

Draft second PEFCR & PEF-RP study report: Apparel and Footwear

Date:	28-Apr-24
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Documents:	<p>1.1 A&F_PEFRCR_v2_0_2023-03-18_Quantis.pdf</p> <p>1.2 A&F_PEFRCR Annex II - PEF study template_2023-03-18_Quantis.docx</p> <p>1.3 A&F_PEFRCR Annex V - Detailed requirements regarding intrinsic quality_2023-03-18_Quantis.pdf</p> <p>1.4 A&F_PEFRCR Annex VII - Inventory modelling and default datasets_Quantis.xlsx</p> <p>2.1 A&F_PEF-RPstudy_v2_0_2023-03-18_Quantis.pdf</p> <p>2.2 A&F_PEF-RPstudy_Annex I-LCI_v2_0_2023-03-18_Quantis.xlsx</p> <p>2.3 A&F_PEF-RPstudy_Annex II_Microfibre-calculation_2023-03-18_Quantis.xlsx</p>

Please indicate which document your comment relates to:
 - the Product Environmental Footprint Category Rules (PEFCRs) or one of its annexes
 - the PEF-Representative Product (PEF-RP) study or one of its annexes

Comment types:
 G = general; T = technical; E = editorial

Comment no.	Name/Organization	Date	Document	Subject	Page	Line number	Section	Figure/ Table/ Note	Type of comment (i.e. G, T, E)	Comment (justification for change)	Proposed change	Reference if relevant (document name or link)	Reference attached? (Y/N)	
1	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR	Consultations and stakeholders	25	313	2.2		G	<p>A public consultation can only be effective if the public is sufficiently informed about the proposal and the outcomes it will deliver. However, that's not the case with these PEFCRs. Even though case studies (supporting studies) were conducted assessing the PEF score of a range of clothing types made from a variety of raw materials, the results of those case studies are not available to the public. Similarly, the physical durability test thresholds used to distinguish between inadequate/basic/moderate/aspirational Duration of Service performance are based on a study (Durhahi study) which is not available to the public, so the rationale for choosing these important thresholds is unclear.</p> <p>By utilising the limited data available to assess the scores, it's anticipated the adoption of PEF will have devastating impacts on the wool, cashmere, mohair, alpaca and other natural fibre industries. So, in the absence of complete clarity on how PEF will score competing products made from different raw materials (and the reasons they differ), it is not possible to provide informed feedback on these PEFCRs.</p>	A public consultation should not be held if the public is in the dark. Anonymised results of the supporting studies and the Durhahi study should be released to enable respondents to provide informed feedback.			
2	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR	Application of results of PEFCRs	22	276	1		G	<p>LCA as its applied in these PEFCRs doesn't provide the evidence base needed to demonstrate that clothing made from one raw material is more environmentally damaging than similar clothing made from other raw materials. LCA practices are being applied in PEF to comparative assessments that are beyond the level of certainty needed to make such claims - potentially resulting in undeserved reputational and financial harm to affected industries.</p> <p>Consumer law typically protects consumers and products from comparative statements that aren't supported by robust evidence - and based on a review of these PEFCRs, this evidence is lacking.</p>	The research to determine confidence limits for PEF scores should be completed prior to implementation of these PEFCRs to avoid unwarranted reputational and financial damage to natural fibre industries.			
3	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR	System Boundaries	61	859	3.4		T	<p>These PEFCRs bias against products made from natural fibres due to the distinct system boundary difference compared to products made from fossil fuel-based fibres (Wiedemann 2022). The impacts of forming natural fibres on a farm are fully accounted for in PEF, while the impacts of forming fossil fuels are not. Oil and natural gas are treated as 'environmentally free' raw materials in LCA, resulting in fossil fuel-based clothing consistently scoring better.</p> <p>An LCA of fossil feedstock-derived fibres omits the ancient uptake of water and nutrients required to create the biomass feedstock for fossil reserves (Dukes 2003), and the subsequent geological processes that led to the formation of the extracted oil, coal, or gas (Bernier 2003).</p> <p>This inconsistent system boundary significantly contributes to an unlevel playing field. PEFCRs are designed to facilitate equitable comparisons amongst similar products (Zamport & Pant 2019). However, comparison of the life cycle impacts of a product from an extractive industry with a similar product from a non-extractive-industry results in a fundamental inequity in the comparison.</p>	<p>a. Incorporate a more effective circularity indicator in PEF to reward attributes vital to sustainability - including being natural, renewable and biodegradable. For example, using the Ellen MacArthur Foundation's Material Circularity Index in PEF would create a more level playing field across fibres and would also much more effectively deliver the EU's circular economy strategy (CEAP) than PEF's ineffective Circular Footprint Formula.</p> <p>b. Do not use LCA methods, such as PEF, to compare products whose material inputs are derived from extractive industries with non-extractive industries. This could be achieved by creating separate classes for fossil-fuel based products and natural products.</p> <p>c. Ensure the interpretation phase of PEF, on products whose inputs are derived from extractive industries, considers the implications of commencing a life cycle with raw material acquisition. This may be done by reporting percent 'fossil carbon' and percent 'biogenic carbon' and weighting them sufficiently in the PEF score to reflect their relative importance to EU environmental strategy.</p>	<p>SG Wiedemann, Using LCA and Circularity Indicators to Measure the Sustainability of Textiles—Examples of Renewable and Non-Renewable Fibres, SUSTAINABILITY, Dec 2022</p> <p>MTLC White paper, Delivering EU environmental policy through fair comparisons of natural and synthetic fibre textiles in PEF</p> <p>JS Dukes, Burning Buried Synthetic in Human Consumption of Ancient Solar Energy, Climatic Change 61(1):31-44 Nov 2003</p> <p>RA Bernier, The long-term carbon cycle, fossil fuels and atmospheric composition, NATURE, VOL 42, 20 Nov 2003</p>		N
4	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR	Relevant impact categories	65	882	3.5		G	<p>Following feedback from the first public consultation about the PEF method's omission of microplastics as an impact category, the Commission's demand that microplastics be included in PEF has not been delivered. Instead, microfibres will now appear as "additional information".</p> <p>With microplastics already under-reported, due to counting only releases from the laundering stage (omitting emissions to air and land), merging the more environmentally harmful microplastics with microfibrils from natural-based clothing will further reduce its influence - reflecting a failure to comply with the EU's precautionary principle (EU 2012, p. 132).</p> <p>Finally, the inability to amalgamate the impacts of microplastics/microfibrils in the overall PEF score, and reporting it as "additional information" will have the effect of hiding this information from well-intended consumers.</p>	<p>Given the European Chemicals Agency's proposed restrictions on intentionally-added microplastics (ECHA 2020), there is a strong argument to include microplastics as a PEF indicator and incorporate it in the overall PEF score. This would align with the precautionary principle that underlines EU environmental policy (EU 2012, p. 132).</p> <p>It is recommended the EC synthesise existing research, and commission the necessary future research, required to incorporate microplastics in the overall PEF score.</p>	<p>ECHA (2020) Opinion on an Annex XV dossier proposing restrictions on intentionally-added microplastics, Helsinki: European Chemicals Agency (ECHA). Available at: https://echa.europa.eu/documents/10162/fa20d0e0-83fc-489a-9e9e-01a68383e3cd?file=/IC-/Users/gonzalos/D%20documents/Literature/ECHA%202018/Committee%20for%20Risk%20Assessment%20(RAC)%20Committee%20for%20Socio-economic%20Analysis%20(SEAC)%20Background%20document.pdf</p> <p>EU (2012) Consolidated version of the Treaty on the Functioning of the European Union. Off. J. Eur. Union C 326, 47-390.</p>		N

5	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR	EF Dataset	28	337	2.3	G	<p>The Commission has funded collection of LCA data for each apparel and footwear raw material for use in PEF. But the data quality obtained depends on the availability of credible LCA data, as well as the time and effort put into sourcing it. However, a review of the dataset obtained for wool by the Commission's LCA data provider exemplifies how insufficient that data is.</p> <p>The apparel wool dataset was sourced from the grey literature even though peer-reviewed published information was available, and was based on a meat sheep study (not wool sheep) with poor precision, technological, geographical and temporal representativeness. This study only assessed one of the 16 environmental impact categories assessed in PEF, with the other 15 questionable.</p> <p>The result was a very poor data quality score of 4.5, which showed raw material acquisition impacts for wool to be more than 6 times higher than the published datasets – significantly disadvantaging products made from wool.</p>	<p>a) Update the EF-compliance criteria and review process.</p> <p>b) Replace the poor-quality wool LCA datasets with the higher quality peer-reviewed and published datasets.</p>		
6	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEF-RP study	Relevant impact categories	22	287	1	G	<p>These PEFRCs fail to account for the inherent benefit of renewability of raw materials. LCA-based methods quantify negative impacts on the environment, whereas 'Sustainability' is concerned with preserving the capacity of the environment and avoiding the accumulation of extracted substances. (Holmberg 1998). It's a clear oversight that these PEFRCs fail to assess the degree of renewability in raw materials, as this attribute is fundamental to long term sustainability. The result is that these PEFRCs are lacking in their ability to support EU directives such as Circular Economy Action Plan (CEAP).</p>	<p>a. The normalisation of PEF indicators should be reviewed so they are closely aligned with the concept of sustainability, such as the carrying-capacity of Earth systems.</p> <p>b. Require a PEF study to report parameters that account for the inherent, biological circularity and therefore renewability. The Material Circularity Indicator (Ellen MacArthur Foundation and Grantia Design) provides a system to achieve this.</p>	<p>Holmberg J (1998) Backcasting: a natural step in operationalising sustainable development. Greener Manag. Int. 23, 31–51.</p> <p>European Commission (2015) Closing the loop - An EU action plan for the Circular Economy. COM(2015) 614 final. Brussels: European Commission. Available at: https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_2&format=PDF. https://www.ellenmacarthurfoundation.org/material-circularity-indicator</p>	N
7	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR	Product Lifetime	41	515	3.3.2.1	T	<p>These PEFRCs are built on an underlying assumption that's not based on robust science. Namely, that the more physically durable a garment is, the more often it will be worn, so the less often it needs to be replaced.</p> <p>However, consumer research consistently shows that only about one-third of clothing is thrown out because its worn out. In other words approximately two thirds of discarded clothing still has perfectly usable functionality or are 'durability intact'. But, when estimating garment lifetime (which is the single most important metric in PEF), these PEFRCs overlook the two thirds of reasons for clothing disposal and prioritise physical durability testing to estimate garment lifetime. This has the effect of significantly over-weighting the influence of physical durability on the PEF score.</p> <p>These PEFRCs are consequently biased in favour of polyester and other strong synthetic fibres (which perform particularly well in physical durability tests), in the absence of evidence that these higher levels of durability actually increase product lifetime. Rather, the evidence is compelling that the increased availability of cheap polyester clothing has been the enabler of fast fashion, and hence, shorter garment lifetime (Ninimäki 2020.)</p>	<p>a. It is recommended the Commission fund independent research as soon as possible to properly characterise the influence of a product's intrinsic attributes on duration of service.</p> <p>b. In the interim, set all DOS multipliers to a value of 1.0 (i.e. null influence) until the science-based evidence is available.</p>	<p>See 17 references listed in IWTO Discussion Paper - Accounting for non-physical durability. See TS wiki for original document.</p> <p>Ninimäki K, The environmental price of fast fashion. Nature Reviews Earth & Environment - April 2020</p>	
8	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR	Limitations	73	1022	3.8	G	<p>Further to the above point, both PEFRC Section 3.8 and Annex VI acknowledge the lack of a science-base to these PEFRCs and need for targeted research to identify and appropriately weight the criteria needed to assess the non-physical durability attributes which are known to significantly determine garment lifetime (or duration of service DoS).</p> <p>But section 3.8 does not acknowledge that the evidence base for inclusion of reparability and physical properties such as strength is equally lacking. Notwithstanding this lack of evidence, arbitrary DoS multipliers for physical durability and reparability have been adopted - having the effect of significantly over-weighting their influence on estimated clothing lifetime - and therefore on the overall PEF score.</p>	<p>a. Commission EU funded independent research as soon as possible to properly characterise the non physical intrinsic attributes influencing duration of service.</p> <p>b. Set all DOS multipliers to a value of 1.0 (i.e. null influence) until the science-based evidence is available.</p>		
9	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEF-RP study	End of Life	55	681	4.5	G	<p>Accounting for biodegradability – PEF methodology has previously been criticised for not including solid waste as an impact category. Reducing waste and ensuring there is a well-functioning internal market for recycled raw materials are essential components of the circular economy - CEAP initiatives (European Commission 2015; European Commission 2020).</p> <p>However, none of the 16 PEF impacts directly accounts for solid waste. This lack of alignment between PEF and the central tenet of the CEAP, which includes minimising the production of waste, needs to be addressed. Although the circular footprint formula (CFF) attempts to incorporate solid waste its effect on the PEF score is so small as to be irrelevant. This problem could be rectified by requiring a PEF study to report the mass of solid waste produced per functional unit and include sub-totals based on biodegradability – this attribute should be highly valued because it reflects the potential for materials to be recycled via natural processes and their transient presence in landfills.</p>	<p>a.Reporting the mass of non-biodegradable solid waste per functional unit as an inventory level indicator.</p> <p>b.Using a PEF study to inform an environmental labelling scheme, such as the EU Ecolabel, and directly account for the biodegradability and renewability of material flows.</p>	<p>European Commission (2015) Closing the loop - An EU action plan for the Circular Economy. COM(2015) 614 final. Brussels: European Commission.</p> <p>Available at: https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_2&format=PDF.</p>	
10	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEF-RP study	EF Dataset	22	280	1	G	<p>The goals of the PEFRCs do not align with the goals of the EU's commitment to <i>End poverty in all its forms and Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</i>. The PEF scores derived from the current EF datasets will allocate high footprints to natural fibres whose small holder farmers, mostly in the global south, support a quarter of the world's population of which most are the poorest. If EU brands switch from high EF to low EF fibres it will reduce demand for natural fibres and force those farmer to grow a less profitable crop or worse still, go out of business.</p>	<p>Ensure the data in the PEFRCs/ EF datasets properly balance social as well as environmental aspects.</p>		
11	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR Annex V	Pilling thresholds	18	248	Table 7	E	<p>As written, the physical durability thresholds below are not clear. For example, it would be impossible to attribute score to a product showing grade 3. Basic $2 \leq x \leq 3$, Moderate $3 \leq x \leq 4$ Aspirational $x > 4$</p>	<p>Change Moderate to read $3 < x \leq 4$</p>		
12	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR Annex V	Pilling thresholds	28	290	Tables 13 & 14 & 20	E	<p>Thresholds unclear, no score for pilling grade 3</p>	<p>Change Moderate to read $3 < x \leq 4$</p>		
13	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR Annex V	Pilling thresholds	35	217	Table 18	E	<p>Thresholds unclear for pilling grade 3 and pilling grade 4</p>	<p>Change Moderate to read $3 < x \leq 4$</p>		

14	Travis Tobin CEO Livestock SA Incorporated	Sunday, 28 April 2024	PEFCR Annex V	Colour fastness to Chlorinated water	49	384	Tables 27 to 30	E	Score for Grade 3 unclear	Change Moderate to read $3 < x \leq 4$		
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