


Designing a new solution to reduce the environmental impact linked to hair-washing



The partnership between L'Oréal and the environmental start-up Gjosa has enabled us to design an innovative low flow shower head coupled with an easy-to-rinse shampoo, which helps to reduce the volume of water needed for hair-washing by up to five times.

Start date of the project	October 2015
Project Localisation Places of implementation of the project at this stage and targeted geography if replicable.	The prototypes of the new shower head have been tested in L'Oréal laboratories, as well as in hairdressing salons in France and the United States.
Project objectives Type of climate innovation of the project with a description of the problem/issue addressed	<p>Reducing the water and energy consumption of hairdressing salons by developing a low flow shower head together with an easy-to-rinse shampoo.</p> <p>When considering the life cycle analysis of a shampoo, the use phase creates the greatest impact, both in terms of water footprint and carbon emissions. In fact, it represents up to 80% of these impacts. Also, reducing the consumption of water during the use phase in hairdressing salons and thereby lowering the energy needed to heat water during the use phase is central to reducing GHG emissions.</p>
Detailed project description	<p>Water is essential to the design and use of our company's products, and sits at the heart of L'Oréal's activity. Its capacity to function effectively and respond to consumers' needs depends on sustainable access to water, and sustainable water management and conservation. In this respect, L'Oréal has worked for many years to preserve high quality water, consumed in responsible quantities, across our value chain, as well as in all the water basins and communities where the brand is present. The innovative nature and evaluation of our products therefore plays a vital role in our efforts to conserve this precious resource.</p> <p>Elsewhere, through a life cycle analysis of a shampoo, the use phase has the greatest impact, both in terms of water footprint and GHG emissions arising from heating water. In fact, it represents up to 80% of these water and GHG impacts. In addition, reducing water consumption in the use phase in hairdressing salons will also therefore lead to a reduction in the energy needed to heat water and a significant reduction of GHG emissions for a salon shampoo.</p> <p>In 2020, the Group updated the calculation of the carbon footprint related to its 2019 activities. The study shows that the stage with the greatest impact in terms of GHG emissions is the product use phase, in the consumer's home, when he/she uses hot water. These emissions represent 49% of the entire emissions linked to the Group's activities.</p> <p>To achieve this, L'Oréal joined forces with Swiss start-up Gjosa to develop a technology that enables consumers to rinse off shampoo with just 1.5 litres of water, instead of the usual 8 litres. The start-up Gjosa developed a low flow shower head (two litres of water per minute), which reduces the water flow while accelerating the speed of water droplets, so that rinsing is just as effective as rinsing with a conventional shower head.</p> <p>To optimise the process, scientists at L'Oréal developed shampoos that are easier to rinse, applied directly through the shower head. Certain parameters were adjusted according to real conditions of use, in order to ensure a good level of rinsing and contribute to reducing energy consumption (for hot water) and water by around 70%.</p> <p>The two companies have launched a low flow shower head linked to an easy-to-rinse shampoo, which enables consumers to reduce by up to five times the volume of water needed for hair-washing and go from 8 litres (per wash) to an average of only 1.5 litres.</p> <p>This innovative shower head reduces the flow of water but compensates for this reduction by accelerating the speed of the droplets, so that the easy-to-rinse shampoo is applied directly via the shower head, rather than being applied by hand to the scalp. By infusing the water and the shampoo simultaneously, the shower head helps to reduce the volume of water consumed in professional hair salons.</p>

	First tested in L'Oréal's laboratories, the prototypes of this new shower head are now available in many hairdressing salons in France and the USA. A global roll-out is planned by 2023, with the aim of equipping around 10,000 salons in the next few years.																																
Main project's drivers for reducing the greenhouse gas emissions	Reduction levers		Details on the aspects of the project																														
	<input checked="" type="checkbox"/> Energy and resource efficiency (including behaviour)																																
	<input type="checkbox"/> Energy Decarbonisation																																
	<input type="checkbox"/> Energy efficiency improvements																																
	<input checked="" type="checkbox"/> Improving efficiency in non-energy resources		Development of a technology that reduces the amount of water needed to rinse a shampoo by 5 times (using 1.5 liters of water instead of the usual 8 liters)																														
	<input type="checkbox"/> Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)																																
	<input type="checkbox"/> Financing low-carbon producers or disinvestment from carbon assets																																
	<input type="checkbox"/> Reduction of other greenhouse gases emission																																
Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope	<table border="1"> <thead> <tr> <th></th><th>Aspects of the project contributing to the reduction of emissions by emission category</th><th>Quantification of associated GHG emissions by emission category</th></tr> </thead> <tbody> <tr> <td colspan="3">Please follow the quantification methodology used in the Afep guidelines.</td></tr> <tr> <td colspan="3">Reduction of the company's carbon dependency</td></tr> <tr> <td>Scope 1 <i>Direct emissions generated by the company's activity.</i></td><td></td><td></td></tr> <tr> <td>Scope 2 <i>Indirect emissions associated with the company's electricity and heat consumption.</i></td><td></td><td></td></tr> <tr> <td>Scope 3 <i>Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.</i></td><td>Development of a technology allowing to use only 1,5 liter of water instead of the usual 8 liters to rinse a shampoo</td><td>This solution allows a reduction in energy and water consumption of about 70% in hair salons</td></tr> <tr> <td colspan="3">Increase of carbon sinks</td></tr> <tr> <td>Emissions Absorption <i>Carbon sinks creation, (BECCS, CCU/S, ...)</i></td><td></td><td></td></tr> <tr> <td colspan="3">GHG emissions avoided by the company at third parties</td></tr> <tr> <td>Avoided Emissions <i>Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects.</i></td><td></td><td></td></tr> </tbody> </table>				Aspects of the project contributing to the reduction of emissions by emission category	Quantification of associated GHG emissions by emission category	Please follow the quantification methodology used in the Afep guidelines .			Reduction of the company's carbon dependency			Scope 1 <i>Direct emissions generated by the company's activity.</i>			Scope 2 <i>Indirect emissions associated with the company's electricity and heat consumption.</i>			Scope 3 <i>Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.</i>	Development of a technology allowing to use only 1,5 liter of water instead of the usual 8 liters to rinse a shampoo	This solution allows a reduction in energy and water consumption of about 70% in hair salons	Increase of carbon sinks			Emissions Absorption <i>Carbon sinks creation, (BECCS, CCU/S, ...)</i>			GHG emissions avoided by the company at third parties			Avoided Emissions <i>Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects.</i>		
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	Clarification on the calculation or other remarks: Carbon impact (in tCO ₂ eq/year) not measured to date because the project is in the test phase.																																
Modality of verification of the quantification.	Calculation standard used (ADEME base, GHG protocol, etc.): The CO ₂ reductions generated by this project are linked to the L'Oréal Group's Scope 3 emissions. They will therefore be calculated according to the GHG protocol methodology (in the same way as the L'Oréal Group's entire GHG footprint is calculated).																																
	Verification of the calculation (internal or external): click here to enter the information																																
Other environmental and social benefits of the project	<p>This innovative solution contributes to the following SDGs:</p> <ul style="list-style-type: none"> SDG 7 Clean and affordable energy and SDG 13 Climate action; the solution helps to reduce the energy needed to heat water; SDG 6 Clean water and sanitation and SDG 12 Responsible production and consumption; the solution helps to significantly reduce the volume of water used to rinse off hair products in hairdressing salons. This saving will deliver reduced energy and water impacts. 																																

Project maturity level	<input type="checkbox"/> Prototype laboratory test (TRL 7) <input checked="" type="checkbox"/> Real life testing (TRL 7-8) <input type="checkbox"/> Pre-commercial prototype (TRL 9) <input type="checkbox"/> Small-scale implementation <input type="checkbox"/> Medium to large scale implementation Remarks: click here to enter the level of maturity of the project
Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential	<p>L'Oréal and Gjosa's key objective is to implement this new technology in professional hairdressing salons worldwide, in order to help hairdressers reduce their consumption of water and their CO₂ emissions.</p>  <p>How Gjosa Technology Benefits Hair Salons</p> <ul style="list-style-type: none"> Substantially reduces water consumption (75%) Drastically cuts energy consumption (75%) Ensures an enjoyable experience, full wettability, and good rinsing Get recognized as a sustainable, pioneer brand
Amount of investment made (in €)	Not communicated.
Economic profitability of the project (ROI)	<input type="checkbox"/> ST (0-3 years) <input type="checkbox"/> MT (4-10 years) <input type="checkbox"/> LT (> 10 years) Remarks: <ul style="list-style-type: none"> Economic benefit for the managers of hairdressing salons in saving water and energy resources, which are at the heart of their business. For salons in zones under water stress, this will enable them to optimise their use of water and address more clients' needs with less water. Economic benefit for L'Oréal in supporting hairdressing salons and building their future resilience by helping them adapt to the consequences of climate change, while reducing their impact.
Engaged partnerships	L'Oréal and Gjosa, a Swiss environmental start-up, reinforced their partnership at the end of 2019 with the aim of developing a first industrial version of this shower head, which will be tested in real conditions.
Open comments from the project owner	/
More about the project	
Contact the company carrying the project	alexandra.vickery@loreal.com
Project URL links	https://www.loreal.com/en/commitments-and-responsibilities/for-the-planet/managing-water-sustainably [English links https://mediaroom.loreal.com/fr/loreal-et-la-start-up-environnementale-gjosa-innovent-ensemble-pour-rincer-un-shampooing-avec-5-fois-moins-deau https://www.loreal-finance.com/fr/actualite/ces-2021-loreal-devoile-loreal-water-saver-technologie-durable-soins-capillaires-pour https://www.loreal.com/fr/articles/science-et-technologie/loreal-water-saver-the-new-sustainable-haircare-system/]

Illustrations of the project



Partnering exclusively with L'Oréal to drastically reduce the water footprint of the Hair Care Industry



80% of the global water footprint of shampoo comes from the usage phase



90% of the total energy used in a shampoo's life cycle comes from rinsing hair