



Addressing sustainability in floriculture

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Product Environmental Footprint (PEF) method

The environmental impact of products has increasingly gained attention. More and more consumers look for information while NGOs demand transparency from companies e.g. by seeking media attention. More recently, financial institutions, retailers and other large companies are also demanding increased transparency partly as a result of upcoming regulations such as the EU Corporate Sustainability Reporting Directive (CSRD) and mandatory due diligence legislation. Whether you are a producer, trader or reseller of cut flowers and potted plants like roses or orchids, sooner rather than later you will have to be transparent about the environmental impact of your products.



To ensure reliability of results of environmental footprinting and subsequent sustainability claims, it is important to use a uniform and reliable methodology across the sector. The European Commission has put lots of efforts in tackling 'greenwashing'. In the past 10 years they have developed a method which is the most suitable for measuring environmental sustainability. The European Commission (EC) Directorate General for the Environment (DG-ENV) has recommended to use a life-cycle assessment (LCA) based method, i.e. a method that considers impacts on the environment from one unit of a product, starting from extraction of raw materials to the waste treatment (end-of-life) of the product (see Figure 1).



The method of EC is called the Product Environmental Footprint (PEF) and is now declared by the EC as the method that the European society can rely upon when measuring environmental sustainability of a specific product [1]. The EC recommends using PEF methods to measure and communicate the life cycle environmental performance of products and organisations (Box 1). The EC has set up an open call for industries to contribute to the development of product-specific methodologies. PEFCRs - Product Environmental Footprint Category Rules - have been completed in 2018 for 19 pilots.

Figure 1 Product Life Cycle

Among these, pilots that are relevant for agriculture are: Dairy, Beer, Wine, Pasta, Olive Oil, Packed water and Feed (see [here](#)).

Individual floriculture companies have been calculating environmental footprints on the basis of life cycle assessments of plants or flowers for many years. The floriculture sector is among the five frontrunners that started the development of the PEFs in 2019: apparel sector, synthetic turf, flexible packaging, marine fish, and cut flowers and potted plants. The PEF for Cut Flowers and Potted Plants (FloriPEF) ensures that environmental assessments are calculated in the very same scientific way for any type of cut flower or potted plant, sold in Europe. The environmental assessment includes all life cycle stages (such as cultivation of planting materials) even when they take place outside Europe.

Box 1. References to environmental claims/sustainability labels in most recent EC Policy Proposals and Recommendations

- ‘Companies should substantiate their environmental claims using Product and Organisation Environmental Footprint methods and committed to test the integration of these methods in the EU Ecolabel’ [1];
- ‘The Product Environmental Footprint method has the potential of being one underlying methodology for various product policy tools in the EU and the framework for sustainable products, taking also other suitable methodologies into account’ [1];
- ‘The Circular Economy Action Plan provides for the need to set the rules on environmental claims using Product and Organisation Environmental Footprint methods’ [2];
- ‘The proposal [2] aims at a ban on displaying a sustainability label which is not based on a certification scheme or not established by public authorities’;
- ‘The proposal [2] aims to ban generic environmental claims used in marketing towards consumers, where the excellent environmental performance of the product or trader cannot be demonstrated in accordance with EU Ecolabel regulation, officially recognised eco-labelling schemes in the Member States, or other applicable Union laws, as relevant to the claim;
- ‘The objective of the Green Claims initiative will be to introduce further requirements in relation to environmental claims made about products and organisations, both when made by businesses towards consumers and by businesses towards other businesses’ [2].

Developments around PEF method

Following quotes from Box 1, the EU PEF method is recommended for substantiating environmental claims through several future policies. EC’s Proposal for a Directive on empowering consumers for the green transition [2] (released on March 30, 2022) will revise the Unfair Consumer Practices Directive (UCPD) and proposes to ban sustainability labels and claims that are not substantiated. In summer 2022 a proposal for a legislation on Green Claims Initiative (GCI) is expected [3]. Both of the above-mentioned initiatives are part of the Circular Economy Action Plan of the European Commission and ‘are mutually consistent and complementary’. Following [2], the upcoming CGI legislation will formulate how the PEF methodology is to be applied, i.e. what will be the requirements in relation to environmental claims made about products by businesses towards consumers and by businesses towards other businesses.

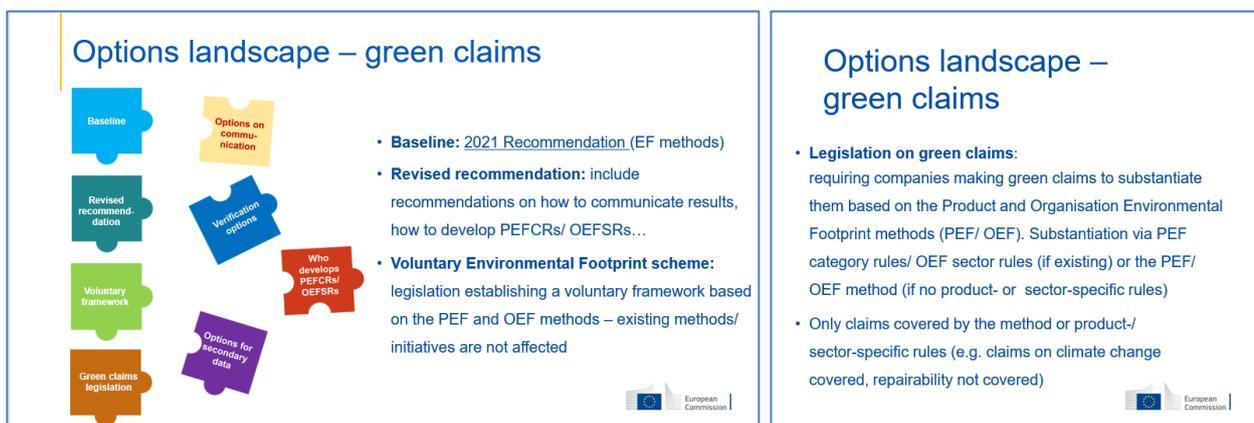


Figure 2 Options under green claims initiative [3].

Figure 2 presents four options that are being assessed suggesting that the PEF approach may be used either on a voluntary basis or through a legislation [3]. The most recent presentation [4] clarified that the GCI will be focusing on voluntary claims made by organisations regarding their products and it is not a proposal on mandatory labelling. In other words, the companies may or may not communicate environmental claims but once they do, they will be advised or required to substantiate their environmental claims using PEF methodology.

In addition to the implementation of PEF in EC policy, two examples of how the application of the preliminary PEF method for horticulture is taken up in practice can be mentioned. First, FSI – Floriculture Sustainable Initiative – has developed an Excel-based Environmental Footprint Toolkit for Floriculture for its members [5]. It is meant for use by individual companies and derives the most relevant indicators for floriculture: climate change, water scarcity, eutrophication, and ecotoxicity. Tools with an updated and complete set of PEF indicators will be developed following the FloriPEFCR release. Second, MPS - a Dutch certification company - has announced the release of a tool to calculate product footprint for growers with MPS-ABC certification. It builds on the information that growers have already provided to MPS [6]. Both tools are inspired by the most recent yet unofficial (is not approved by the EU) guidelines for footprinting in horticulture [7]. One may expect a greater interest in footprinting tools once FloriPEFCR is officially released. The embedding of PEF methods is expected in, for example, the Eco-label (see [2]).

What are the pains and the gains of developing FloriPEFCR?

Developing FloriPEFCR is a process of several years that requires substantial resources and intensive engagement of different stakeholders. Will the sector benefit from this PEF methodology and succeed in reducing the environmental impact?

The developed PEF methodology for floriculture derives 16 important environmental indicators in total, among which climate change, resource use (fossils), toxicity, acidification, water use, and land use. The large number of indicators and the complex method result in heavy data demands on primary processes in floriculture, i.e. on everything that a farmer decides upon. The cultivation stage and distribution stage are modeled based on company-specific data because these have a large influence on the total impact of a product. Other stages are modelled using default data provided by the FloriPEFCR through rules and PEF-compliant databases. When these data are to be processed in a life-cycle model, only LCA experts can complete such calculations. Thus, both the development and the application of the PEF method are among the pains.

There are also multiple gains. Perhaps the most important gain of developing a uniform method is in building the trust. FloriPEFCR supports fair comparisons, i.e. potted plants are compared with potted plants and cut flowers are compared with cut flowers. This in turn increases reliability of environmental footprint information and environmental impact claims. Through the trust in the method that is endorsed by the EC and stakeholders and through proactive engagement with all stakeholders, the sector gains in reputation among chain partners. Also, building the trust towards consumers in light of transition towards greener economy becomes more feasible.

The ability to quantify 16 environmental indicators and to monitor the footprint on an annual basis gives companies a solid management tool. Insight into sustainability often also provides opportunities for reduction of costs due to increased efficiency.

Another important gain is that the development of FloriPEFCR ensures preparation for future EU legislation and ensures sector compliance to policies which are foreseen to take effect in the near future (GCI, UCPD).

Finally, having such a complex, detailed but yet harmonised modelling method to calculate the environmental footprint per product, the business will be prepared to tackle the upcoming requirements on non-financial reporting at the company level. In April 2021, the Commission adopted a proposal for a Corporate Sustainability Reporting Directive (CSRD) that requires large (with more than 500 employees) companies to publish regular reports on the social and environmental impacts of their activities. The exact requirements of which environmental indicators to report on are not yet formulated. Having PEF results per product at hand will supposedly assist companies to tackle the CSRD requirements but also make them better prepared to address

the voluntary reporting initiatives at company level like Carbon Disclosure Project (CDP), Global Reporting Initiative (GRI), Taskforce on Climate Related Financial Disclosures (TCFD) and Science Based Targets initiative (SBTi).

How to stay connected?

The development of FloriPEFCR is expected to be finalised, i.e. approved by the European Commission in 2023. All the work is carried out by an international consortium (the Technical Secretariat) and is led by Royal FloraHolland – the Dutch flower auction. A very strict process is followed that involves independent reviewers, two Open Public Consultations and endorsement of the EU Expert Group 'Environmental Footprint Technical Advisory Board (E03710)'. As of medio 2022 the development is well on its way: draft rules and draft case studies have been prepared and reviewed. In spring 2022 external consultancies have tested the draft FloriPEFCR with individual growers (3 studies for cut flowers and 3 for potted plants). The next review and public consultation is expected to take place early 2023. We invite you to stay informed and follow our project page ([link](#)).

References

- [1] Commission Recommendation of 16.12.2021 on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organizations ([link](#)).
- [2] Proposal for a Directive on empowering consumers for the green transition - COM(2022)143 ([link](#)).
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- [4] Maire, E. (2022). Driving greener food & drink choices: Unlocking the potential of the European Commission's proposal on substantiating green claims (EBCD.org). DG ENV, European Commission, April 22, 2022 ([link](#)).
- [5] FSI (2021). FSI 2025 Strategy summary ([link](#)).
- [6] MPS (2022). The HortiFootprint Calculator: innovative new tool to measure the environmental footprint of horticulture production, developed by MPS and LetsGrow.com ([link](#)).
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