Product Environmental & Social Impact Labelling Methodologies

24/06/2020 - VERSION 1

L'ORÉAL

e-accessibility

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01. INTRODUCTION

In compliance with the commitment L'Oréal made in 2013 when launching its "Sharing Beauty With All" sustainability programme, Environmental and Social Impact Labelling was designed **to inform consumers on the environmental and social impact of their products**, and consequently, empower them to make conscious consumption choices. The labelling will be accessible to consumers on product web pages, starting with a Garnier Haircare pilot in 2020. This labelling is based on the key impact assessments of the Sustainable Product Optimisation Tool (SPOT), the methodology L'Oréal has developed together with independent scientists and experts[1], and aligned with the European Product Environmental Footprint (PEF) guidelines to scientifically evaluate a product's environmental and social impact.

Since 2017, all new or revised L'Oréal products[2] have been evaluated with SPOT and in 2019, 85% showed an improved profile.

Calculating the product environmental footprint of a L'Oréal product is a way of accurately determining its impact on **14 environmental** factors such as greenhouse gas emissions, water scarcity, ocean acidification and biodiversity.

These impacts are measured at every stage of a **product's life cycle**. The impact is calculated by looking **not only** at **sourcing, production and transportation, but also usage and packaging recyclability**. For example, the water used in the production cycle, the percentage of recycled plastic used in the packaging and the CO_2 emissions generated by heating water in the shower all enter into the calculation.

In the case of cosmetics, the carbon and water footprints are the most important impact factors.

Thus, L'Oréal communicates the **overall environmental score**, as well as the detailed **carbon** and **water footprints** of its marketed products. The present document sets out:

- The methodologies that have been developed to calculate and communicate as a score three key indicators of product environmental performance, so as to allow consumers to compare products offering the same type of cosmetic benefit and be able to select the product with the lowest environmental footprint.
- The labelling rules that require complementary information to be provided on product manufacturing conditions, packaging profile and product social impact.

(1) Ganaël Bascoul, Koen Boone, Anne-Marie Boulay, Andreas Ciroth, Ian Fenn, Dominique Gangneux, Virginie Raisson, Sarah Russo Garrido, Tomas Rydberg, Greg Thoma, Alessandra Zamagni.
(2) Except recent acquisitions and products produced outside of L'Oréal facilities references.

02. CALCULATION OF ENVIRONMENTAL INDICATORS

Three environmental indicators were retained to communicate the level of environmental performance of our products:

- Overall Environmental Impact
- Carbon Footprint
- Water Footprint

These three indicators are based on the **environmental impact assessment methodology** which was defined between 2014 and 2016 to evaluate the reduction of product impact, and deployed in all brands as of 2017, so as to be compliant with our commitment to improve our product impact and offer the possibility for product developers to monitor progress.

L'Oréal's vision to develop and to offer consumers products with an improved environmental or social profile was made public in 2013 by L'Oréal CEO, Jean-Paul Agon through the following two "Sharing Beauty With All" (SBWA) objectives:

- By 2020, we will innovate to ensure that 100% of new or renovated products have an improved environmental or social footprint[3].
- By 2020, we will empower L'Oréal consumers to make sustainable consumption choices[4].

Both the Environmental and Social Product Impact Labelling, designed to help consumers make more sustainable consumption choices, and SPOT (Sustainable Product Optimisation Tool), an internal tool used by L'Oréal product managers to measure progress, are based on the same environmental impact assessment methodology.

[3] "Every time we invent or renovate a product we will improve its environmental or social profile against at least one of the following criteria: the new formula reduces the environmental footprint; the new formula uses raw materials that are sustainably sourced or that or derived from Green Chemistry; the new packaging has an improved environmental profile; the new product a positive social impact." 2013 SBWA Program Booklet.
[4] "We will use a product assessment tool to evaluate the environmental and social impact of 100% of new products and all brands will make this information available to allow consumers to make sustainable lifestyle choices" 2013 SBWA Booklet.

Environmental impact assessment methodology

This methodology is in line with the European PEF (Product Environmental Footprint) principles(5), and was used as a basis for the development of SPOT that was launched in 2016 and deployed in 2017 worldwide for all brands.

A METHODOLOGICAL FRAMEWORK BASED ON LIFE CYCLE ASSESSMENT

The methodology is applicable to all L'Oréal cosmetic products. In general, a cosmetic product is made up of a formula and its packaging. In some cases, accessories may be sold together with cosmetic products, such as gloves, combs, etc. Most of the accessories are included in the scope of the assessment with the exception of electronic devices.

L'Oréal's methodology is based on the **Life Cycle Assessment (LCA)** approach in order to ensure the full impact of a product from raw materials to end of life is taken into account and give product developers tangible levers to improve a product's environmental and social footprint.

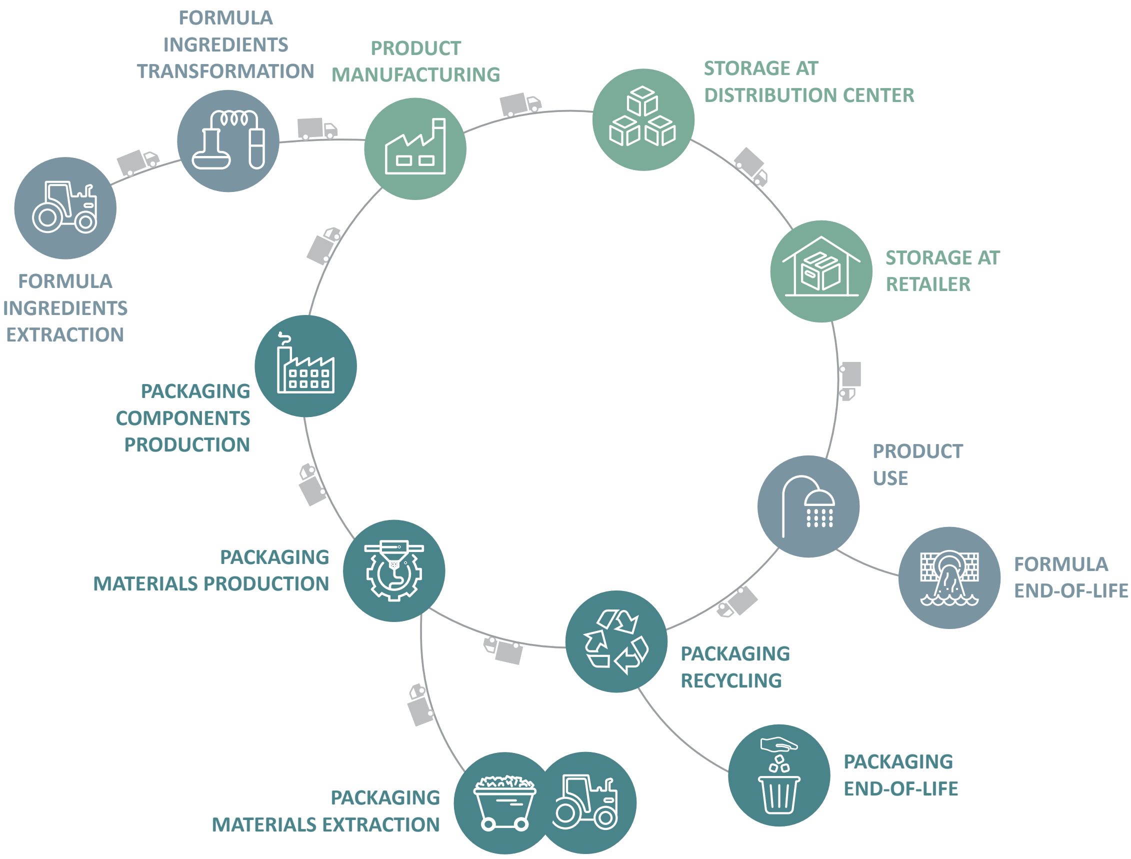
The framework is the current work being carried out through the European Commission initiative on PEF. Under this initiative, specific guidelines are developed aiming at harmonising indicators used for product environmental assessment as well as rules on how to calculate them. While no cosmetic product categories were selected to be part of the official PEF experiment, a "shadow" group for shampoos following the same approach was initiated, led by the professional association Cosmetics Europe. Guidelines developed through this "shadow" group(6) and a scientific publication(7) have also been used as a basis for SPOT environmental assessment methodology.

Reference methodologies and databases are still under development at the European level and are not always applicable to cosmetic products. Consequently, they had to be adapted to our products.

(5) The PEF describes the Life Cycle Analysis (LCA) principles and how to use them to measure a product's environmental footprint. European Commission – Joint Research Centre (2012): Methodology for environmental assessment: "PEF methodology – final draft "Product Environmental Footprint (PEF): Guide of 17 July 2012 (guide for SPOT development between 2014 and 2016).
https://ec.europa.eu/environment/eussd/pdf/footprint/PEF%20methodology%20final%20draft.pdf
(6) Cosmetics Europe (2017): Study into the development of Product Environmental Footprint Category Rules (PEFCR) for Shampoo: Explanatory Document and five reports listed in Annex II of the Explanatory Document.
(7) Golsteijn L., Lessard L., Campion J.F., Capelli A., D'Enfert V., King H., Kremer J., Krugman M., Orliac H., Roullet Furnemont S., Schuh W., Stalmans M., Williams O'Hanlon N., Coroama M. (2018): Developing Product Environmental Footprint Category Rules (PEFCR) for shampoos – The basis for comparable Life Cycle Assessments, Integrated Environmental Assessment and Management - Volume 14, Number 5 - pp. 649–659.
https://setac.onlinelibrary.wiley.com/journal/15513793

The environmental assessment calculates the impact of a product over its entire life cycle. It takes into consideration the value chain of a cosmetic product, together with environmental methodological references, and uses the life cycle diagram in Figure 1.

FIGURE 1: LIFE CYCLE STAGES OF A COSMETIC PRODUCT*



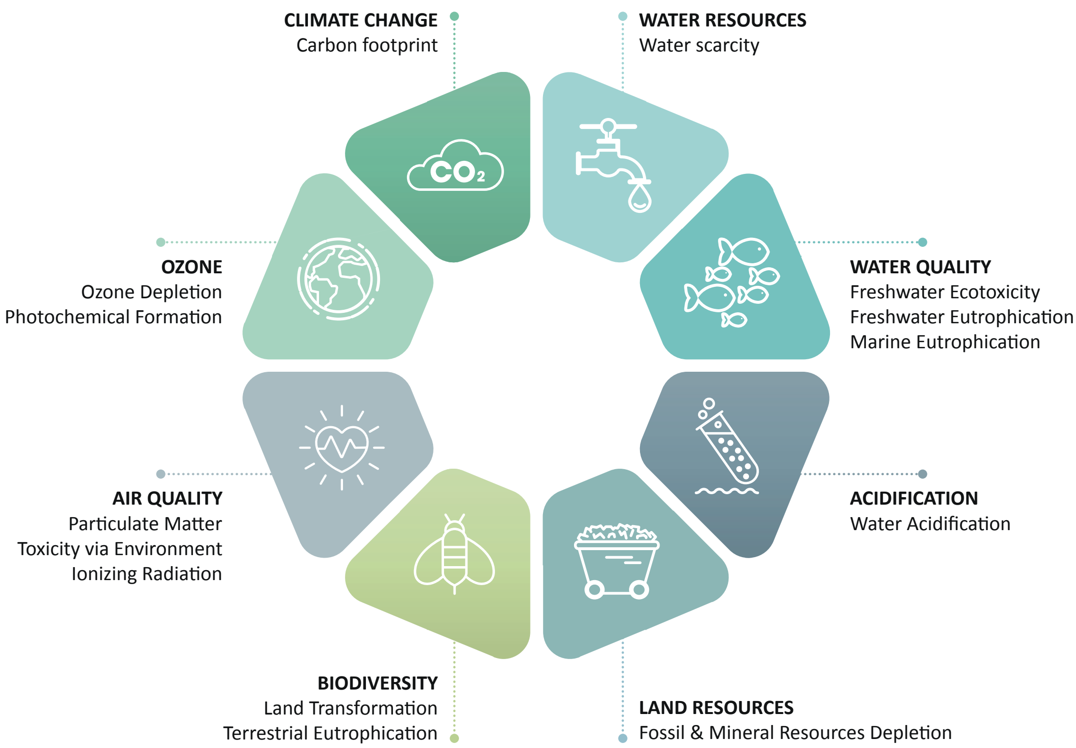
* Environmental impacts at the different stages of the product life cycle can be linked to the formula (grey circles), the packaging (dark green circles) or the finished product manufacturing and distribution (light green circles).

ENVIRONMENTAL IMPACT FACTORS

The environmental impact factors selected as part of the SPOT tool are in line with:
• The European Commission's Product Environmental Footprint (PEF) guidelines for environmental impact assessment[8];
• Product Environmental Footprint Category Rules (PEFCR) "shadow pilot project" for shampoo products developed by Cosmetics Europe[9].

In line with PEF guidelines, **14 impact factors are currently taken into account**. These impact factors, shown in Figure 2 by impact category and described in Table 1, provide an overall and consistent overview of potential cosmetic environmental impacts. However, a few modifications/adaptations were made on the impact assessment methodologies for some of the factors in order to either better adapt to the specificities of cosmetic products, such as freshwater ecotoxicity, or to anticipate foreseeable methodological improvements, such as water scarcity.

FIGURE 2: CATEGORIES OF ENVIRONMENTAL IMPACT FACTORS COVERED



[8] European Commission – Joint Research Centre (2012): Methodology for environmental assessment: "PEF methodology – final draft "Product Environmental Footprint (PEF): Guide of 17 July 2012 (guide for SPOT development between 2014 and 2016).
https://ec.europa.eu/environment/eussd/pdf/footprint/PEF%20methodology%20final%20draft.pdf
[9] Cosmetics Europe (2017): Study into the development of Product Environmental Footprint Category Rules (PEFCR) for Shampoo: Explanatory Document and five reports listed in Annex II of the Explanatory Document.

TABLE 1: DESCRIPTION OF THE 14 ENVIRONMENTAL IMPACT FACTORS USED

IMPACT FACTORS	METHODOLOGIES PROPOSED	UNITS	PEF COMPLIANCE
Climate Change	IPCC2007, 100 years	kg CO_2 - eq	Yes
Water Resources Water Scarcity (Water depletion)	AWaRe	L of water - eq	Not yet. However the AWaRe method has been developed with the objective of consensus, and is expected to be the PEF–recommended method for Water Scarcity assessment
Water Quality – Freshwater Ecotoxicity	For emissions of formula in water at the end of life: custom method from L'Oréal based on USEtox Framework For other emissions: USEtox	CTUe (1)	No, since the Effect Factor is different than the one applied in USEtox Yes, USEtox is the PEF–recommended method for assessing ecotoxicity footprint
Water Quality - Freshwater Eutrophication	EUTREND model	kg P - eq	Yes
Water Quality - Marine Eutrophication	EUTREND model	kg N - eq	Yes
Acidification Water Acidification	Accumulated Exceedance model	mol H+ - eq	Yes
Land Resources Fossil & Mineral Resources Depletion	CML2002 (ADP, reserve base)	kg Sb - eq (2)	Yes
Biodiversity - Land Transformation	Soil Organic Matter (SOM) model	kg C deficit	Yes
Biodiversity - Terrestrial Eutrophication	Accumulated Exceedance model	mol N - eq	Yes
Air Quality - Particulate Matter	RiskPoll	kg PM 2.5 - eq (4)	Yes
Air Quality - Toxicity via Environment	USEtox	CTUh (3)	Yes
Air Quality - Ionising Radiation	Human Health effect model	kBq U235 - eq	Yes
Ozone Ozone Depletion	EDIP model based on the ODPs of the World Meteorological Organization (WMO) over an infinite time horizon	kg CFC11 - eq	Yes
Ozone Photochemical Formation	LOTOS-EUROS model (Van Zelm et al., 2008 as applied in ReCiPe)	kg NMVOC - eq (5)	Yes

(1) CTUe: Comparative toxic unit for ecotoxicity
(2) Sb: Antimony
(3) CTUh: Comparative toxic unit for human toxicity
(4) PM2.5: Particulate matter with an average aerodynamic diameter of 2.5 μm
(5) NMVOC: Non-Methane Volatile Organic Compound

AGGREGATION OF IMPACT FACTORS

Whether we are aiming to make SPOT an evaluation tool that can support decision-making and allow for reporting on product portfolio improvement, or seeking to enable consumers to compare products, it is necessary to **aggregate the 14 environmental impact factors into a single environmental footprint**. This is carried out in two stages.

Step 1: Normalisation

The 14 impact factors with specific units are transformed into footprints (without unit) by normalisation to be able to aggregate the impacts of the formula including the use phase, packaging, impacts associated with manufacturing and the upstream/downstream supply chain, in order to calculate the overall environmental footprints of the finished product.

Normalisation is a methodology that allows comparison of each impact factor to a reference value in order to determine to what extent each individual factor is important compared to this reference (e.g. human activities, European production, European consumption, etc.). The reference values retained for normalisation of impact factors in our methodology come from data published by the European Commission (EC) – Joint Research Centre (JRC): European Domestic impacts (EC-JRC EU27 (2010)), per person[10].

Step 2: Weighing

These 14 environmental footprints (without unit) derived from normalisation are weighed, before aggregation, taking into account the relative criticality of each type of impact compared to the others. **They are weighed according to the Planetary Boundaries**[11] concept which is strongly supported by the scientific community. The idea is to assess environmental impacts in terms of the Earth's thresholds, the limits of the safe space in which the planet may remain a habitat suitable for human development.

The Planetary Boundary weighing values, based on previous work done by Bjørn et al. (Bjørn and Hauschild, 2015) and published also by the EC – JRC, were completed (3 reference values missed) and improved before implementation in our methodology[12].
The 14 normalisation and weighing values are presented respectively in Tables 2 and 3.

[10] Benini L., Sala S., Pant R. (2014): Normalization and weighting factors for testing, EC-JRC, version 0.1.1 of 15 December 2015; as reported in JRC Technical Report EUR 26842 EN: Normalisation method and data for Environmental Footprints.
https://publications.jrc.ec.europa.eu/repository/bitstream/JRC91531/lb-na-26842-en-n.pdf
[11] Rockstrom J., Steffen W., Noone K. et al. (2009) Planetary boundaries: exploring the safe operating space for humanity, Ecology and Society, Volume 14, Issue 32, Article 32.
Steffen W., Richardson K., Rockström J. et al. (2015) Planetary boundaries: Guiding human development on a changing planet, Science, Volume 347, Issue 6223, Reference 1259855.
[12] Vargas-Gonzalez M., Witte F., Martz P., Gilbert L., Humbert S., Jolliet O., van Zelm R., L'Haridon J. (2019) Operational Life Cycle Impact Assessment weighting factors based on Planetary Boundaries: Applied to cosmetic products, Ecological Indicators, Volume 107, Reference 105498.

TABLE 2: NORMALISATION VALUES OF ENVIRONMENTAL IMPACT FACTORS USED IN SPOT

IMPACT	NORMALISATION VALUE	UNIT
Climate Change	9220.00	kg CO_2-eq per person
Water Scarcity	2.16E+07	L of water - eq per person
Freshwater Ecotoxicity	8740.00	CTUe per person
Freshwater Eutrophication	1.48	kg P-eq per person
Marine Eutrophication	16.90	kg N-eq per person
Water Acidification	47.30	mol H+ eq per person
Fossil & Mineral Resources Depletion	0.101	kg Sb-eq per person
Land Transformation	74,800.00	kg C deficit per person
Terrestrial Eutrophication	176.00	mol N-eq per person
Particulate Matter	3.80	kg PM2.5 eq per person
Toxicity via Environment	0.0005699	CTUh per person
Ionising Radiation	1130.00	kg U235 eq (to air) per person
Ozone Depletion	0.0216	kg CFC-11 eq per person
Photochemical Ozone Formation	31.70	kg NMVOC-eq per person

TABLE 3: WEIGHING VALUES OF ENVIRONMENTAL (NORMALISED) FOOTPRINTS USED IN SPOT

IMPACT	WEIGHING VALUE	UNIT
Climate Change	25.497%	dimensionless (%)
Water Scarcity	1.397%	dimensionless (%)
Freshwater Ecotoxicity	2.314%	dimensionless (%)
Freshwater Eutrophication	8.778%	dimensionless (%)
Marine Eutrophication	1.500%	dimensionless (%)
Water Acidification	1.449%	dimensionless (%)
Fossil & Mineral Resources Depletion	11.125%	dimensionless (%)
Land Transformation	25.427%	dimensionless (%)
Terrestrial Eutrophication	0.829%	dimensionless (%)
Particulate Matter	16.250%	dimensionless (%)
Toxicity via Environment	3.167%	dimensionless (%)
Ionising Radiation	0.040%	dimensionless (%)
Ozone Depletion	0.755%	dimensionless (%)
Photochemical Ozone Formation	1.471%	dimensionless (%)

The 14 impact factors are therefore converted into footprints (without unit) by normalisation, then weighed using the concept of Planetary Boundaries and finally all aggregated together to determine the **overall environmental footprint**.

Indicators for Product environmental Impact Labelling

OVERALL ENVIRONMENTAL IMPACT

This indicator corresponds to the sum of the environmental footprints (without unit) of the finished product stemming from 14 impact factors measured all along the life cycle of the product, per user dose.

CARBON FOOTPRINT

This indicator corresponds to the carbon footprint of the finished product (in g of CO_2 equivalent) all along its life cycle, per user dose of the product and per representative volume (ml) of product in order to be able to compare products with a different user dose within the same PIL product category (cf. § 3).

WATER FOOTPRINT

This indicator corresponds to the sum of the environmental footprints (without unit) of the finished product stemming from 5 impact factors measured using our environmental footprint methodology with the aim of preserving the quantity and the quality of water resources. It is expressed by user dose of the product and per representative volume (ml) of product in order to be able to compare products with a different user dose within the same product category (cf. § 3):

Water quantity

- Water Scarcity

Water quality

- Freshwater Ecotoxicity
- Freshwater Eutrophication
- Marine Eutrophication

Water Acidification

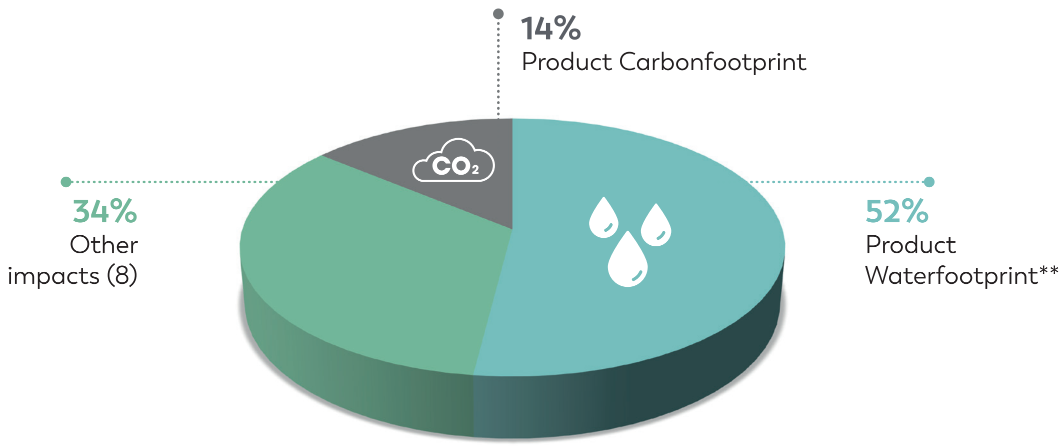
- Water Acidification corresponds to an increase in the concentration of H+ ions in atmospheric water, leading to a drop in pH. Acidic gases such as sulphur dioxide (SO_2) react with water in the atmosphere to form 'acid rain', a process known as acid deposition. When this rain falls, often a considerable distance from the original source of the gas, it causes ecosystem impairment of varying degree, depending upon the nature of the landscape ecosystems. Gases causing acid deposition include ammonia, nitrogen oxides and sulphur oxides. So, this impact factor concerns both water quality (contribution to acid rain) and air quality. In this methodology, this factor, expressed as mol of H + eq, was considered as an impact linked to the quality of water resources and was therefore considered when calculating the water footprint indicator.

Main impact factors

The calculation applied to our product portfolio shows that the Carbon Footprint and the Water Footprint as determined for the labelling represent the two major contributors to the Overall Environmental Impact of our products.

FIGURE 3: CARBON AND WATER ARE THE MAIN IMPACT FACTORS

ENVIRONMENTAL IMPACT BY IMPACT FACTOR - ALL CATEGORIES COMBINED (L'ORÉAL)



* Based on 6 000 + L'Oréal references: 2018 DATA
** Water Scarcity & Water Quality (water eutrophication, marine eutrophication, water ecotoxicity) + Water Acidification

In addition, by providing information related to climate change and water resources, we are addressing two major environmental issues which are priorities for consumers today.
This is the reason why we have decided to communicate three indicators:
• Overall Environmental Impact (14 impact factors)
• Carbon footprint
• Water footprint

While biodiversity is not reported as a footprint category, 6 out of the 14 impact factors used are closely related to effects on biodiversity. What's more, biodiversity impact is included in the Planetary Boundaries methodology.

03. ENVIRONMENTAL INDICATORS LABELLING

Product category definition

Our ambition is to inform consumers about the environmental and social impact of L'Oréal products to enable them to compare products offering the same services, and thereby to make conscious consumption choices. This involves both defining product categories and ensuring that consumers are in a position to compare and switch from one product to another with the same 'beauty function' (e.g. shampoo, conditioner) in light of their environmental impact. In line with this consumer-centric objective, we pre-defined product categories based on the largest possible aggregate of products without leading to irrelevant comparison. We drew on our Consumer & Market expertise to guarantee consumer relevance for the grouping process. Several usage and attitudes studies converged with decades of product evaluation tests which were instrumental in identifying which products could be considered as offering distinct options for a common beauty function or benefit.

In line with these principles, our beauty product portfolio has been divided into 30 product categories, in order for our consumers to compare products and consider sustainability when making their decision.

These 30 product categories are presented in Table 4. To date, only 3 categories within hair care have been defined, since pilot initiative before rolling out the labelling to other categories.

Regarding hair care products, we decided to put all shampoos into a single category, since they all offer the same core benefit: cleansing the hair, even if some may deliver cleansing and treatment, or cleansing, treatment and antidandruff functions. In addition, the different product functions are clearly defined. We grouped rinse-off conditioners and masks together because they are both mainly used for detangling and conditioning, whereas leave-in treatments and oils mainly provide care and styling benefits. What's more, a large majority of women and men use leave-in treatments or oils after using a conditioner. This is why they are both in a distinct category. We decided to isolate dry shampoos as they address a different core benefit compared to rinse-off shampoos; only one part of the dirt (sebum) is absorbed, allowing the user to postpone using a rinse-off shampoo, rather than replace it. Lastly, the hair care category groups together all scalp treatments.

We will follow the same principles for skincare products, with facial cleansers, makeup removers, skincare, tinted skincare, eye care, body suncare and body care.

DEODORANT OVERSEGMENTATION

SEGMENTATION OF CHOICE

In the same vein as shampoos, we intend to group all deodorant and antiperspirant products together for all formats from roll-on to aerosols. Associated with the selected scoring methodology (cf. § 3.c), this provides a good distribution of products across the various level of impact and is a key element in helping consumers make more sustainable choices. Body cleanser, shower gels and solid soap for body are joined in a unique category, whereas liquid and solid soaps for hands will be joined in another category. Perfumes and rinsed shaving products will make up two other categories.

TABLE 4: SEGMENTATION OF PRODUCT CATEGORIES

HAIR COLOR	STYLING & FORM	HAIR CARE	SKIN CARE	MAKE UP	HYGIENE FRAGRANCE
Coloring	Styling	**SHAMPOO** (Including anti dandruff)	Face wash (Including scrub)	Eye mascara	Antiperspirant / deo
Bleach	Longlasting styling	**CONDITIONER & MASK**	Make-up removers	Lip	Body cleansing (Shower gel / scrub)
		LEAVE-IN & OIL	Face care	Eye line, khol, brow	Perfume
		Dry shampoo	Tinted face care / bb cream	Eyelids	Rinse-off shaving
		Scalp treatment	Eye care	Nail polish	Hand-cleanser
			Body sun care	Foundation	
			Body care	Teint blush	
				Teint concealer	
				Powders	

DEFINED CATEGORY SEGMENTATION

Forecast category segmentation

In addition to the evaluated impact reported under a metric score, educational content has been developed to highlight qualitative information regarding the impact of beauty products. For example, consumers will be informed about the carbon emissions and water impact associated with the use of a rinse-off conditioner. Providing this information to consumers will enable them to take action to reduce their environmental footprint. For example, in the case of a rinse-off product, consumers will be told about the CO_2 and water fooptrint associated with heating and using water and provided with the option to use a leave-in product.

In most of the product categories, there are enough L'Oréal product references to make the comparison relevant. For the few categories where this is not the case, we will not be communicating the product's environmental footprint. In addition, preliminary studies conducted in France, the United States and India have proved the relevance of this approach for consumers.

User dose definition

To compare the different products, we have decided to measure and communicate the footprint per user dose which is the most relevant way to compare the impact of two products in a given category, whereas products offering the same beauty function may have different user dose. We also provide information on the impact per volume of formula (per 10ml or per 1ml) to offer a measurement method consumers are familiar with, like the 'Nutritional Information' found on foodstuff packaging. This paragraph explains the methodology and references used to define the user dose per type of product depending on available data (external and internal) and consumer tests (external and internal). These values represent the maximum user dose.

The main reference document we have used to establish user dose is the publication by the Scientific Committee for Cosmetic Safety evaluation (SCCS)[13].

Various European databases, were assessed by researchers to better understand consumer usage habits of cosmetic products (Hall et al.[14][15]). These data were used to determine user dose for most cosmetics products.

For example in the case of shampoo, the user dose was defined as 10.46g of shampoo per use.

Product categories not covered by the SCCS referent document

For the SPOT categories where there is no specific user dose in the SCCS document, we decided to use the L'Oréal internal evaluation data and transform the data into a user dose.

When a median value is not available but just an interval, the maximum value will be taken into consideration to ensure the most conservative estimate in coherence with SCCS methodology.

The user doses for product categories already defined are presented in Table 5.

[13] Scientific Committee on Consumer Safety (2018): The SCCS notes of guidance for the testing of cosmetic ingredients and their safety evaluation, 10th revision

[14] Hall B., Tozer S., Safford B., Coroama M., Steiling W., Leneveu-Duchemin M.C., McNamara C., Gibney M. (2007): European consumer exposure to cosmetic products, a framework for conducting population exposure assessments: Food and Chemical Toxicology, Volume 45, Issue 11, pp. 2097-2108

[15] Hall B., Steiling W., Safford B., Coroama M., Tozer S., Firmani C., McNamara C., Gibney M. (2011): European consumer exposure to cosmetic products, a framework for conducting population exposure assessments Part 2: Food and Chemical Toxicology, Volume 49, Issue 2, pp. 408-422

TABLE 5: SINGLE DOSE WEIGHT FOR THE FIRST CATEGORIES TO BE COMMUNICATED

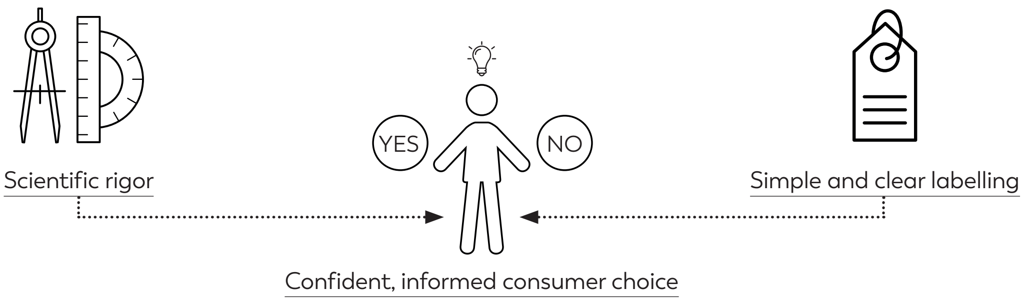
PRODUCT CATEGORY	PRODUCT	SINGLE DOSE (G)	DATA REFERENCE
Shampoo	Shampoo	10,46	SCCS[13]
Conditioner and mask	Conditioner and mask	14	SCCS[13]
Leave-in and Oil	Leave-in	14	SCCS[13]
	Oil	14	SCCS[13]

[13] Scientific Committee on Consumer Safety (2018): The SCCS notes of guidance for the testing of cosmetic ingredients and their safety evaluation, 10th revision

Scoring methodology

In addition to being scientifically robust (cf. S2), the scoring of products should be understandable for consumers and perceived as credible to empower them to make more sustainable consumption choices

FIGURE 4: SCORING OBJECTIVES



The goal was to attribute a score using a five-letter classification system (from A to E) for each indicator (overall impact, carbon and water footprints).

To classify the various products according to their impact, a linear bounded scale method was selected. Under this approach, the 10% of products with the lowest footprint per user dose would be categorised as Class A and the 10% with the highest footprint would be categorised as Class E. The remaining products were assigned to either category B, C or D. These categories were defined using fixed intervals between the bottom 10% and the top 10% scores. Because the intervals for B, C and D are fixed in terms of product impact values, the number of products in each interval will vary.

These classes are in line with the recommendation of the French Labelling initiative and compliant with the Ecolabel methodology which ensures that the most environmentally friendly products represent 10% to 20% of the products available on the market.

https://www.ecologique-solidaire.gouv.fr/laffichage-environnemental-des-produits-et-des-services#e3)

SCORING CLASSES DETERMINATION FOR EACH INDICATOR

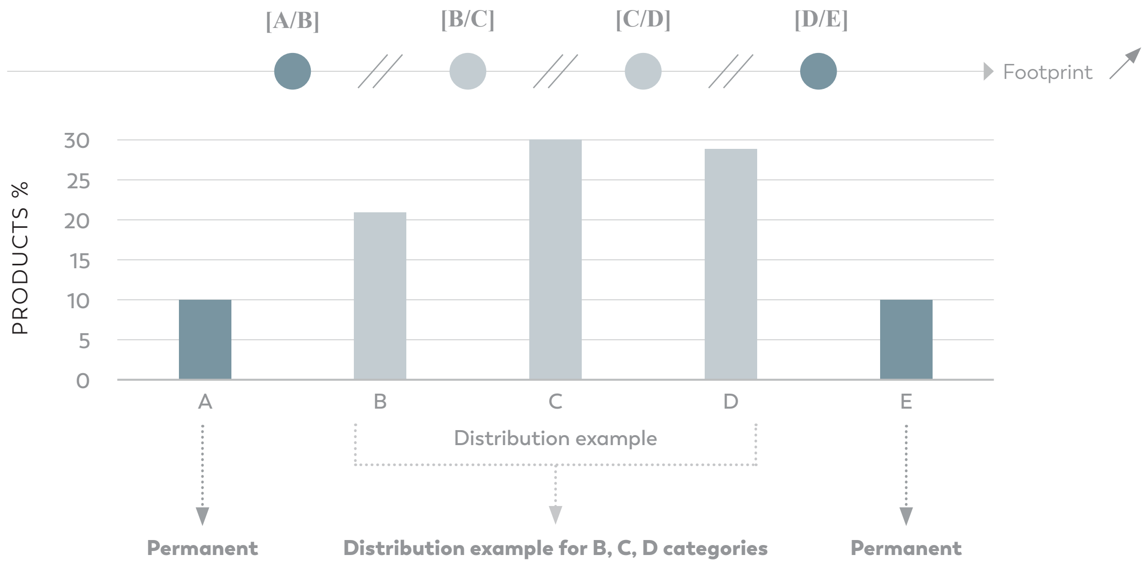
DETERMINATION OF A & E INTERVALS

Class A contains top 10% products with the lowest footprint
Class E contains 10% products with the highest footprint

The three other classes, (B, C, D) would be at an equal interval of classes A and E.

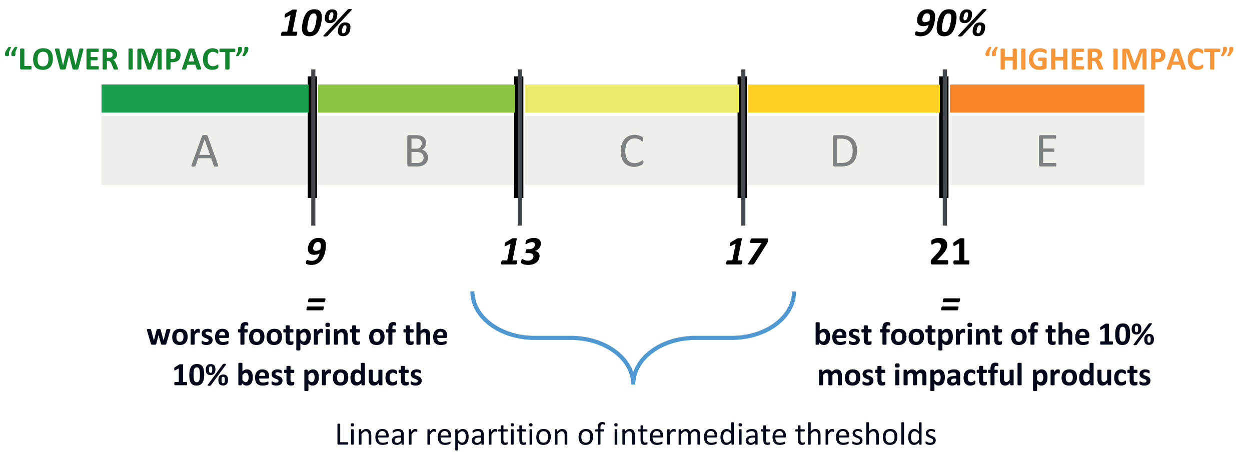
DETERMINATION OF CATEGORIES B, C & D INTERVALS

Determination of categories B, C & D by calculating equal values intervals between classes A & E



SCORING PRINCIPLES - LINEAR SCALE

… < 9 < *10* < 11 < 18 < …

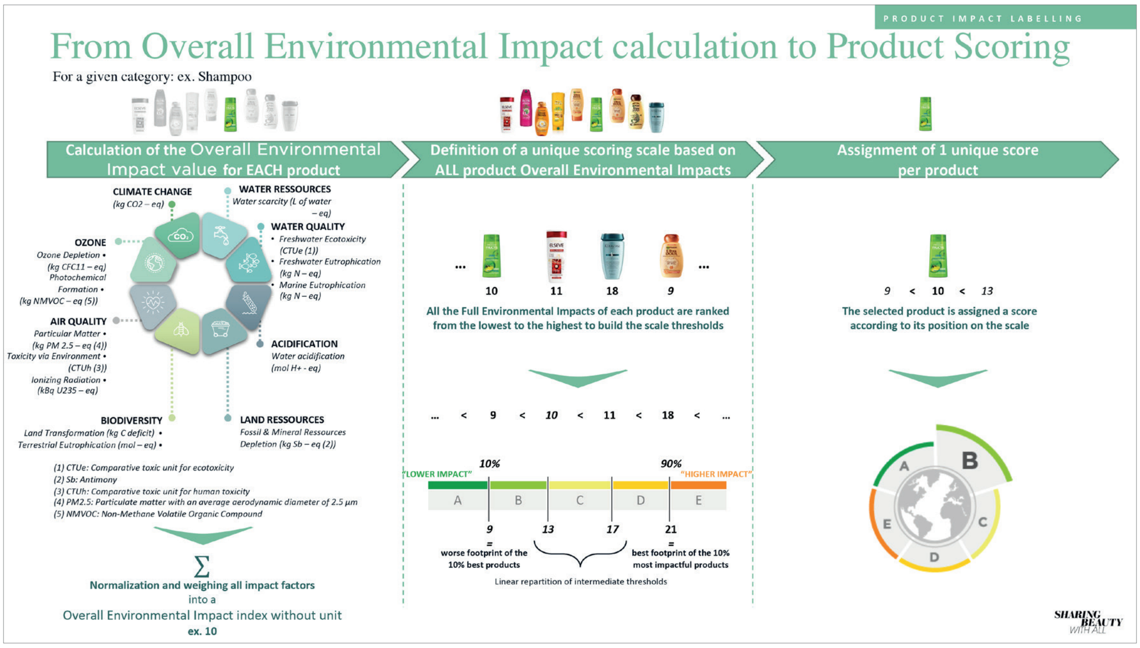


FROM OVERALL ENVIRONMENTAL IMPACT CALCULATION TO PRODUCT SCORING

This method presents several key advantages compared to other methods which have been tested:

- Simple to understand for consumers
- Enables the comparison between different types of format having a common core benefit (for example roll-on vs aerosol).
- Provides satisfactory discrimination in categories where products are very similar (shampoos for example).

The choice of the linear bounded scale methodology for scoring classes is therefore closely related to the definition of product categories for cosmetic products.

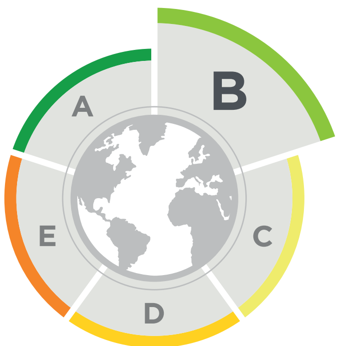


Product Labelling

The three environmental indicators will be displayed as follows:

FIGURE 5: EXAMPLE OF PRODUCT LABELLING

Overall environmental impact



Carbon footprint

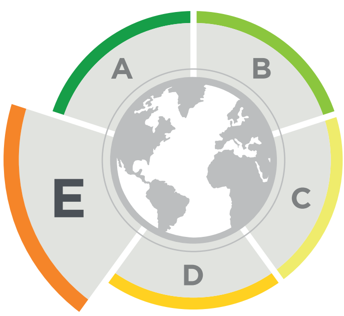
84g(1) per usage dose
60,3g per 10ml

Water footprint

6,1(2) per usage dose
4,4 per 10ml

(1)Grams of CO_2 equivalent ("shampoo" category average = 100g)
(2)Water index including water quality + water scarcity (m^3) ("shampoo" category average = 7,7)

Overall environmental impact



Carbon footprint

84g(1) per usage dose
60,3g per 10ml

Water footprint

17,8(2) per usage dose
12,7 per 10ml

(1)Grams of CO_2 equivalent ("shampoo" category average = 100g)
(2)Water index including water quality + water scarcity (m^3) ("shampoo" category average = 7,7)

04.
ADDITIONAL INFORMATION

FIGURE 6: "PRODUCT ENVIRONMENTAL AND SOCIAL IMPACT LABELLING" PIL

Manufacturing conditions

We consider a manufacturing site to be 'responsible' when it continuously reduces its CO_2 emissions, water consumption and waste production, contributes to the development of local employment (especially for people with disabilities) and gives access to training, irrespective of whether the site belongs to L'Oréal or a subcontractor.

The labelling provides two key indicators for the site that manufactured the product.

Manufacturing conditions	
Made in a responsible plant.	
Waste recovery:	100%
Renewable energy:	92%

Part of waste recovery (%):

Definition: *waste that is either reused, recycled, or recovered with energy generation (such as energy used for urban heating).*

Part of renewable energy (%):

Definition: *renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.*

Since 2005, we have reduced the water consumption of our Industrial sites by 51% (in litres per finished product), their CO_2 emissions by 78% (in tonnes), and waste production by 35% (in grammes per finished product), 97% of which is recovered (from 2019).

Packaging profile

As part of a long-term sustainable packaging strategy (3Rs = Respect-Reduce-Replace) and in compliance with our 2020 commitments, L'Oréal product packaging is optimised in terms of weight and size, it also uses a growing percentage of PCR (Post-Consumer Recycled) materials. L'Oréal also promotes new ways of consumption by developing refillable or rechargeable products and by providing consumers with sorting advice.

In addition to indicating the impact of packaging as part of the Product Overall Environmental Assessment, we will provide information about four features of packaging design, which are considered important by consumers:

Environmental impact of the packaging

% of cardboard/paper certified FSC or PEFC:	100%
% of bottle made of recycled material[(3)]:	74%
Recyclable[(4)]:	yes
Refillable or rechargeable:	no

Part of FSC/PEFC certified paper or cardboard (%):

Definition: *Packaging made of materials from responsibly managed forests where biodiversity is protected with the independent certification from FSC (Forest Stewardship Council) or PEFC (Programme for the Endorsement of Forest Certification).*

Part of recycled material in primary packaging (%):

Definition: *portion of the product's material (primary container) that is recycled from waste, at the same quality as virgin material (petrol-based or non-petrol based raw materials).*

Packaging item recyclability: yes/no

Definition: *by default we base the assessment on the Ellen MacArthur Foundation definition: "A packaging or packaging component is recyclable if its successful post-consumer collection, sorting, and recycling is proven to work in practice and at scale."*

As recycling instructions may vary locally, our labelling may be adapted to local market specificities.

Refillable or rechargeable: yes/no

How do we calculate the environmental impact of a refillable product?

A growing number of products developed by L'Oréal are designed to be rechargeable or refillable. As rechargeable packaging is designed to last longer, the "container" (base packaging) may have a higher impact than the packaging of non-rechargeable products when compared on a single product unit basis. As a result, the environmental footprint of rechargeable and refillable products is assessed by looking at the impact of one full product plus 2 refills divided by three.

The environmental footprint of refillable products is assessed by looking at the impact of one full product plus 2 refills divided by three. The information will be transparent for the consumer, thus encouraging him/her to use at least two refills for each base packaging unit.

We are currently working on a methodology to evaluate the impact of refillable products available in store, for example refill fountains.

Social impact

Social impact is not part of the environmental score, but product labelling will provide two key pieces of information that reflect the attention we pay to our suppliers.

- L'Oréal suppliers who have contributed development of the product have guaranteed decent working conditions.
- Number of suppliers committed to inclusive projects having contributed to the product, if any.

We select our suppliers according to strict social standards, which are verified by external auditors companies. We also encourage them to go further and to develop projects with a positive social impact: "Solidarity Sourcing" projects.

Social impact of the product

The ingredients and components of this product are sourced from suppliers committed to respect the fundamental principles of the UN on labor standards.

3 suppliers committed to the social inclusion of people from vulnerable communities contributed to making this product.

The 4 principles of the UN global compact on labour rights:

- *The right of workers to associate freely and engage in collective bargaining*
- *No forced or compulsory labour*
- *No child labour*
- *No discrimination among workers*

All direct suppliers who have contributed to the product have signed an ethical commitment[16] which includes respecting the UN Compact.

Suppliers committed to social inclusion

Ingredient or packaging suppliers that provide access to work and a decent wage to people from socially and/or economically vulnerable communities.
These suppliers support at least one Solidarity Sourcing project.

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[16] Access to Suppliers Commitment Letter (URL address on loreal.com)

IN 2019, L'ORÉAL GROUP'S SOLIDARITY SOURCING PROGRAMME ENABLED 70,912 PEOPLE FROM UNDERPRIVILEGED COMMUNITIES TO GAIN ACCESS TO A JOB AND A DECENT WAGE.

L'Oréal's suppliers are working for local communities in their respective country (which may not be precisely the one wherein the product is manufactured and sold). Working for local communities can address a wide range of issues such as:

- Fair sourcing
- Women's empowerment
- People with disabilities
- Senior workers
- Long-term unemployed
- Refugee & asylum seekers
- Minorities
- Veterans
- Other socially and economically vulnerable people
- Local employment in vulnerable zones
- Work integration social enterprise
- Small business
- Diverse* suppliers "owned certified" business
  (*women, minority, LGBTQ+, veterans, disabled)
- Natural disaster
- Specific local know-how.

How do we count suppliers "committed in social inclusion"?

- A supplier is declared as a "committed supplier" as soon as they have implemented at least one Solidarity Sourcing project.

- Specific for Raw Materials (RM) :
  - For a given product, two different Raw Materials sourced from two suppliers belonging to the same company and beneficiating from the same Solidarity Sourcing project(s) are valorized as 1 committed supplier.
  - For a RM that can be supplied by different suppliers:
    . As soon as one of these suppliers doesn't have any Solidarity Sourcing project > We count 0 committed supplier (even if other suppliers for this RM have projects, even if the supplier whose manufacturer is declared as "representative" has a project)
    . Only if all potential suppliers for this RM entering in a product's composition have Solidarity Sourcing project(s) > We valorize 1 committed supplier (as it is the same RM coming from one of the supplier listed)

This indicates only direct suppliers, but the projects that are supported through solidarity sourcing may concern other suppliers in the product value chain.
If no supplier contributing to the product has initiated any "Solidarity Sourcing" project, the paragraph will not appear on the labelling.

To find out more about L'Oréal's social impact in the supply chain:

The Group's subcontractors and its suppliers of raw materials, packaging, production equipment and POS advertising/ promotional items and materials located in countries identified as being at risk according to Verisk Maplecroft are subject to a mandatory social audit (and prior to any inclusion on the supplier panel) aimed notably at ensuring compliance with the applicable laws, Human Rights and labour law. This audit also covers employee safety and working conditions, and the way in which the environmental impact of activities is taken into account.

Social audits are carried out on behalf of L'Oréal by independent external service providers.

The initial audits and re-audits triannual audits are financed by the Group. Follow-up audits that make it possible to verify the effectiveness of the action plans are paid for by the suppliers.

Ten areas are audited:
- Child labour
- Forced and compulsory labour
- The environment, health and safety
- Compliance with the laws relating to trade unions
- Non-discrimination
- Disciplinary practices
- Harassment or a hostile working environment
- Due payment of remuneration and benefits
- Working time
- Relations with subcontractors.

L'Oréal's social audit is based to a great extent on the internationally recognised SA 8000 standard. The Group has also imposed more stringent criteria, particularly with regards the minimum age for child labour. It is set at 16 years of age for all employees working for suppliers, a higher age limit than the minimum age required by the Fundamental Conventions of the International Labour Organization (ILO).

2019 KEY FIGURES :

- 8,152 supplier sites have been subject to social audits since the reporting tool was rolled out in 2006:
- 1,562 audits (16) were carried out in 2019, and a total of 12,400 audits have been conducted since 2006;
- Follow-up audits, which verify the correction of nonconformities, represent 21% of the total number of audits conducted in 2019 and allowed 74% of the suppliers audited to improve their results.
- Thus 93% of supplier production sites requiring audits have been audited at least once.

05. UPDATES

Environmental impact product data and thresholds of environmental indicator scoring classes (A to E) for each product category will be updated every 5 years.

L'ORÉAL