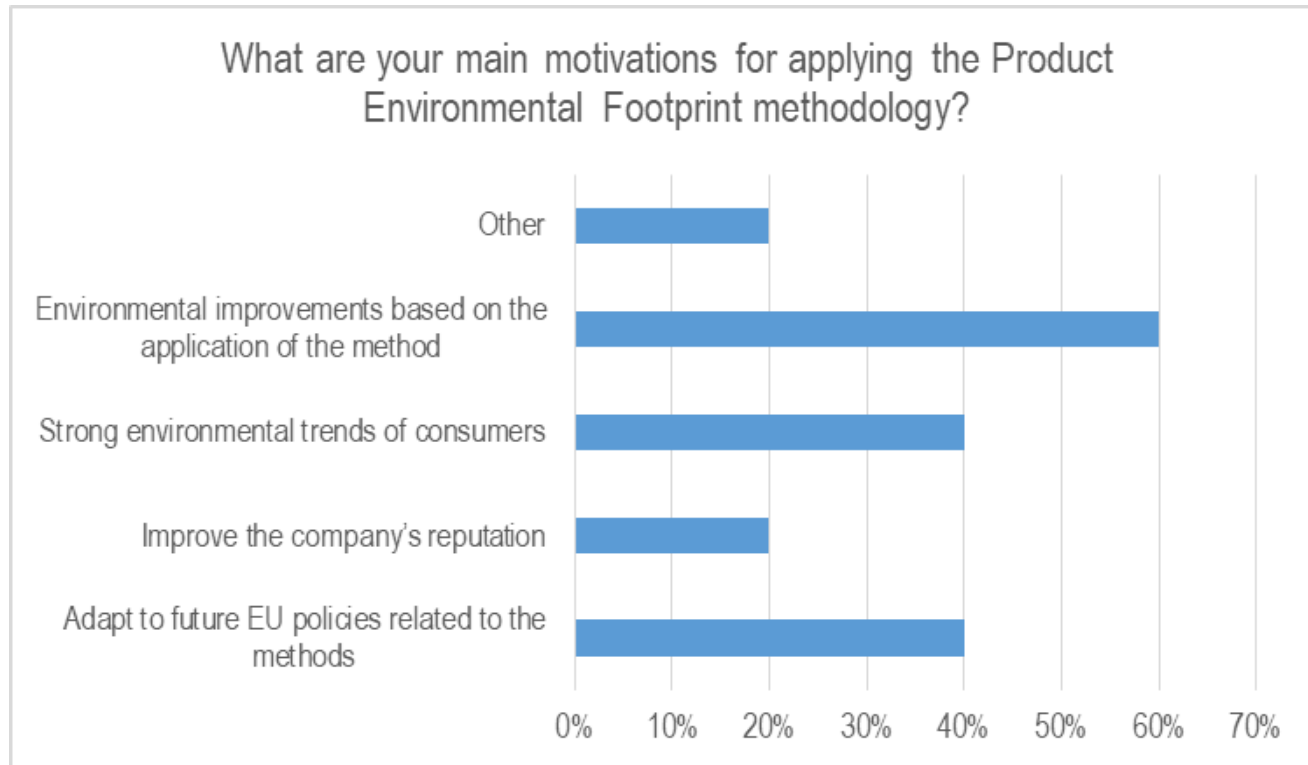


Main motivations of Dairy Companies to experiment with LIFE RENDER.

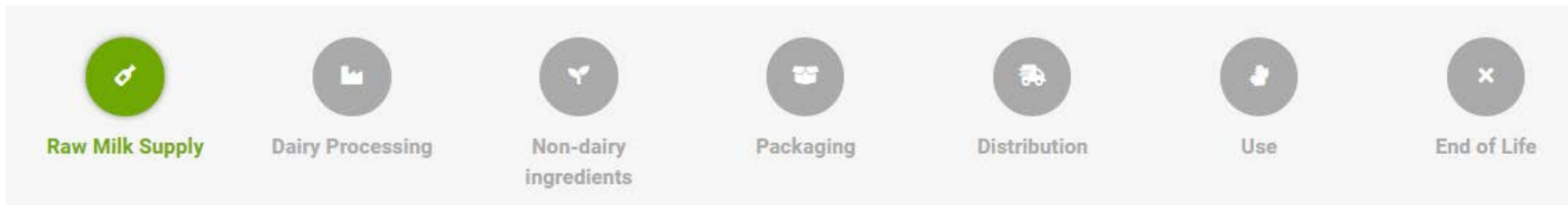


60% of companies involved in Life RENDER affirm that clients require specific environmental certification/label/method

Only 20% confirm that clients don't ask for environmental information.

Main feedbacks by Dairy Companies in the implementation of PEF method and RENDER Tool (1/3)

- ✓ The tool is written in a clear and understandable language reflecting the intended target audience (non LCA expert). **The instructions provided by the RENDER tool** (for example with help boxes) could be expanded.
- ✓ The structure of the tool, which follows the life of the product (production of raw milk, supply of ingredients, process, etc.), is clear and logical and facilitates the search for information and the understanding of results.



- ✓ End users value the possibility to create PEF profile of out-of-scope product by adding default density and default storage information related to additional product categories.
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Main difficulties found by Dairy Companies in the implementation of PEF method and RENDER Tool (2/3)

- ✓ Although the RENDER tool is designed to facilitate the data gathering process by the end user, most pilot companies comment that the development of a Product Environmental Footprint study is **Extremely or Very consuming and expensive process**. Tools' future developments should be focused on facilitating the use of the tool
 - ✓ The possibility to have a specific module to **specify data on the milk production** would be highly appreciated as some dairy companies have already performed an environmental analysis for their milk.
 - ✓ The **adaptability of the default data** could be improved, for example, for transport were the default distance tends to be overestimated
 - ✓ **The amount of data to fill is very high** and a preliminary questionnaire on the plant's own infrastructure could simplify data collection by reducing seizure if they are not present on the site
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Main difficulties found by Dairy Companies in the implementation of PEF method and RENDER Tool (3/3)

- ✓ The results obtained in the form of a graph give a good overview of the different environmental impacts of the products, and the indicators used (climate change, human toxicity, ozone depletion, etc.) are fairly clear, which facilitated the interpretation. It would be appreciated to have more exporting features for the results ad not only on Excel format.



Methodological Gaps detected. Recommendations for improvement in future reviews of the method – Dairy companies feedback

- ✓ **System boundaries:** There are plenty flow in dairy companies and to stay pragmatic, dairy companies can't report in the RENDER tool all flows and it's necessary to have a **cut-off point**. Such a cut-off is not currently indicated in the Dairy PEFCR even if some activities are by default excluded (analytical activities, R&D, employee commuting, etc.). This cut-off criteria may be perceived as arbitrary and it may be interesting to give companies the option of including or excluding certain flows.
 - ✓ **Lack of guidelines for “mass balance” looping:** Dairy processes are often characterised by the production of a high number of product and co-products and **dairy companies experienced difficulties to loop the mass balance**.
 - ✓ Difficulties have been encountered to manage data collection with a **multi-plant approach**
 - ✓ **Distribution:** Its is necessary to clarify the meaning two different type of supply chains: local and intracontinental as it can mislead dairy companies during the use of Render tool.
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Methodological Gaps detected. Recommendations for improvement in future reviews of the method – Focus on EF Database

Some specificities of the different companies are not covered by the Dairy PEFCR methodology and/or EF-compliant datasets. The main remarks concerned:

- **Dairy ingredients**: need of other dairy ingredients datasets such as whey, cream or concentrated milk for dairy companies importing other dairy ingredients than milk
 - **Non-dairy ingredients**: several inventories lack
 - **Energy**: It is not possible to use wood pellets or biogas as main heat sources
 - **Packaging**: Lack of composite polymer dataset to model packaging.
 - **Transports**: Euro 6 lorry can't be modelled.
 - **Waste scenario** per country and material is important to mention in order to model correctly end-of-life stage.
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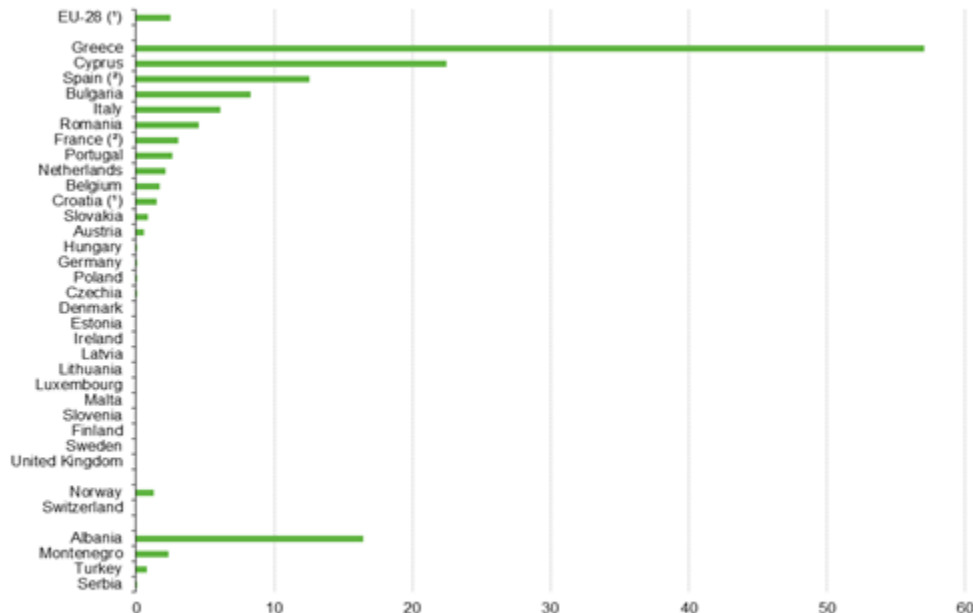
Propositions for further recommendations regarding PEF studies

Recommendation 1 - Extending the scope of the Dairy PEFCR

Amended to cover a wider range of dairy products; including non-cow milk based dairy products (goat, ewe milk...).

Completed with new PEFCRs covering plant-based products or mixed products.

Milk from animals other than cows, 2018
(% share of total milk delivered to dairies)



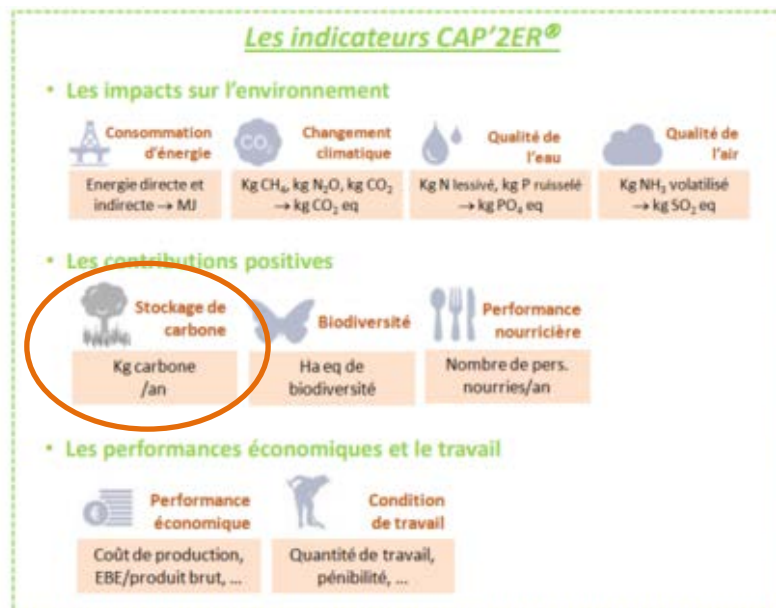
(*) Estimate.
(*) Provisional.
Source: Eurostat (online data code: apro_mk_pobta)

Propositions for further recommendations regarding PEF studies

Recommendation 2 - Adding a harmonized Carbon Sequestration methodology in the Dairy PEF CR

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.

- 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.



Propositions for further recommendations regarding PEF studies

- ✓ **Recommendation 3** : Supporting the development of sectoral calculation tools
 - ✓ **Recommendation 4** : Develop further guidance on the potential uses/applications of the PEF studies especially on review / verification process of PEF studies
 - ✓ **Recommendation 5** : **Linking PEF studies to existing “carbon neutrality” guidelines and standards** (the European Commission proposed on 4 March 2020 the first **European Climate Law** to enshrine the 2050 climate-neutrality target into law).
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