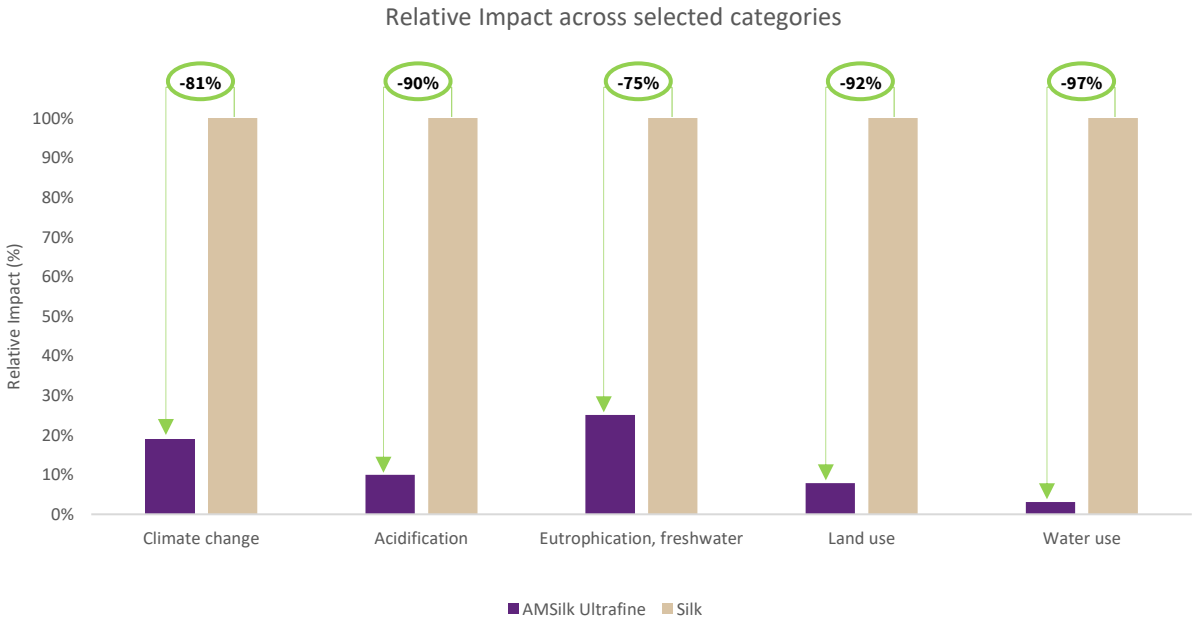
Together with Quantis, a BCG company and leading environmental sustainability consultancy, we conducted an ISO-compliant Cradle-to-Gate Life Cycle Assessment (LCA)[1] comparing the environmental footprint of AMSilk Ultrafine fiber with Mulberry silk. Below you can see the highlights of this comparison.

	Climate Change[4]	Acidification[4]	Freshwater Eutrophication[4]	Land Use[4]	Water Use[4]	Single Score[5]
AMSilk Ultrafine[2]	28 kg CO_2 eq.	0,24 mol H^+ eq.	0,01 kg P eq.	629 Pt	34 m^3 deprived	5 Points
Mulberry Silk[3]	149 kg CO_2 eq.	2,46 mol H^+ eq.	0,06 kg P eq.	8035 Pt	1123 m^3 deprived	32 Points
Difference in Impact	-81%	-90%	-75%	-92%	-97%	-85%



[1] This LCA study is ISO compliant and has been critically reviewed by a panel of LCA and textile industry experts. It is a "cradle-to-gate" study and excludes the the packaging and distribution, application/use phase, end of life, focusing solely on cradle-to-gate impacts and omitting an evaluation.

of differences in use and applications between the fibers. This exclusion aligns with ISO 14044:2006 standards, justified by the perceived similarity in these stages across all fibers. The rationale for the 'cradle-to-gate' scope is grounded in data availability and the complexity of modeling EoL and use scenarios, particularly in the case of AMSilk fibers which uses are plentiful and diverse. However, this limitation means that any potential environmental benefits or burdens associated with the EoL phase, such as recyclability, biodegradability, or toxicity of disposed materials, are not captured.

[2] AMSilk Ultrafine values based on perspective upscaled protein production process in Europe and pilot scale fiber production in Germany.

[3] Mulberry silk values are based on the ecoinvent 3.9 dataset "Yarn, silk {IN}|yarn production, silk, long fibre |Cut-off, U".

[4] Study and assumptions based on the PEF standards, set by the European Commission. The EF 3.1 methodology was used for the impact calculation. Five of 16 impact categories from the Environmental footprint methodology were chosen based on their relevance in the textile industry.

[5] The single score provides an aggregated score for all 16 EF indicators and is calculated with the PEF normalization and weighing approach. Due to the limitations of this approach, It should not be used as a single impact value. We provide the single score as additional information to provide an overview of the impacts in the other 11 impact categories of the EF 3.1 methodology.