MANAGEMENT REPORT OF THE BOARD OF DIRECTORS: THE GROUP

Environment and sustainability

1. GENERAL ENVIRONMENTAL POLICY

One of the consequences of the public health crisis that continued to rage in 2021 has been to raise public expectations worldwide as to the need to protect biodiversity and combat global warming. With a fourth value of commitment (to inclusiveness and solidarity and to the environment) now added to the Group's three enduring values of creativity, excellence and entrepreneurial spirit, the Group unveiled its new environmental roadmap, LIFE 360 (LVMH Initiatives For the Environment 360), at its Shareholders' Meeting on April 12, 2021. This new phase in the Group's environmental policy, which itself dates back as far as 1992, follows on from LIFE 2020, LVMH's program of commitments covering the period 2016-2020. To speed up progress, LIFE 360 includes 2023, 2026 and 2030 targets for all the Group's Maisons, with the aim of nurturing the emergence of a new vision for luxury as a balanced combination of nature on the one hand and creativity and artisanal excellence on the other.

1.1 Organization of the Group's environmental approach

1.1.1 Governance

Reporting directly to Antoine Arnault, a member of LVMH's Board of Directors, the 10-member Environmental Development Department has the following objectives:

- implement the four action plans (creative circularity, traceability, biodiversity and climate) of the LIFE (LVMH Initiatives For the Environment) program across all Maisons;
- guide Group companies' environmental policies, in compliance with the LVMH Environmental Charter;
- report on the Group's environmental strategy through a dedicated report and specific impact indicators;
- identify world-class environmental analyses, tools and methodologies and share them with the Maisons;
- build the environment into design processes and nurture innovation;
- carry out forward-looking analysis to help the Maisons safeguard against risks and seize opportunities in each business group: Wines and Spirits, Fashion and Leather Goods, Perfumes and Cosmetics, Watches and Jewelry, and Selective Retailing;
- train employees and raise environmental awareness at every level of the organization;
- share LVMH's environmental experience at international summits and build proactive partnerships;
- uphold the Group's reputation and contribute to its non-financial performance.

Each Maison also draws on its own in-house expertise in environmental matters. These experts make up a network of nearly 200 Environment Officers from Maisons, known as the Environment Committee, which meets several times a year, in particular to share and discuss best practices.

In 2003, the Group joined the United Nations Global Compact, which aims to promote responsible corporate citizenship through business practices and policies based on ten universal principles, including the following three relating to the environment:

- adopt a precautionary approach to environmental challenges;
- promote greater environmental responsibility;
- encourage the development and widespread adoption of environmentally friendly technologies.

In addition, LVMH's ability to drive continuous improvement is closely tied to the Group's success at making sure that its 175,700 employees understand their role as active participants in its approach to environmental matters. The Environment Department thus works to inform, train and raise awareness among employees with regard to the conservation of natural resources and biodiversity, as well as climate change. In 2016, the Group established an in-house Environment Academy to serve this role. The Academy designs training programs based on the major objectives of the LIFE program, using a range of learning materials – including face-to-face training sessions, e-learning modules and virtual classes – covering a large number of subjects, from sustainable design to environmental audits. Sustainable design training was delivered in 2021 focusing on products, stores and also biodiversity. In addition, almost all Maisons continued with their employee environmental training and awareness programs. These programs totaled 20,106 hours. To optimize the environmental performance of its stores, LVMH runs a program of monthly webinars for the Store Planning and Environment community mainly focusing on sustainable building design in accordance with Group and LIFE 360 guidelines.

In 2021, the Group was included in the main indices based on responsible investment criteria: FTSE4Good Global 100, Euronext Vigeo Eurozone 120 (67/100), S&P (71/100), CDP Climate (A-), CDP Water (A-) and CDP Forests (A-).

1.1.2 Risk identification

In 2021, the analysis of material issues for the Group was updated by mapping the climate impacts of LVMH's operations. The main environmental risks identified at the Group level relate to the following topics:

1. impacts on ecosystems;
2. depletion of natural resources;
3. setting up and maintaining responsible supply chains.

The Group is also exposed to climate-related risks and opportunities.

The policies implemented and their results are set out in the following sections.

The full materiality matrix of risks and opportunities provides detailed information on the following environmental issues relating to the Group's business activities:

	Wines and Spirits	Fashion and Leather Goods	Perfumes and Cosmetics	Watches and Jewelry	Selective Retailing

State of energy resources and climate change	- Grape growing and yield
	- Packaging production
	- Distillation
	- Transportation of products
	- Soil erosion
		- Store lighting and air conditioning
		- Transportation of products and carbon taxes
		- Production of resources needed to manufacture products:
		  - Plant fibers used for textiles (cotton, etc.)
		  - Leather, including exotic leather
		  - Fur
		  - Wool
		- Customer expectations in relation to more sustainable products
		- Renewable energy costs
			- Packaging production
			- Store lighting and air conditioning
			- Transportation of products and carbon taxes
			- Customer expectations in relation to more sustainable products
			- Renewable energy costs
				- Store lighting and air conditioning
				- Renewable energy costs
					- Store lighting and air conditioning
					- Transportation of products
					- Renewable energy costs

Impact on water resources	- Water consumption (vineyard irrigation in Australia, New Zealand, Argentina and California) - Production of effluents containing organic matter during winemaking and distillation	- Water consumption (crocodile farms and tanneries) - Production of effluents containing organic matter - Alternative raw materials	- Water consumption (production and transformation of raw materials)	- Water consumption during the extraction of mineral resources needed to manufacture products - Production of effluents containing mineral matter	

Impact on ecosystems (including deforestation and desertification) and depletion of natural resources	- Production of plant resources needed for other production processes (grape vines, barley, rye, etc.)
	- Protecting biodiversity
		- Production of resources needed to manufacture products:
		  - Plant fibers used for textiles (cotton, etc.)
		  - Leather, including exotic leather
		  - Fur
		  - Wool
		  - Eider down
		- Farming and trapping practices concerning raw materials of animal origin
		- Protecting biodiversity
			- Production of plant resources needed to manufacture products (rose, jasmine, etc.)
			- Protecting biodiversity
				- Extraction of resources needed to manufacture products:
				  - Gems and precious metals
				  - Exotic leather
				- Farming and trapping practices concerning raw materials of animal origin
				- Protecting biodiversity	

Waste production	- Production of residues from winemaking or distillation processes and packaging waste - Circular economy	- Unused raw materials, obsolete and unsold products, window displays and events - Customer expectations in relation to more sustainable products - Circular economy	- Point-of-sale advertising, packaging waste, and obsolete and unsold products - Circular economy	- Scrap metal - Circular economy	- Point-of-sale advertising, packaging waste, and obsolete and unsold products - Circular economy

1.1.3 Environmental expenses

Environmental expenses are recognized in accordance with the recommendations of the Autorité des Normes Comptables, France's accounting standards authority. Operating expenses and capital expenditure are recognized against each of the following items:

- air and climate protection;
- wastewater management;
- waste management;
- soil protection and purification;
- noise and vibration reduction;
- conservation of biodiversity and other environmental protection measures;
- research and development.

In 2021, expenses related to environmental protection broke down as follows:

- operating expenses: 32 million euros (2020: 24.4 million euros);
- capital expenditure: 16.6 million euros (2020: 10.4 million euros).

Provisions for environmental risks amounted to 12.4 million euros as of December 31, 2021. This amount corresponds to the financial guarantees required by law for Seveso upper-tier establishments.

Furthermore, in accordance with Regulation (EU) 2020/852 establishing criteria for determining whether an economic activity qualifies as environmentally sustainable, LVMH has identified those of its activities that qualify as contributing to climate change adaptation and mitigation objectives (see Chapter 6, "Environmental taxonomy").

1.2 The LIFE program

Signed in 2001 by the Group's Chairman, the Environmental Charter is the founding document for LVMH's five main aims with regard to the environment:

- striving for high environmental performance;
- encouraging collective commitment;
- managing environmental risks;
- designing products that factor in innovation and environmental creativity;
- making a commitment that goes beyond the Company.

The Environmental Charter also encourages all Maison Presidents to become directly involved in the approach through concrete actions, and requires each Maison to set up an effective environmental management system, create think tanks to assess the environmental impacts of its products, manage risks, and adopt environmental best practices. The Environmental Charter has guided LVMH's environmental commitments and its program of actions.

1.2.1 Overview of the LIFE program

Launched in 2011, the LIFE (LVMH Initiatives For the Environment) program is designed to reinforce the incorporation of environmental concerns into brand strategy, facilitate the development of new coordination tools, and take into account developments and improvements arising from innovative practices at Maisons.

The Maisons have incorporated the LIFE program into their strategic plans since 2014. The LIFE program was implemented by a Steering Committee at each Maison and is based on nine key aspects of environmental performance:

- environmental design;
- securing access to strategic raw materials and supply chains;
- traceability and compliance of materials;
- suppliers' environmental and social responsibility;
- preserving critical expertise;
- reducing greenhouse gas emissions;
- environmental excellence in manufacturing processes;
- product life span and reparability;
- keeping customers and key stakeholders informed.

1.2.2 The LIFE 360 program

Preparations for the new program

LIFE 2020, the first roadmap resulting from the LIFE program and risk mapping, which in 2016 set out four targets common to all the Maisons, was completed in 2020. A review of the program showed that most of its targets had been met and highlighted future areas for improvement. Preparations for the Group's new program of commitments, drawn up from November 2020 with the intention – shared by the Maisons – of making even faster progress, included analyzing the results of LIFE 2020.

Other work was involved in preparing the new program:

- priorities set jointly with the Maisons and via the various consultative bodies: the LVMH Science Committee; the Future of Luxury Commission (established in July 2020 and made up of leading outside figures from various disciplines); and work sessions with students and young employees;
- updates to the analysis of risk factors;
- analysis of the Sustainable Development commitments made by certain LVMH Maisons. This is the case for Louis Vuitton, which has committed to achieve the following by 2025: set up or maintain responsible supply chains for 100% of its raw materials; map out a climate trajectory approved by the Science Based Targets initiative; and promote circular creativity by committing to sustainable design for all its products. At the end of 2020, Moët Hennessy had made all of its own vineyards in the Champagne region herbicide-free as part of its Living Soils program and plans to do the same by 2028 for its independent grape suppliers;
- LVMH Climate Week, held from December 8 to 11, 2020, offered a week-long program of discussions and meetings with experts on climate and biodiversity-related topics for the Group's 150,200 employees;
- the calculation of the Group's environmental footprint for its entire value chain, including Scope 1, 2 and 3 emissions, covering issues relating to climate change, biodiversity and water;
- analyzing the extent to which LVMH's environmental policy has contributed to the achievement of the United Nations Sustainable Development Goals (SDGs), in particular SDG 3 ("Good health and well-being"), SDG 6 ("Clean water and sanitation"), SDG 9 ("Industry, innovation and infrastructure"), SDG 12 ("Responsible consumption and production"), SDG 15 ("Life on land") and SDG 17 ("Partnerships for the goals");
- securing approval for the prioritization of objectives and their terms of implementation at presentations to members of the Executive Committee and the Ethics and Sustainable Development Committee.

LIFE 360 objectives

LVMH's new LIFE 360 roadmap, the fruit of this work, was unveiled at the 2021 Shareholders' Meeting and presented to the Board of Directors on October 28, 2021. It sets out 2023, 2026 and 2030 targets and charts a course for creating products that embody the Group's environmental ambitions: products that exist in harmony with nature, demonstrate care for biodiversity and the climate and mobilize stakeholders. It is structured around four strategic action plans:

- **Creative circularity**: harnessing the circular economy (sustainable design, repair, reuse and upcycling) and innovation (research into new materials) to fuel creativity, with a target of all new products being sustainably designed by 2030 and having a managed environmental footprint from extraction of materials through to their transformation. Packaging strategy will follow this same trajectory, with a target of zero plastic from virgin fossil oil by 2026.
- **Biodiversity:** the Group's activities are intimately linked to nature. The targets laid down in this action plan are designed to limit impacts and restore to the environment whatever is taken from it: zero sourcing in areas at very high risk of deforestation or desertification; all strategic supply chains to be subject to the most rigorous standards by 2026; a regenerative agriculture plan to restore 5 million hectares of flora and fauna habitat between now and 2030. The Group continues to roll out its Animal Welfare Charter published in 2019 and is in the process of drawing up a dedicated policy to protect water resources.
- **Climate**: LVMH's new carbon trajectory, in line with the Paris Agreement. was approved by the Science Based Targets initiative (SBTi) in December 2021. It aims to achieve a 50% reduction in energy-related greenhouse gas emissions by 2026 (baseline: 2019) and a 55% reduction in Scope 3 emissions per unit of added value by 2030. Actions to achieve these targets are concentrated in four key areas: exclusive use of renewable or low-carbon energy by production sites and stores, an action plan dedicated to green e-commerce, increase in the share of maritime transport for freight, and a supplier carbon footprint plan.
- **Traceability and Transparency:** the action plan aims to roll out dedicated traceability initiatives covering all strategic raw materials by 2030 and tools for sharing environmental and/or social information at product level.

These four strategic action plans are broken down to business segment and individual Maison level. They are accompanied by targets designed to mobilize stakeholders around the LIFE 360 priorities, in particular:

- **employees**, with the aim of designing environmental training programs tailored to the **specific characteristics of the Group's businesses**;
- **customers**, with a target of all new products having a dedicated information system by 2026;
- **strategic suppliers**, with CSR clauses to be included in all contracts and subject to verification by 2030;
- **researchers**, with a dedicated sustainable luxury research and innovation program for 2023.

1.3 2021 reporting scope

The environmental indicator reporting process covered the following scope in 2021:

Production facilities, warehouses and administrative sites *(number)*	**2021**
Sites covered[(a)]	301
Sites not covered[(b)(c)]	145
Total number of sites	**446**

(a) Includes Château du Galoupet and new Bvlgari, Christian Dior Couture and Louis Vuitton sites.
(b) Main components: certain regional administrative sites of Louis Vuitton and Moët Hennessy as well as administrative sites with fewer than 20 employees.
(c) Belmond is included in reporting for indicators relating to energy and associated greenhouse gas emissions; seven hotels, five trains and three boats are excluded.

90% of production sites are covered. The manufacturing, logistics and administrative sites that are not covered by environmental reporting are essentially excluded for operational reasons and their environmental impact is not material. A plan to gradually include them is underway.

The total store floor space used to calculate energy consumption, greenhouse gas emissions and water consumption is as follows, expressed as a percentage of the Group's total store floor space:

	% of Group's total store floor space taken into account in calculating energy consumption and greenhouse gas emissions[(a)]	
	2021	**2020**
Group total	**74**	**73**

(a) The reporting scope does not cover the stores operated under franchise by Fashion and Leather Goods, Perfumes and Cosmetics, and Watches and Jewelry.

Calculations of energy consumption and greenhouse gas emissions also include certain stores operated by all Maisons in the Fashion and Leather Goods, Perfumes and Cosmetics, Watches and Jewelry, and Selective Retailing business groups.

Not including Sephora South East Asia, Rimowa, Cha Ling, Parfums Francis Kurkdjian, Pucci and Parfums Givenchy stores.

For waste production and water consumption, only certain stores operated by DFS and stores operated by the Le Bon Marché group are included.

2. LIFE 360 – CREATIVE CIRCULARITY

2.1 Overview of the Creative Circularity policy

LVMH's Maisons work to limit the impact of their products on the natural environment by taking each product's entire life cycle into account. Through its LIFE 360 strategy, LVMH is bringing together all its Maisons around the concept of creative circularity, based on four convictions:

- inventiveness: selecting innovative new materials such as those that are recycled, bio-sourced, certified and/or derived from regenerative agriculture (see Sections 2.1.1 and 3.1);
- simplicity: selecting the most demanding transformation and manufacturing processes at Maisons' and suppliers' sites to reduce environmental impacts (climate, water, waste, biodiversity) (see Section 2.1.4);
- eternity: guaranteeing long product life by ensuring high quality thanks to expertise in repairs and the art of patina, new technologies such as product recharges, refills and refurbishment, and the promotion of new services (see Section 2.1.3);
- rebirth: helping give materials and products a new lease of life through reuse, recovery, recycling and upcycling (see Section 2.2.2).

These convictions are translated into action plans with tangible targets:

- all new products sustainably designed by 2030;
- zero virgin fossil plastics to be used in packaging by 2026;
- new circular services to be rolled out;
- as key drivers of circularity, Maisons' production sites are also subject to specific targets, for example to roll out certified environmental management systems across all production and logistics sites by 2026. Ambitious policies are also in place covering water consumption, wastewater and general waste.

2.1.1 All products to be covered by a sustainable design process

To meet this sustainable design challenge, the Group and its Maisons have together identified sustainable design criteria encompassing at least the following:

- use of materials that are certified, recycled or derived from regenerative agriculture;
- traceability: knowing the supplier and country of origin for each primary material;
- product life span and end-of-life treatment.

Each business group has tailored these sustainable design criteria to its own specific environmental challenges; tools are currently being rolled out to monitor performance against these criteria and assess each product's environmental footprint:

- Perfumes and Cosmetics: The Maisons have implemented the EFI (Eco-Formulation Index) and the EPI (Environmental Performance Index for packaging). The EFI score spans six dimensions: traceability, clean beauty (with certain substances banned from use), naturally occurring materials, smart formulation to reduce the number of substances used, sustainability, and overall environmental impact. The EPI score takes into account a number of criteria including packaging weight and volume, recycled content, recyclability and refill capability.
- Fashion and Leather Goods: Maisons in the Fashion and Leather Goods business group apply the traceability criteria identified by the Group as well as requiring a minimum of 50% raw materials to be certified, recycled or derived from regenerative agriculture. A sustainability criterion is also currently under development. Testing and rollout of a sector-based tool for tracking indicators and calculating products' environmental footprints began in 2021.
- Wines and Spirits and Watches and Jewelry: Criteria are currently under development.

2.1.2 Zero virgin fossil plastics in customer packaging by 2026

LVMH aims to have stopped using virgin fossil plastics in packaging that reaches customers by 2026. To achieve this target, the Maisons are working to:

- use recycled plastics;
- use bio-sourced plastics;
- replace plastics with other materials.

LVMH has also set the following targets for 2030: 70% of packaging materials used by the Maisons (in packaging that reaches customers) is to be recycled, and all packaging that reaches customers is to be recyclable, compostable or reusable.

2.1.3 Results for new circular services

LVMH's 75 Maisons offer a vast range of opportunities to explore potential new cross-sector circular design practices, a priority action of LIFE 360. From 2021 onwards, these practices will result in new services:

- to make products more sustainable through repairs and refills;
- to donate unsold products to nonprofits, reuse (i.e. use a product for the same purpose for which it was originally designed), recover (i.e. use products and materials now considered as waste) and recycle (i.e. reintroduce waste directly into the production cycle that produced it to completely or partially replace a new raw material);
- to exchange raw and other materials between Maisons through innovative projects.

2.1.4 All manufacturing and logistics sites to have certified environmental management systems by 2026

The Maisons' products are mainly manufactured at 222 production sites and distribution hubs. Reducing their environmental impact and fostering a circular approach also helps shrink products' environmental footprint.

The Group has set a target of having all its sites covered by environmental certification by 2026; this kind of certification is a dynamic, unifying and motivating approach for continuously improving performance in building use. This approach to certification is not new for the Maisons: the LVMH Environmental Charter already requires that they put in place an environmental management system reporting to Executive Management. Hennessy has played a pioneering role in this regard, becoming the world's first wines and spirits company to obtain ISO 14001 certification in 1998.

2.2 Key achievements in 2021: Creative Circularity

2.2.1 Sustainably designed packaging

The Maisons are working on sustainable packaging design to reduce the amount of raw materials used, facilitate recycling and help put a stop to the use of virgin fossil plastics. For example, Parfums Christian Dior is working with Eastman to develop packaging using materials like copolyester produced with molecular recycling technologies.

The quantities of packaging consolidated by the Maisons concern the following items:

- Wines and Spirits: bottles, boxes, caps, etc.
- Fashion and Leather Goods: boutique bags, pouches, cases, etc.
- Perfumes and Cosmetics: bottles, cases, etc.
- Watches and Jewelry: cases, boxes, etc.
- Selective Retailing: boutique bags, pouches, cases, etc.

Packaging used for transport is not included in this breakdown.

The amount of packaging used Group-wide was higher than in 2020 but 5% lower than in 2019. Sustainable packaging design efforts have also resulted in a reduction in the proportion of plastic and an increase in the proportion of glass and paper, as shown by the change in the EPI (Environmental Performance Index) for packaging used by Maisons in the Perfumes and Cosmetics and Wines and Spirits business groups (see Section 2.1.1).

Perfumes and Cosmetics and Wines and Spirits business groups: EPI scores over time

Indicators	Baseline	Performance in 2021	Performance in 2020	Change
EPI score for Perfumes and Cosmetics packaging	8.32	10.71 [(a)]	9.15	+17%
EPI score for Wines and Spirits packaging	Champagne: 16.03	16.5	16.1	+2%
	Cognac: 10.60	13.4	13.9	-4%

(a) Maisons included: Guerlain, Parfums Christian Dior, LVMH Fragrance Brands, Benefit, Bvlgari and Make Up For Ever.

The weight of packaging that reaches customers changed as follows between 2020 and 2021:

(in metric tons)	2021	2020	2021 pro forma [(a)]	Change [(b)] *(as %)*
Wines and Spirits	170,166	141,224	170,166	20
Fashion and Leather Goods	19,149	13,090	19,149	46
Perfumes and Cosmetics	26,890	23,163	26,890	16
Watches and Jewelry	3,390	3,274	3,543	8
Selective Retailing	4,053	4,541	4,053	(11)
Other activities	1	1	1	-
Total	**223,649**	**185,293**	**223,802**	**21**

(a) Value and change at constant scope.
(b) This change was a result of the upturn in business.

The total weight of packaging that reaches customers, by type of material, broke down as follows in 2021:

(in metric tons)	Glass	Paper/ Cardboard	Plastic	Metal	Fabric	Other packaging materials
Wines and Spirits	152,495	14,431	529	2,165	59	487
Fashion and Leather Goods	472	16,109	327	118	2,121	2
Perfumes and Cosmetics	14,274	5,195	6,123	1,287	9	2
Watches and Jewelry	1,319	1,019	767	136	111	38
Selective Retailing	298	2,476	1,136	61	82	-
Other activities	-	1	-	-	-	-
Total	**168,858**	**39,231**	**8,882**	**3,767**	**2,382**	**529**

2.2.2 Reducing and recovering waste

The weight of waste generated changed as follows between 2020 and 2021:

(in metric tons)	Waste produced in 2021	*Of which: Hazardous waste produced in 2021* [a]	Waste produced in 2020	Waste produced in 2021 pro forma [d]	Change in waste produced [d] *(as %)*
Wines and Spirits	78,881	*439*	52,256	78,696	51 [b]
Fashion and Leather Goods	19,422	*4,739*	13,125	18,915	44 [c]
Perfumes and Cosmetics	10,297	*2,352*	8,540	10,369	21
Watches and Jewelry	985	*409*	1,584	976	(38)
Selective Retailing	2,373	*12*	3,140	2,418	(23)
Other activities	1,625	*74*	2,042	1,625	(20)
Total	**113,584**	***8,025***	**80,687**	**112,998**	**40**

(a) Waste that must be sorted and processed separately from non-hazardous waste (such as cardboard, plastic and paper).
(b) This change is the result of a process change at one site.
(c) This change is the result of exceptional activity at one site.
(d) Value and change at constant scope.

Waste was recovered as follows in 2021:

(as % of waste produced)	Re-used	Recovery of materials	Waste-to-energy recovery	Total recovery
Wines and Spirits	3	88	3	94
Fashion and Leather Goods	19	41	25	86
Perfumes and Cosmetics	1	75	17	93
Watches and Jewelry	1	46	25	72
Selective Retailing	2	38	38	78
Other activities	27	32	38	97
Total	**6**	**76**	**9**	**91**

The Maisons are working to reduce and recycle production waste, end-of-life products and unsold products. As regards waste circularity, in 2021, 91% of waste was recovered (93% in 2020). Recovered waste is waste for which the final use corresponds to, listed in descending order of interest in accordance with European and French laws: reuse, recovery of materials (i.e. recycling, composting or land treatment) or incineration for energy production.

In France, the Perfumes and Cosmetics Maisons, as well as Sephora since 2010 and Louis Vuitton since 2011, have used the CEDRE *(Centre Environnemental de Déconditionnement, Recyclage Ecologique)* recovery and recycling facility to handle all the waste generated by the manufacturing, packaging, distribution, and sale of cosmetic products. CEDRE accepts several types of articles: obsolete packaging, obsolete alcohol-based products, advertising materials, store testers, and empty packaging returned to stores by customers. In 2014, the service was expanded to accept textiles. In 2021, around 3,717 metric tons of waste were processed (2,920 metric tons in 2020). The various materials (glass, cardboard, wood, metal, plastic, alcohol and cellophane) are resold to a network of specialized recyclers.

As another example, LVMH has set a target of ensuring that all site waste from store construction and renovation is locally recycled or reused. To achieve this, the Maisons complete the store construction process by implementing a recycling indicator for construction waste.

2.2.3 Results for new circular services

Annual reporting tracks the number of new projects at each Maison as well as the proportion of total sales accounted for by new circular offerings. In 2021, LVMH launched Nona Source, a platform on which the Group's Maisons can resell their unused textiles. As well as fostering greater circularity in the fashion industry, Nona Source also offers tangible support for young designers by offering high-quality fabrics at very competitive prices. Over 60,000 meters of fabric was upcycled in this way in 2021. In 2021, LVMH entered into a partnership with WeTurn, which has begun developing the first dedicated process for recycling unsold textiles, fabric rolls and production offcuts from prestigious Maisons protected by intellectual property rights by transforming them into new, fully traceable high-quality European thread. Kenzo also ran an upcycling project with CETI (European Center for Innovative Textiles) aimed at producing recycled thread from distressed inventory. The resulting recycled thread was used to make more than 6,000 new T-shirts.

To help combat food waste and promote food donations, Grande Épicerie de Paris put in place a process to accurately monitor sales that production can be adjusted accordingly. The French Red Cross collects any unsold products each day. In 2018, a partnership was launched with Too Good To Go, an app that lets stores give their unsold items to its users. In light of the Group's business activities, food insecurity and actions promoting responsible, fair and sustainable food use do not constitute key risks.

2.2.4 Environmental management

In 2021, the Group continued to roll out certified environmental management systems across its 446 sites. By the end of 2021, 70% of its industrial sites will be ISO 14001 certified.

Sustainable design and environmental management are also relevant to the Group's stores. The Sustainable Store Planning process was put in place in early 2021, in partnership with Purchasing, to coordinate efforts across the store community, which brings together over 300 people. A platform named LIFE Influencers Journey has helped more quickly deliver training for decision-makers. Over 400 webinars were run in 2021 to cascade the LVMH LIFE environmental performance criteria set out in the Group's store guidelines. An LVMH Store Planning nomenclature has been developed in conjunction with the Maisons to make it easier to compare projects and tie environmental requirements into each line of expenditure. During the design phase of their stores, most Maisons were able to implement improvements in relation to energy conservation and the circular economy (recycled materials, premises free of volatile organic compounds, etc.) into their store concepts.

2.2.5 Summary of LIFE 360 "Creative Circularity" achievements in 2021

Objectives	Performance in 2021	Performance in 2020	Target
Zero virgin fossil plastics in customer packaging			
Quantity of virgin fossil plastics in packaging that reaches customers *(in metric tons)*	8,632	9,162	0 (2026)
70% recycled materials in customer packaging			
Percentage of recycled materials in customer packaging for glass and plastic *(by weight)*[(a)]	41%	N/A	70% (2030)
Presence of ISO 14001-compliant environmental management systems (at manufacturing sites and distribution hubs)	70%	69%	100%

(a) Data from a report currently under development.
N/A: Not applicable.

3. LIFE 360 – BIODIVERSITY

3.1 Overview of the Biodiversity policy

Protecting natural ecosystems is of vital importance to LVMH, whose business is heavily dependent on natural raw materials (such as flowers, grapes, cotton, leather and gems). This concern is part and parcel of a long-term view that places a priority on preserving nature, from which the exceptional quality of the Group's products is ultimately derived.

The first step in the process is to measure impacts. This can serve as a powerful lever for identifying priorities, targets and actions. However, measuring impacts on biodiversity is a complex matter. LVMH rolled out two methods: the Global Biodiversity Score and an environmental footprint for its entire value chain, including Scope 1, 2 and 3 emissions, covering issues relating to climate change, biodiversity and water. Some biodiversity impact indicators are geolocalized to allow for analysis at a more granular level and the implementation of specific action plans for some regions. LVMH's commitments and actions are in keeping with the reference framework drawn up by Science Based Targets for Nature, which aims to align companies' actions with international biodiversity protection goals.

Taking into account the results of these measurements, LVMH is taking action and making protecting and regenerating biodiversity a major focus of its LIFE 360 environmental strategy, whose three targets aim to reduce impacts and regenerate biodiversity:

- zero net deforestation by 2026 and zero gross deforestation by 2030 within the Group's supply chains;
- all strategic raw materials to be certified by 2026;
- 5 million hectares of flora and fauna habitat to be preserved, regenerated or restored by 2030.

3.1.1 Avoiding and reducing impacts on biodiversity

Zero net deforestation by 2026 and zero gross deforestation by 2030 within the Group's supply chains

LVMH has set itself a target of achieving zero net deforestation in its supply chains by 2026 and zero gross deforestation by 2030. Raw materials considered at risk and used by LVMH include wood and wood derivatives (paper, cardboard and viscose), palm oil derivative and leather. These materials have been identified with the help of environmental footprints from LVMH's value chain. LVMH is working to roll out a methodology for quantifying the degree of deforestation and has taken a number of practical steps:

- in spring 2021, LVMH entered into a partnership with Canopy, an NGO whose program aims to avoid deforestation in the wood, cardboard and viscose sectors;
- like many of the Group's Maisons, LVMH is a member of FSC France, whose strategy is aimed at certifying sustainably managed forests, transforming markets and acting as a catalyst for change;
- the Group's Maisons ask their partner tanneries not to accept any hides sourced from the Amazon basin;
- LVMH has kicked off agroforestry projects in the Malaysian palm oil sector.

All strategic raw materials to be certified by 2026

The LVMH group has put in place a strategy for sourcing and preserving raw materials, covered by LIFE 360 targets for 2026, that commits the Maisons to ensuring that all strategic raw materials they purchase and produce are certified as complying with the most stringent environmental standards covering both the materials themselves and production sites, and that guarantees that ecosystems and water resources are properly protected. At the close of the LIFE 2020 environmental program, the list of strategic raw materials was expanded. This list now includes the following:

- grapes, rye and barley;
- leathers, raw lamb and calf skins, exotic leathers and furs;
- cotton;
- wool;
- down and feathers;
- viscose;
- silk;
- wood, paper and cardboard;
- gems and precious metals;
- palm oil and its derivatives;
- soya and its derivatives for cosmetic use;
- alcohol;
- iconic ingredients used by Maisons in the Perfumes and Cosmetics business group;
- regulated chemicals. All the Maisons have incorporated the requirements of international regulations, including REACH, into their contractual documents so as to engage all suppliers in this undertaking.

Furthermore, the Maisons have implemented procedures to ensure that all of their products comply with CITES, a convention on international trade in endangered species. Through a system of import-export permits, this convention was set up to prevent overexploitation of certain species of endangered fauna and flora. In keeping with the Animal-Based Raw Materials Sourcing Charter published in 2019, the Maisons committed not to source any supplies of materials listed in Appendix 1 of CITES or identified as under threat by the International Union for Conservation of Nature (IUCN) with effect from 2020.

The Group proactively supports certification programs not only by purchasing certified materials but also by sitting on expert committees, in partnership with other stakeholders, to ensure that the required standards are both neutral and sufficiently stringent.

Wines and Spirits

The Wines and Spirits business group is actively committed to sustainable, organic and/or regenerative winegrowing, both of which are helping to considerably reduce its environmental impact, in particular by limiting the use of plant protection products.

Stepping up the roll-out of sustainable, organic and/or regenerative winegrowing at the Maisons' vineyards and among independent grape suppliers has thus been adopted as a LIFE 360 target. Various certification systems have been established across winegrowing regions: Viticulture Durable en Champagne for champagne houses, environmental certification for cognac (Haute Valeur Environnementale), organic farming for certain vineyards, Napa Green in California, etc. LIFE 360 targets are as follows:

- for vineyards owned by the Group: all grapes to be from sustainable, organic or regenerative winegrowing by 2026;
- for partner/supplier vineyards (Champagne, cognac, wines): 80% of grapes to be from sustainable, organic or regenerative winegrowing by 2026.

Fashion and Leather Goods

The Fashion and Leather Goods business group has adopted nine major targets for 2026:

- 90% by volume of supplies of cow, sheep and exotic leathers to be purchased from Tier 1 LWG-certified tanneries, with 50% to be purchased from Tier 2 and above LWG- or ISO 14001-certified tanneries. LWG certification is a standard created by the Leather Working Group to improve the environmental performance of tanneries (energy, water, waste, traceability);
- supplies of exotic leather to be purchased from abattoirs and/or farms certified in accordance with standards covering animal and human welfare and care for the environment, such as the LVMH Standard for Responsible Crocodilian Production, the International Crocodilian Farmers Association (ICFA), the South African Business Chamber of Ostriches (SAOBC) and the forthcoming standard to be issued by the South East Asian Reptile Conservation Alliance (SARCA). The Group is also seeking certification for all crocodile farms supplying the Group's tannery;

- all supplies of pelts to be purchased from certified fur farms, notably by rolling out certifications recognized under the FurMark program;
- all supplies of cotton to be purchased from sustainable cotton sources. Organic, regenerative and recycled cottons are preferred;
- all supplies of wool to be purchased from sustainable sources. Sustainable wool is either recycled or sourced from farms certified as complying with animal welfare and environmental protection standards such as the Responsible Wool Standard (RWS), the Responsible Mohair Standard (RMS), the Code of Practice of the Sustainable Fibre Alliance (SFA) and the Global Recycle Standard (GRS);
- all supplies of viscose to be sustainable, whether recycled or purchased from suppliers with a Canopy "green shirt" rating;
- all supplies of silk to be purchased from sustainable sources (certified GOTS or a mix of GOTS and GRS);
- all supplies of feathers and down to be either recycled or purchased from suppliers certified in accordance with the Responsible Down Standard (RDS);
- animal-Based Raw Materials Sourcing Charter to be incorporated into supplier relationships. LVMH shares civil society's aim of improving animal welfare, as reflected in the charter unveiled by the Group in 2019. It is supported by a consultative Science Committee that helps support scientific research. This work is the result of a long process of research and collaboration between LVMH's environmental experts, its Maisons and its suppliers. Taking a comprehensive approach, the charter addresses the full range of issues involved in the sourcing of fur, leather, exotic leather, wool and feathers, with commitments to achieving progress in three areas: full traceability in supply chains; animal farming and trapping conditions; and respect for local communities, the environment and biodiversity.

Perfumes and Cosmetics

The Perfumes and Cosmetics business group has set itself three key LIFE 360 targets in relation to its supply chain to be achieved by 2026:

- all supplies of palm oil to be purchased from sustainable sources, including RSPO-certified palm oil and palm oil from regenerative agriculture;
- all supplies of alcohol to be purchased from sustainable sources, including organic beet and regenerative agriculture as well as alternative and innovative solutions;
- all iconic ingredients used by the Maisons to be EUBT-certified.

The business group also takes part in specific initiatives related to the sourcing of mica (RMI). The Group's Research & Development Department and Maisons have been carrying out ethnobotanical studies for a number of years. They seek to identify plant species with a particular interest as components of cosmetic products while contributing to the preservation of these species and to local economic development. This partnership can take a variety of forms such as financial support, technical or scientific assistance, or skills sponsorship, sharing the expertise of LVMH's staff with its partners. As part of this initiative, Parfums Christian Dior's Dior Gardens are plots dedicated to cultivating plant species chosen for their exceptional properties. Guerlain has also launched a number of partnerships focused on orchids in China, vetiver in India, honey in Ouessant in France, sandalwood in Asia and lavender from the south of France.

Watches and Jewelry

The Watches and Jewelry business group has set itself three key LIFE 360 targets in relation to its supply chain to be achieved by 2026:

- all supplies of gold to be purchased from sustainable sources, including Responsible Jewellery Council Chain-of-Custody (RJC CoC) or equivalent certification for recycled gold and RJC CoC or equivalent certification for mines for new gold. The Group is currently working to recognize other standards for future adoption such as the Initiative for Responsible Mining Assurance (IRMA), Fairmined, Fairtrade and the CRAFT and Swiss Better Gold Association (SBGA) initiatives;
- all supplies of diamonds to be purchased from RJC CoP-certified suppliers;
- all supplies of colored gemstones to be purchased from suppliers certified RJC CoP or equivalent or verified via the Gemstones and Jewellery Community Platform (GJCP);

All of the Watches and Jewelry Maisons have received certification under the Responsible Jewellery Council's Code of Practices standard, known as RJC CoP. As part of the LIFE 2020 and LIFE 360 targets, and in line with this certification, which applies to their gold and diamond supply chains, they expanded their responsible sourcing efforts. Bvlgari is particularly active in this area, and has become the first company in its market to obtain the Chain of Custody (CoC) certification for its jewelry business. The Group and its Maisons are also involved in the Coloured Gemstones Working Group (CGWG) run by The Dragonfly Initiative. The CGWG aims to roll out environmental and social best practice across the colored gemstone sector by making all tools developed by the initiative available to the industry on an open-source basis and allowing industry players to assess the maturity of their practices.

All business groups

- Wood and wood derivatives: Given its strong commitment to combating deforestation, the Group has set an additional target applicable to all business groups: all supplies of wood, paper and cardboard to be FSC-certified (including FSC Mix and FSC Recycle) by 2026. For example, all wood for use in store fittings and decorations will be FSC-certified by 2026. In the meantime, a training module on wood was added to the architects' training program in 2021. The framework agreement negotiated with prime contractors now requires them to declare what proportion of certified wood is used in their projects.
- Chemicals: LVMH has also implemented many tools to improve and monitor the use of chemicals in products. These are described in §5.3.

3.1.2 Protecting and restoring biodiversity

The Group is committed to regenerating the equivalent of 5 million hectares of flora and fauna habitat by 2030, either within its supply chains by rolling out regenerative agriculture programs for strategic agricultural commodities like grapes, cotton, wool and leather, or by contributing to collective efforts to regenerate and preserve ecosystems and protect particularly endangered plants and animals.

Regenerative agriculture

Regenerative agriculture is defined as agriculture that can regenerate soil health and ecosystem function (biodiversity/water cycle) while ensuring socioeconomic stability for stakeholders (farmers and communities) and yielding high-quality agricultural commodities. LVMH has selected a number of agricultural commodities for which the Group is keen to roll out regenerative agriculture practices. These include grapes for Wines and Spirits, cotton, wool and leather for Fashion and Leather Goods, and palm, beet and iconic ingredients for Perfumes and Cosmetics.

Preserving and restoring ecosystems

As responsible corporate citizens keen to make a net positive contribution to biodiversity, LVMH and its Maisons are committed to funding projects that help preserve or restore ecosystems that fall outside their supply chains. In this context, LVMH and UNESCO have launched a program with 5 million euros of funding over five years to combat causes of deforestation in the Amazon. The program aims to attack the root causes of deforestation and water pollution in the Amazon basin by working with eight biosphere reserves in Bolivia (Pilón-Lajas and Beni), Ecuador (Yasuní, Sumaco and Podocarpus-El Cóndor), Brazil (Central Amazon) and Peru (Manu and Oxapampa-Asháninka-Yanesha).

3.2 Key achievements in 2021: Biodiversity

At the IUCN (International Union for Conservation of Nature) World Conservation Congress in September 2021, LVMH presented its solutions for promoting diversity at a stand shared with UNESCO; Antoine Arnault spoke about the Group's commitment during the CEO Summit at the start of the congress. LVMH has been active for more than 10 years alongside many partners working to conserve biodiversity. The Group was the first private-sector entity to join the eight public research bodies on the Board of Directors of the French Foundation for Research on Biodiversity (FRB). In 2019, LVMH stepped up its involvement by signing a five-year partnership with UNESCO to support its intergovernmental scientific program, "Man and the Biosphere (MAB)". This tool for international cooperation is aimed at protecting global biodiversity. For example, the Group's Maisons draw on UNESCO's scientific expertise and its network of 686 biosphere reserves to develop their sustainable sourcing policies. LVMH is actively involved in the Act4Nature International initiative.

In 2021, LVMH launched a series of interviews on nature and living beings with prominent figures from the scientific community and civil society to answer questions such as, "Are humans (really) animals like any other?" These discussions helped raise awareness of the crucial role of nature, on which all the Group's businesses undeniably depend: there can be no champagne without grapes, no perfume without plants, no evening gowns without silkworm farms.

3.2.1 Certification of strategic supply chains

In 2021, the level of certification increased significantly in some supply chains, for example leather (up from 74% in 2020 to 81% in 2021) and cotton (up from 51% in 2020 to 61% in 2021). As part of the LIFE 360 program, the Group has set certification targets for supply chains in which standards may have yet to stabilize. This is the case, for example, of the wool and cashmere supply chains. Against this backdrop, the Group's Maisons are working in partnership with their suppliers to ensure that wool and cashmere is purchased from farms certified as complying with animal welfare and environmental protection standards.

In the fur sector, the Group and its Maisons are actively involved in drawing up new certification standards under the FurMark program (which follows the ISEAL rules)[1].

(1) Source: "Chain of custody models and definitions", ISEAL Alliance, V 1.0, September 2016 (page 2).

The level of certification of gold used in the Watches and Jewelry business also increased significantly in 2021 thanks to efforts by the Maisons to improve supply chain visibility all the way through to refiners and ensure that gold is purchased only from certified operators, as well as an updated reporting scope for the activities of the Group's Watches and Jewelry Maisons.

As regards exotic leather, all hides purchased by the Heng Long tannery now come from farms certified as complying with the standard developed by LVMH in 2018 and reviewed in 2021 to take into account the latest research findings on the welfare of farm-reared crocodiles so as to align with the International Crocodilian Farmers Association (ICFA) standard.

Certification of strategic supply chains: LIFE 360 achievements in 2021

Indicators	Performance in 2021	Performance in 2020	Target for 2026
Wines and Spirits			
Grapes – Sustainable winegrowing certification *(% certified grapes by weight; figures include still wines and eaux-de-vie)*	LVMH vineyards: 92% French vineyards: 100% Rest of the world: 86% Independent grape suppliers: 16%	LVMH vineyards: 92% French vineyards: 100% Rest of the world: 90% Independent grape suppliers: 4%	LVMH vineyards: 100% Independent grape suppliers: 50%
Fashion and Leather Goods			
LWG certification of tanneries for bovine and ovine leather *(leather from certified tanneries by weight, as %)*	81%	74%	100%
LWG certification of tanneries for crocodile skin leather *(crocodile skin leather from certified tanneries by weight, as %)*	70%	N/A	100%
Certified cotton *(% GOTS, Better Cotton, GRC, OCS and Supima certified cotton by weight)*	61%	51%	100%
Certified paper, cardboard and wood[a] *(% FSC- and PEFC-certified paper, cardboard and wood by weight)*	77%[a]	N/A	100%
Certified fur (mink and fox) *(% fur from farms certified as complying with one of the standards recognized by the FurMark program)*	92%	87%[b]	100%
Certified sheep's wool (merino and other species) and cashmere *(% wool and cashmere from farms certified RWS, ZQ, Authentico, New Merino, SustainaWOOL, Nativa or SFA)*	24%	N/A	100%
Certification for all crocodile farms supplying the Group's tannery *(% crocodile skin from farms certified as complying with LVMH's crocodile standard)*	100%	86%	100%
Perfumes and Cosmetics			
Palm oil derivatives *(RSPO-certified Mass Balance or Segregated palm oil derivatives by weight, as %)*	95%	91%	100%
Watches and Jewelry			
Diamonds: RJC COP certification *(carats of diamonds from COP-certified direct suppliers, as %)*	99.9%	99%	100%
Gold: RJC COP certification	98%	79%	100%
RJC CoC certification *For Maisons without CoC certification, gold is included within the reported indicator if it is sourced from CoC-certified precious metal refiners, regardless of any intermediate subcontractors between the precious metal refiner and the Maison*[c]	93%	77%	100%

(a) It should be noted that, since the reporting process is currently under development, data reported by the Maisons is subject to a high degree of uncertainty.
(b) Indicator not audited in 2020.
(c) In 2021, the Maisons reported exclusively on their Watches and Jewelry activities.
N/A: Not applicable.

3.2.2 Regenerative agriculture and preserving ecosystems

In 2021, LVMH developed practical guides on how to put regenerative agriculture into practice and surrounded itself with a network of experts such as Biosphères, Renature, Earthworm, Pour une Agriculture du Vivant and Savory. The overall approach and individual projects are signed off by a Science Committee, which meets annually. Practice and performance indicators have been put in place for each raw material. A number of projects have already kicked off in Turkey for cotton, in Uruguay and Australia for merino wool, in Malaysia for palm oil and in France for some iconic perfume ingredients. For example, Parfums Christian Dior has set itself a target of implementing regenerative agriculture practices for each of the essences in its Dior Gardens program: nine essences for skincare (such as Granville rose, longoza from Madagascar and red hibiscus from Koro) and four for perfumes (such as rose, jasmine and neroli from Grasse). The Maison is also partnering with the Hectar project, which runs a center for dedicated research into horticulture and regenerative practices. Lastly, all Moët Hennessy vineyards have also launched regenerative agriculture programs.

Outside these supply chains, LVMH and its Maisons are committed to financing projects that help preserve or restore ecosystems, such as the joint LVMH and UNESCO program to combat the causes of deforestation in the Amazon and Moët Hennessy's partnership with Reforest'Action to launch reforestation programs in Kenya, China, the United States and South Africa as well as on its own vineyards. LVMH Italia is also partnering with the ForestaMi program, which aims to replant 3 million trees in the Milan metropolitan area by 2030.

A total of 657,000 hectares was preserved or restored in 2021 (LIFE 360 target).

3.2.3 Protecting water resources

Water consumption is broken down into the following requirements:

- process requirements: use of water for cleaning purposes (tanks, products, equipment, floors), air conditioning, employees, product manufacturing, etc. Such water consumption generates wastewater;
- agricultural requirements: use of water for vineyard irrigation outside France, as irrigation is not used for the Group's vineyards in France. Water is taken directly from the natural environment for irrigation purposes, with water use from year to year closely linked to changes in weather conditions. However, it should be noted that water consumption for agricultural requirements is assessed by sites with a higher level of uncertainty than water consumption for process requirements.

Water consumption changed as follows between 2020 and 2021:

(in m³)	2021	2020	2021 pro forma[a]	Change *(as %)*
Process requirements	3,406,813	3,310,906	3,464,166	5
Agricultural requirements (vineyard irrigation)	5,131,434	6,969,256	5,107,347	-

(a) Value and change at constant scope.

Water consumption for process requirements broke down as follows by business group:

(process requirements in m³)	2021	2020	2021 pro forma[a]	Change[a] *(as %)*
Wines and Spirits	1,314,226	1,068,162	1,311,910	23
Fashion and Leather Goods	1,494,457	1,472,857	1,483,200	1
Perfumes and Cosmetics	184,933	197,032	187,639	(5)
Watches and Jewelry	73,397	62,427	69,611	12
Selective Retailing	188,727	229,211	174,061	(24)
Other activities	151,073	281,217	237,745	(15)[b]
Total	**3,406,813**	**3,310,906**	**3,464,166**	**5**

(a) Value and change at constant scope.
(b) Change related to measurement adjustments at a site.

LVMH calculated its environmental footprint for its entire value chain, including Scope 1, 2 and 3 emissions, covering issues relating to climate change, biodiversity and water use. As part of this exercise, an in-depth analysis of sensitivity to local constraints was carried out at each of the Group's Maisons using the AWARE method. This analysis was based on measurements of each geographic area's sensitivity, obtained by comparing water consumption to available resources at the local level. Four vineyards whose water consumption is significant relative to the Group as a whole are located in areas where water stress is close to 100%, meaning that water requirements in these areas are close to the level of available resources:

- the Domaine Chandon Argentina vineyards (Agrelo and Terrazas), which represent 67% of the Group's agricultural water requirements and 65% of the Group's environmental footprint for Scopes 1 and 2;
- the Domaine Chandon California and Newton vineyards, which represent 8% of the Group's agricultural water requirements and 7% of the Group's environmental footprint for Scopes 1 and 2.

Vineyard irrigation requires authorization and is regulated in California and Argentina due to the climate. Such irrigation is necessary for winegrowing. Nevertheless, the Group has taken the following measures to limit water consumption: harvesting rainwater; implementing protocols to measure and specify water requirements; standardizing drip irrigation practices in California; using weather forecasts to optimize irrigation; and adopting the "regulated deficit irrigation" technique, which reduces water consumption and improves grape quality and grapevine size, yielding an enhanced concentration of aroma and color.

As part of the calculation of the environmental footprint of LVMH's value chain in 2020, water consumption related to the Group's Scope 3 activities was measured at 126 million cubic meters of water, more than 95% of which was used for the production of raw materials, mainly luxury wool fibers (47%), cotton (17%), and grapes, wines and spirits (15%). The water footprint will be updated in 2022.

3.2.4 Preventing pollution

The only significant, relevant indicator related to preventing water pollution is the release of substances into water by Wines and Spirits, Fashion and Leather Goods, and Perfumes and Cosmetics operations contributing to eutrophication. The Group's other activities have only a very limited impact on water quality. Eutrophication is the excessive buildup of algae and aquatic plants caused by excess nutrients in the water (particularly phosphorus), which reduces water oxygenation and adversely affects the environment. The parameter used is the Chemical Oxygen Demand (COD) calculated after treatment of effluents from the Group's own plants or external plants with which the Group has agreements. The following operations are considered treatment: city and county wastewater collection and treatment, independent collection and treatment (aeration basin), and land application.

COD after treatment changed as follows between 2020 and 2021:

COD after treatment *(metric tons/year)*	**2021**	**2020**	**2021 pro forma[a]**	**Change[a]** *(as %)*
Wines and Spirits	1,354	917	1,353	48
Fashion and Leather Goods	19	19	19	-
Perfumes and Cosmetics	21	16	21	31
Total	**1,394**	**952**	**1,394**	**46[b]**

(a) Value and change at constant scope.
(b) This change was a result of the upturn in business and changes to effluent treatment processes at Domaine Chandon Argentina.

Measurement frequencies at the highest-contributing Maisons are compliant with local regulations but remain limited with regard to the changes observed in quantities discharged.

LVMH also joined the ZDHC (Zero Discharge of Hazardous Chemicals) trade association, which aims to promote best practices concerning the use of dangerous substances and the quality of discharged wastewater at textile and leather manufacturing sites. LVMH has drawn up a detailed roadmap targeting affected LVMH production sites and key suppliers of Maisons in the Fashion and Leather Goods business group. The following targets are in place for 2023: roll out the ZDHC MRSL with a minimum compliance rate of 50%; implement a chemicals management system with at least ZDHC Foundation-level certification; and monitor wastewater quality, with at least one ZDHC ClearStream report to be produced each year. The Riba Guixa tannery and Loro Piana production sites already achieved all these targets in 2021. At the same time, the Maisons have begun working with their suppliers to roll out wet processes. Loro Piana also installed a new reverse osmosis wastewater treatment unit at its Quarona site in 2021, enabling water treated by this unit to be reused in the production process, which already led to a 10% reduction in water consumption in 2021.

Volatile Organic Compound (VOC) emissions are addressed through specific action plans, notably for Perfumes and Cosmetics operations and the tanneries.

4. LIFE 360 – TRACEABILITY AND TRANSPARENCY

4.1 Overview of the Traceability and Transparency policy

Tracing a material – be it gold, cotton or leather – from source through to finished product is no simple matter. However, it is a vital step in ensuring the adoption of responsible practices. If the Group is to reduce its carbon impact, introduce ecosystem-friendly farming practices and ensure that its suppliers use responsible practices, it must first have end-to-end knowledge of the value chains of all materials that go into the exceptional products made by the artisans and manufacturers it works with. Traceability is thus a prerequisite for identifying issues, implementing responsible practices and transparently sharing those practices with stakeholders. This is known by LVMH as the Chain of Custody system, defined by ISEAL [1] as "the complete set of documents and mechanisms used to verify the traceability between the verified unit of production and the claim about the final product".

Building on the formal certification policy put in place for its supply chains as early as 2016, LVMH has set itself new targets to perfect product traceability and boost its progress in relation to customer transparency:

- all strategic supply chains to be covered by a dedicated traceability system by 2030;
- all new products to come with a dedicated customer information system by 2026.

4.1.1 Traceability

What action is required to ensure traceability across the entire value chain depends on the characteristics of the supply chain in question: whether or not it is integrated (one of the Group's distinctive features is that it owns a large number of manufacturing businesses, enabling it to ensure traceability and responsible practices through direct control); how structurally mature it is; and whether the materials produced are compound.

Traceability is a key concern for the following strategic raw materials:

- grapes, rye and barley;
- leathers, raw lamb and calf skins, exotic leathers and furs;
- cotton;
- wool;
- down and feathers;
- viscose;
- silk;
- wood, paper and cardboard;
- gems and precious metals;
- palm oil and its derivatives;
- soya and its derivatives for cosmetic use;
- alcohol;
- iconic ingredients used by Maisons in the Perfumes and Cosmetics business group.

To ensure that all strategic supply chains are covered by a dedicated system enabling full product traceability from raw material to finished product by 2030, three sub-goals have been put in place:

- 2023: country of origin to be known for all strategic supply chains;
- 2026: all strategic supply chains to have a dedicated traceability system;
- 2030: all strategic supply chains to be fully traceable from raw material to finished product with the help of the dedicated traceability system.

To achieve these targets, LVMH is implementing an ambitious certification process for its strategic supply chains based on the most stringent standards, as set out in Section 3.1.1. These standards are mainly based on Chain of Custody models and strengthen the upstream traceability process for the most complex supply chains.

In 2021, the Environmental Development and Purchasing departments launched a joint Upstream Traceability Working Group with members drawn from over 25 Maisons. This working group's goals are as follows:

- to raise awareness of upstream traceability issues and work together to build solutions to them;
- to initiate and/or accelerate upstream traceability projects within each Maison;
- to manage cross-functional requirements and standardize upstream traceability practices across the industry for selected materials.

In 2021, three awareness-raising webinars were run, two Maisons (Louis Vuitton and Chaumet) received support for materials traceability projects and three materials taskforces were set up.

4.1.2 Transparency

Sharing information about products' environmental performance with customers has become a key requirement for the Group, which has set a target of ensuring that each product comes with a dedicated information system by 2030. With this in mind, LVMH is involved in ongoing discussions on environmental labelling at both the French and European levels, notably in respect of fashion products where quality and lifespan are of critical importance. Over the next three years, each business group will be equipped with the tools it needs to produce environmental indicators to be shared with customers. All the associated targets are set out in Section 1.2.2.

(1) Source: "Chain of custody models and definitions", ISEAL Alliance, V 1.0, September 2016 (page 2).

4.2 Key achievements in 2021: Traceability and Transparency

4.2.1 Adoption of new traceability tools

The Group launched a tender process in 2021 with the intention of acquiring a system for mapping its strategic supply chains. The objectives of this system are to monitor flows of materials along value chains and to identify and mitigate environmental and social risks as well as risks to ethics and animal welfare. In taking this approach, the Group aims to optimize synergies and streamline information management for Maisons and their suppliers. The Group and its Maisons have now identified a solution; the technology and associated service will be piloted in the first half of 2022.

In addition, in 2021, LVMH developed new solutions tailored to each sourcing channel's specific features, and together with Prada Group and Cartier (a subsidiary of Richemont) announced the launch of the Aura Blockchain Consortium: a unique, global blockchain solution, open to all luxury brands worldwide to address shared challenges in responsible sourcing.

In keeping with the Animal Materials Supply Charter published in 2019, the Group's Maisons are working to ensure that their raw materials are traceable; in 2021, the source of materials of animal origin was known for 90% of exotic leathers, 87% of furs and 62% of wools.

Summary of LIFE 360 "Traceability and Transparency" targets for 2021

Traceability indicators	Performance in 2021	Target for 2023
Fashion and Leather Goods *(as % of quantities purchased in 2021)*		
Sheep and cow leather – country of slaughter known	76%	100%
Exotic leather – country of slaughter known	90%	100%
Fur – country of rearing or trapping known	87%	100%
Wools (merino sheep and other species, and cashmere) – country of rearing known	62%	100%

4.2.2 New information systems

The Group and its Maisons have begun rolling out systems that measure the environmental impact of products as well as monitoring the sustainability of product design (see Section 2.1.1). In 2021, LVMH took part in French and European methodological work on environmental labelling. Two Maisons, Louis Vuitton and Patou, are involved in official testing of the European apparel standard currently under development.

LVMH is also one of the founding members of the Eco-Beauty Score Consortium, which aims to develop a shared methodology for measuring and communicating the environmental footprint of cosmetic products.

In 2021, 4,000 products sold by the Group's Maisons already had an information system.

5. LIFE 360 – CLIMATE

Combating climate change is a major focus of LVMH's environmental policy. The Group has often played a pioneering role in this area. In the early 2000s, for example, it took part in testing the carbon assessment method that would later become the Bilan Carbone®. In 2015 it was also the first luxury company to set up an internal carbon fund.

5.1 Overview of the Climate policy

Based on its overall carbon footprint calculated by an outside firm, LVMH has mapped out a carbon trajectory in line with the Paris Agreement, approved by a leading international third party (the Science Based Targets initiative), which calls for the following:

- reducing energy-related greenhouse gas (GHG) emissions at its sites and stores by 50% in absolute terms by 2026 (baseline: 2019) thanks to a policy of 100% renewable and low-carbon energy;
- reducing or avoiding 55% of Scope 3 GHG emissions (raw materials, purchases, transportation, waste, product usage and end-of-life treatment) per unit of added value by 2030 (baseline: 2019).

5.1.1 Key levers for reducing Scope 1 and 2 emissions

The Group's actions to mitigate the impact of its activities on energy consumption are concentrated in two key areas:

- the improvement in the environmental profile of stores, which represent the main source of the Group's energy consumption;
- greater use of renewable energies at production and logistics sites, administrative sites and stores.

To halve GHG emissions from stores (CO_2 emitted by energy generation and refrigerant gases used in air conditioning systems), the Group has set tangible and ambitious targets for the first two milestones in 2023 and 2026:

- **2023**: all sites and stores to have the ability to report their energy consumption (bills or meters);
- **2026**: all stores to be equipped with LED lighting, with stores over seven years old undergoing partial renovation of their lighting systems.

To move store practices forward, the Group guidelines set out a target lighting power density of 20 watts per square meter. These recommendations are explored in detail at training events that equip designers with the strategies they need to achieve energy efficiency while improving store ambiance.

The Better Stores program uses annual consumption data to identify "bad stores" that exceed a certain threshold and trigger remedial action. These "bad stores" are asked to complete a detailed 15-point questionnaire that serves to identify urgently required improvements. In 2020, the relevant threshold was 700 kWh per square meter. This will fall to 500 kWh in 2023 (from 600 kWh in 2021), 400 kWh in 2026 and 300 kWh in 2030.

Alongside actions to reduce its fossil fuel consumption, LVMH is rapidly expanding its use of renewable energy with a target of exclusive use of renewable or low-carbon energy by 2026. Framework agreements signed with energy suppliers in different regions have been one of the main drivers of the Group's progress in the area of electricity and gas since 2015.

5.1.2 Key levers for reducing Scope 3 emissions

The Group's actions to reduce Scope 3 emissions are concentrated in two key areas:

- a lower carbon footprint for raw materials, products and packaging: dedicated policies on sustainable product design and packaging (see §2.1.1) and the sourcing of certified raw materials (see §3.1.1) are being implemented by each business group, with the involvement of suppliers, such as independent grape suppliers, livestock farmers and growers;
- sustainable transport, using several different methods: an emphasis on local sourcing, use of trains and boats where possible, supply chain optimization, biofuel use for air freight and electric vehicles for last-mile deliveries.

LVMH is also working on forward-looking projects, for example by developing a green e-commerce policy and working with the livestock industry to establish a position on methane, which has significant warming potential.

5.1.3 Key levers for adapting to climate change

The Group is also conducting a review of the various issues involved in adapting to climate change. Winegrowing activities are notably included in the review. In the medium term, changing winegrowing practices is the main component of the Group's adaptation strategy. Several solutions are available for European vineyards depending on the extent of climate change, from altering harvest dates to developing different methods of vineyard management (such as widening rows, increasing the size of grapevine stocks and employing irrigation in certain countries) and testing new grape varieties. For vineyards in Argentina and California, the main issue is the availability of water (see §3.2.3).

More broadly, innovation – a key component of the Group's mitigation policy – also plays a part in LVMH's adaptation policy: new regenerative farming practices (see §3.1.2), the switch to new materials derived from biotechnologies and the use of biomimetics provide opportunities for reducing greenhouse gas emissions while simultaneously diversifying procurement sources and reducing the Group's exposure to climate change. The program to jointly develop clean technologies with Bertrand Piccard's Solar Impulse Foundation, the Matières à Penser (Food for Thought) materials library, and the Maison/0 partnership with Central Saint Martins dedicated to innovation and sustainable creativity will help drive new solutions at the Group's Maisons.

These ambitious reduction and adaptation objectives have raised questions as to the relevance of certain solutions, notably carbon offsetting. To maximize leverage in reducing emissions, LVMH had previously refrained from making use of large-scale carbon offsetting (i.e. buying carbon credits linked to projects to avoid or sequester emissions to offset those emissions still produced by the Group). However, the goal of achieving global net-zero emissions by 2050 raises the question of the role of carbon credits, which the SBTi Net Zero standard proposes should be used once reduction targets have been met. Against this backdrop, the Maisons are trialing various types of offsetting.

5.2 Key achievements in 2021: Climate

LVMH's climate targets have been approved by leading international third-party organization the Science Based Targets initiative (SBTi), a coalition that brings together the Carbon Disclosure Project (CDP), the United Nations Global Compact (UNGC), the World Resources Institute (WRI) and the World Wildlife Fund (WWF). Over and above the Group's overall commitment, four of its Maisons – Louis Vuitton, Moët Hennessy, Parfums Christian Dior and Guerlain – also secured approval in 2021 for their carbon trajectories across their own scopes, confirming their goals built into each Maison's strategy: "Our Committed Journey" for Louis Vuitton, "Living Soils" for Moët Hennessy, "Beauty as a Legacy" for Parfums Christian Dior and "In the Name of Beauty" for Guerlain.

At a time when combating climate change is of vital importance, and corporate citizens must play a decisive role in this fight, LVMH participated in COP26 to present its actions and engage in dialogue with stakeholders:

- as part of the Sustainable Markets Initiative, led by His Royal Highness Prince Charles, Stella McCartney launched the "Future of Fashion: An innovation conversation with Stella McCartney" exhibition at the Kelvingrove Art Gallery and Museum in Glasgow. The installation featured highly innovative materials such as Bolt Threads' Mylo mycelium leather, Söktaş' regenerative cotton, Econyl's regenerated nylon and Evrnu's NuCycl made from post-consumer waste and ocean plastics;
- Antoine Arnault, head of Image and Environment at LVMH, was interviewed on behalf of the Group as part of the special study by the United Nations and Accenture: The 2021 United Nations Global Compact – Accenture CEO Study on Sustainability: "Climate Leadership in the Eleventh Hour". As the world's largest program of CEO research on sustainable development, it draws on insights from over 1,000 CEOs across 113 countries and 21 industries;
- the Group also participated in the "Net Zero Business and Value Chain" conference held by EpE (Entreprises pour l'Environnement) at the EU Pavilion; the "Fashion Industry on the Race to Zero" conference held by the Fashion Industry Charter for Climate Action (UNFCCC); the "Private Sector Net Zero Goal: How can companies contribute to achieving global carbon neutrality, and report on their strategies?" conference held by ADEME and Carbone 4; and organized the "Preserving Biodiversity Can Help Mitigate Climate Change" conference at the French Pavilion.

In addition to a program to jointly develop clean technologies with the Solar Impulse Foundation, in 2021 LVMH's Carbon Fund invested 7.9 million euros in 60 innovation projects that would together avoid more than 2,600 metric tons of CO_2 equivalent a year. In 2021, the Solar Impulse Foundation also published a guide to clean and profitable technological solutions for the ecological transition at COP26 in Glasgow, Scotland. The guide, presented to the Scottish Government on the fringes of COP26, highlighted a case study for Glenmorangie, the Group's Scottish Maison and the only company featured in its pages.

5.2.1 Energy consumption

Improving energy efficiency and expanding the use of renewable energy are the main thrusts of LVMH's strategy to limit its carbon footprint, an approach that also entails better energy management, which is vital to help reduce overall energy consumption. Measures to reduce these emissions have been in place for a number of years at Maisons' production sites.

Total energy consumption amounted to 1,198,144 MWh in 2021 for the Group's subsidiaries included in the reporting scope. This corresponds to primary energy sources (such as fuel oil, butane, propane and natural gas) added to secondary energy sources (such as electricity, steam and ice water) mainly used for the implementation of manufacturing processes in addition to buildings and stores' air conditioning and heating systems. Power consumption by stores not covered by reporting (26% of the total sales floor area) estimated based on consolidated figures stands at 169,196 MWh. The 9% pro forma increase between 2020 and 2021 was mainly the result of an upturn in business in 2021 after stores were closed in 2020. To optimize how stores' energy consumption is managed, the Maisons install the most advanced lighting systems offered by the LVMH Lighting program and follow the LVMH Store Guidelines: 57% of the sales floor area is already covered by full LED lighting, based on the scope of stores that report this data, i.e. 60% of the total sales floor area. Alongside action to reduce consumption and boost energy efficiency, LVMH is increasing the proportion of renewable energy in its energy mix.

Consumption of renewables rose from 1% to more than 39% of the Group's total energy mix between 2013 and 2021. Framework agreements signed with energy suppliers have been one of the main drivers of the Group's progress in this area. The first of these dates back to 2015 and supplies green electricity to more than 90% of LVMH's sites in France, belonging to 23 of its Maisons. A similar agreement was signed in 2016 for the supply of electricity to a number of the Group's Italian Maisons, while some sites in Spain and Portugal now use renewable energy. Many sites have also installed solar panels or geothermal systems. As of 2019, all of Sephora's sites in the United States are powered by green electricity. The other driver is the use of biogas, which is either produced from production waste (Glenmorangie since 2017) or purchased (biomethane with a regional guarantee of origin sourced by Hennessy in 2020 and Guerlain in 2021). LVMH has chosen SAVE Energies, France's second-largest buyer of biomethane, to supply all its French production facilities and sites with biomethane for three years starting in 2023. Biomethane, which is produced from organic waste, generates 81% fewer greenhouse gas emissions than conventional gas. To maximize local benefits, methanation units will be located as close to Maisons' sites as possible.

Meanwhile, Belvedere opened a new biomass power plant in 2021 that will meet the energy needs (electricity and steam) of its distillery using water vapor generated by burning wooden pallets and distillation by-products. The plant was developed after three years of studies and trials with the three Polish universities of Gdańsk, Łódź and Poznań.

Energy consumption by business group changed as follows between 2020 and 2021:

(in MWh)	2021	2021 Estimated store scope[b]	2020	2021 pro forma[a]	Change[a] [c] *(as %)*
Wines and Spirits	233,665	-	214,226	233,015	9
Fashion and Leather Goods	398,686	79,527	368,275	395,198	7
Perfumes and Cosmetics	99,267	4,529	93,267	100,867	8
Watches and Jewelry	46,869	7,079	37,688	43,260	15
Selective Retailing	308,582	77,797	250,901	258,741	3
Other activities	111,075	264	34,460	55,376	61
Total	**1,198,144**	**169,196**	**998,817**	**1,086,458**	**9**

(a) Value and change at constant scope.
(b) Estimated power consumption by stores not covered by reporting (26% of total sales floor area).
(c) Excludes estimated store power consumption.

Energy consumption by business group and by energy source was as follows in 2021:

(in MWh)	Electricity	Natural gas, butane and propane	Fuel oil and heavy fuel oil	Steam	Ice water	Renewable energies	% renewable energies[a]
Wines and Spirits	13,610	84,356	34,344	-	-	101,355	43
Fashion and Leather Goods	142,314	103,394	11,744	2,329	5,894	133,012	34
Perfumes and Cosmetics	8,418	34,014	2,537	613	-	53,684	54
Watches and Jewelry	12,402	7,666	652	1,466	487	24,196	51
Selective Retailing	142,315	14,060	157	6,829	5,938	139,282	45
Other activities	58,029	24,214	4,750	3,641	2,865	17,577	16
Total	**377,088**	**267,704**	**54,184**	**14,878**	**15,184**	**469,107**	**39**

(a) Not including estimated data for stores not covered by reporting.

5.2.2 Greenhouse gas emissions

5.2.2.1 Direct emissions (Scope 1) and indirect emissions (Scope 2)

Scope 1 emissions are those generated mainly through the combustion of fuel oil and natural gas. Scope 2 emissions are those generated indirectly from energy use, mainly electricity used in stores and at the Group's production sites.

Energy-related CO_2 emissions by business group changed as follows between 2020 and 2021:

(in metric tons of CO_2 equivalent)	CO_2 emissions in 2021	*Of which:*		CO_2 emissions in 2021 estimated store scope[c]	CO_2 emissions in 2020	CO_2 emissions in 2021 pro forma[a]	Change[a] [d] *(as %)*
		Direct CO_2 emissions	*Indirect CO_2 emissions*				
Wines and Spirits	34,470	*27,536*	*6,934*	-	33,796	34,431	2
Fashion and Leather Goods	107,301	*24,482*	*82,819*	38,349	107,404	106,764	(1)
Perfumes and Cosmetics	14,285	*7,743*	*6,542*	2,999	14,701	14,896	1
Watches and Jewelry	8,965	*1,756*	*7,209*	3,734	6,772	7,247	7
Selective Retailing	96,315	*2,939*	*93,376*	40,370	62,605	63,375	1
Other activities	28,842	*6,599*	*22,243*	107	6,051	12,142	101[b]
Total	**290,177**	***71,055***	***219,123***	**85,559**	**231,329[e]**	**238,855**	**3**

(a) Value and change at constant scope.
(b) Change linked to business levels.
(c) CO_2 emissions by stores not covered by reporting (26% of total sales floor area).
(d) Excludes estimated store power consumption.
(e) This figure does not include estimated emissions generated by stores in 2020.

5.2.2.2 Scope 3 emissions

In 2020, as part of the process to update the carbon footprint, LVMH instructed an external firm to assess the carbon footprint of the entire value chain based on 2019 data with a view to setting a quantified target for the reduction in Scope 3. The 2019 baseline was revised to take into account additional emissions, in particular relating to fixed assets; this revision was approved by SBTi. The total carbon footprint thus stands at 5.1 million metric tons of CO_2 equivalent, including 4.8 million metric tons from Scope 3 emissions, broken down as follows:

- more than 50% of Scope 3 emissions are generated by the sourcing of raw materials (products and packaging). The main sources of greenhouse gas emissions are the production of luxury wool fibers (535,000 tCO_2e); leather (460,000 tCO_2e); grapes, wines and spirits (234,000 tCO_2e, which includes vineyards belonging to the Group's Maisons as well as independent grape suppliers); glass for packaging (192,000 tCO_2e); and cotton (187,000 tCO_2e);
- inbound and outbound transport of components and finished products is the second-largest area, generating 17% of Scope 3 emissions;
- employees' commutes were assessed using average figures by geographic region and accounted for 7% of Scope 3 emissions.

Total emissions from purchases, employee commuting, business travel, fixed assets and product usage and end-of-life treatment will be recalculated in 2022 and annually thereafter, in accordance with SBTi requirements.

Greenhouse gas emissions generated by inbound transport (transport of raw materials and components toward production sites; only the main components and raw materials are taken into account) broke down as follows in 2021:

(in metric tons of CO_2 equivalent)	Road	Air	Ship	Rail	Total
Wines and Spirits	21,967	962	208	1	23,139
Fashion and Leather Goods	10,880	13,707	639	1	25,226
Perfumes and Cosmetics	820	34,430	475	-	35,725
Watches and Jewelry	149	1,947	-	-	2,096
Selective Retailing	-	-	-	-	-
Other activities	4	7	-	-	12
Total	**33,821**	**51,054**	**1,322**	**2**	**86,198**

Greenhouse gas emissions generated by outbound transport (transport of finished products from production sites to distribution centers) broke down as follows in 2021:

(in metric tons of CO_2 equivalent)	Road	Rail	Air	Ship	Inland barge	Electric vehicle	Liquid natural gas	Total
Wines and Spirits	25,416	337	32,971	25,826	53	2	129	84,735
Fashion and Leather Goods	3,064	17	334,949	177	-	-	192	338,400
Perfumes and Cosmetics	2,529	-	280,011	2,151	-	-	65	284,755
Watches and Jewelry	1,090	-	24,176	96	-	-	-	25,362
Selective Retailing	3,254	-	7,332	138	-	63	16	10,803
Total	**35,354**	**355**	**679,439**	**28,388**	**53**	**65**	**402**	**744,055**

The following Maisons did not report any data for transport-related indicators: Rimowa, Rossimoda, DFS, Fred, Royal Van Lent, Thélios, Château Cheval Blanc, Groupe Les Echos-Le Parisien and Château du Galoupet. Furthermore, the reporting process in respect of inbound transport is still under development at some Maisons, with the result that inbound transport indicators are subject to a high degree of uncertainty.

At the forefront of this field, Hennessy achieved a rate of 90% sustainable transport in 2021 by predominantly using sea freight. Meanwhile, Celine has kicked off two new approaches since 2020. The first aims to reduce reliance on air freight and make greater use of sea freight and road haulage, with a target of converting 2,500 cubic meters of air freight each year. The second aims to reduce the size of packaging (by 15% for leather goods, for example), with a direct impact on CO_2 emissions from outbound transport. For last-mile deliveries, Acqua di Parma has launched a seven-days-a-week bicycle delivery service.

5.2.3 Results for LIFE 360 "Climate" targets

The three LIFE 2020 climate targets were already met in 2019: the increase in the proportion of renewable energy in the energy mix and the improvement in store energy efficiency together had enabled a 25% reduction in emissions compared with 2013.

With LIFE 360, the target reduction in energy-related greenhouse gas emissions (Scopes 1 and 2) is measured relative to a new baseline year (2019). The baseline value will be recalculated at each significant change in scope to better reflect changes, in accordance with the GHG Protocol.

Between 2019 and 2021, Scope 1 and 2 emissions declined by 6% and the proportion of renewable energies rose from 36% to 39%. The reduction in greenhouse gas emissions is mainly down to energy efficiency improvements at the Group's stores; the moderate increase in renewable energies arose from more than twenty Belmond sites being added to the reporting scope.

Energy efficiency at the Group's stores has been steadily improving since 2013 thanks to a specific lighting policy, audits of the least energy-efficient stores and a sustainable design policy (see Section 5.1.1). To drive continued strong performance, the LIFE 360 program has endeavored to set more ambitious targets such as full LED lighting across all of the Group's retail floor space.

Summary of LIFE 360 "Climate" targets for 2021:

Indicators	Performance in 2021	Target for 2026
Energy-related CO_2 emissions (Scopes 1 and 2, baseline: 2019)	-6%[a]	-50%
Proportion of renewable energy in the Group's energy mix	39%	100%
Proportion of stores lit entirely by LED lighting	57%[b]	100%

(a) In accordance with the GHG protocol, performance between 2019 and 2021 is based on a recalculated 2019 scope that takes into account changes since 2021: inclusion of emissions from Maisons that joined the LVMH reporting scope (Belmond and Sephora North Asia); inclusion of emissions related to new sites opened since 2019; exclusion of emissions from sites present in 2019 but absent in 2021; inclusion of changes since 2019 in retail floor space, to which average 2019 emissions per square meter are applied. For entities for which 2019 data is not available, emissions for 2020 or 2021 are used instead, constituting a relatively conservative approach.
(b) Based on the scope of data available, which covers around 60% of all data.

5.3 Supporting the principles of the Task Force on Climate-Related Financial Disclosures (TCFD)

In June 2017, the Financial Stability Board, established by the G20, published recommendations issued by the Task Force on Climate-Related Financial Disclosures (TCFD) aimed at providing a clear, comparable and consistent framework for the assessment and disclosure of climate-related information while enabling companies to disclose more information to stakeholders. Understanding that inadequate information can lead to assets and capital allocation being incorrectly assessed, financial decision-makers are increasingly asking companies to (i) manage their exposure to climate-related risks and (ii) reduce their contribution to climate change.

In 2019, as part of its previous LIFE 2020 program, LVMH commissioned a survey to establish how closely the Group's practices were aligned with the TCFD recommendations. This survey highlighted both the robustness of the targets that had been set and how much progress remained to be made on incorporating climate-related issues into governance, corporate strategy and risk management. These conclusions were taken into account when the LIFE 360 action plan was drawn up.

At the end of 2020, LVMH committed to support the TCFD principles and embarked on a process of continuous improvement to implement its recommendations. Those disclosures already available are presented in this report, in the public response to the CDP Climate Change 2021 questionnaire (https://www.cdp.net/en/responses) and in the most recent CSR report (https://r.lvmh-static.com/uploads/2021/04/ac-fr-lvmh-reng20-accessible.pdf).

A breakdown of the corresponding information is set out for the first time in the following table.

Category	TCFD recommended disclosures	References in URD, response to CDP 2021 questionnaire and most recent CSR report
Governance Describe the organization's governance around climate-related risks and opportunities	a) Describe the board's oversight of climate-related risks and opportunities	– URD: Organization of the Group's environmental approach, p. 76; Ethics & Sustainable Development Committee, p. 181; – CDP: C1.1b (Details on the board's oversight of climate-related issues) – CSR report: Governance of social and environmental responsibility, p. 18
	b) Describe management's role in assessing and managing climate-related risks and opportunities	– CDP: C.1.2a (Describe where in the organizational structure… and/or committees lie, what… responsibilities are, and how climate-related issues are monitored)
Strategy Describe the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is pertinent	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	– URD: Risk analysis matrix, p. 77; Strategic, operational and financial risks, p. 126 – CDP: C2.3a (details of risks identified with the potential to have a substantive financial or strategic impact on your business) and C2.4a (details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.)
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	– URD: Risks arising from access to and pricing of raw materials, p. 128; Climate change-related risks, p. 132 – CDP: C 2.3a and C2.4a
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	– URD: Risks arising from access to and pricing of raw materials, p. 128; Climate change-related risks, p. 132 – CDP: 3.2 (Details of your organization's use of climate-related scenario analysis)
Risk management Disclose how the organization identifies, assesses, and manages climate-related risks	a) Describe the organization's processes for identifying and assessing climate-related risks	– URD: Risk identification, p. 53; Risk analysis matrix, p. 77 – CDP: C2.2 (Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities)
	b) Describe the organization's processes for managing climate-related risks	– URD: Risk management, p. 54 – CDP: C2.2 – CSR report: Taking action for the climate, p. 87
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	– URD: Strategic, operational and financial risks, p. 126 – CDP: C2.2a
Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	– CDP: C2.3a (details of risks identified with the potential to have a substantive financial or strategic impact on your business) and C2.4a (details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.)
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	– URD: Reduce energy-related GHG emissions by 50% in absolute terms, p. 92; Reduce Scope 3 GHG emissions by 55%, p. 92 – CDP: C6 (Emissions data); C7 (Emissions breakdowns) – CSR report: LVMH's carbon footprint by business group, p. 91; Breakdown of direct and indirect emissions by year (Scopes 1 and 2), pp. 131-132
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	– URD: Climate targets in line with the Paris Agreement, p. 92; Key achievements in 2021: Climate, p. 94 – CDP: C4 (Targets and performance) – CSR report: LIFE 360, pp. 68-69; Climate trajectory in line with the Paris Agreement, p. 88

6. ENVIRONMENTAL TAXONOMY

In accordance with Regulation (EU) 2020/852 establishing criteria for determining whether an economic activity qualifies as environmentally sustainable ("the Regulation"), LVMH has identified those of its activities that qualify as contributing to climate change adaptation and mitigation objectives ("the Climate Objectives").

As of December 31, 2021, the Regulation stipulates that certain large companies should publish three key performance indicators (KPIs) indicating the proportion of the following three items that is associated with Taxonomy-eligible economic activities:

- revenue;
- capital expenditure, defined as the sum of acquired fixed assets, right-of-use assets in relation to new leases, and fixed assets and right-of-use assets recognized in respect of changes in scope ("capex");
- operating expenditure used to maintain fixed assets and fund research and development (R&D) and non-capitalized leases ("opex").

The Regulation defines eligible activities as those that have the greatest impact on climate change and thus offer the greatest potential for reducing greenhouse gas emissions. These include, in particular, the production and sale of energy, means of transport and transportation services, and real estate development and renovation. LVMH's main activities are thus not, at this stage, targeted by the Climate Objectives.

Consequently, given the restricted list of activities eligible for the Climate Objectives defined at this stage in the Regulation, and the fact that activities' sustainability will only be assessed from 2022 onward, LVMH's climate-related initiatives are not reflected in the key performance indicators defined in the Regulation and presented herein. However, as part of its LIFE 360 program, LVMH is pursuing an ambitious policy to reduce the impact of its activities on the climate, described in §5, "LIFE 360 – Climate". Furthermore, LVMH is strongly committed to product circularity and diversity, as set out in §2, "LIFE 360 – Creative circularity", and §3, "LIFE 360 – Biodiversity". LVMH's actions in these two areas will be more reflected in progress against other environmental objectives covered by the Regulation (protecting water and marine resources, transitioning to a circular economy, preventing/reducing pollution, and protecting biodiversity and ecosystems), notably in respect of the Fashion and Leather Goods and Wines and Spirits business groups.

6.1 Revenue

Since LVMH's main activities are not at this stage cited by the Regulation in relation to achievement of the Climate Objectives, the turnover KPI is nil for LVMH in respect of fiscal year 2021.

6.2 Operating investments (capex)

Part of LVMH's capital expenditure relates to eligible activities as defined in the Regulation, mainly in the real estate sector. This is chiefly the result of lease right-of-use assets. Total capex (as defined in the Regulation) and Taxonomy-eligible capex in 2021 are broken down as follows:

(EUR millions)	**Total capex**	**Of which individually eligible**
Acquisitions of property, plant and equipment and intangible assets[(a)]	3,253	1,134[(c)]
Right-of-use assets in respect of new leases [(b)]	2,730	2,652
Changes in the scope of consolidation, of which:	8,552	1,218
– *property, plant and equipment*[(a)]	*1,016*	*385*
– *intangible assets*[(a)]	*6,678*	-
– *lease right-of-use assets* [(b)]	*858*	*833*
TOTAL FOR 2021	**14,535**	**5,004**

(a) See Notes 3 and 6 to the consolidated financial statements.
(b) See Note 7 to the consolidated financial statements.
(c) Since a breakdown of acquisitions of property, plant and equipment in respect of Taxonomy-eligible activities is not available within the Group's financial reporting, this information has only been collected for those Maisons whose balance sheets include significant property, plant and equipment; these Maisons account for 60% of the Group's total property, plant and equipment. No extrapolations were performed for the other Maisons, which were considered "ineligible" for the requirements of this reporting.

In 2021, LVMH's capex in respect of Taxonomy-eligible activities equated to 34% of its total capex. Eligible capex relates almost entirely to the real estate sector and mainly consists of right-of-use assets in respect of store leases, as well as property acquisition and renovation. Excluding the one-off impact of the recognition of the Tiffany brand and related goodwill, the portion of eligible activities equates to 63% of total capex.

6.3 Maintenance, R&D and rental expenses (opex)

Since asset maintenance expenses are not readily available within the Group's financial reporting, this information has only been collected for those Maisons whose balance sheets include material amounts of property, plant and equipment and right-of-use assets (together accounting for 60% of the Group's total property, plant and equipment and right-of-use assets).

Given this basis, maintenance, R&D and rental expenses (in respect of non-capitalized leases) represent a non-material proportion of the Group's total operating expenditure. As provided for by the Regulation, this indicator is not shown since it is not relevant in light of the Group's activities.