STELLA McCARTNEY

ECO IMPACT REPORT 2020

A Message from Stella

At Stella McCartney, change has always been about being more conscious, more in tune with Mother Earth and her creatures – and using the fashion industry as a powerful platform to make that message desirable. Having questioned how and why we do everything during lockdown, I see now more than ever that we need to slow down and be more mindful, whilst simultaneously accelerating our push towards circularity and regenerative, nature-based solutions – remaining focused on having a positive environmental and social impact and making every action count. This year, we have seen that we can truly come together as a species to collectively face a challenge and, while we still have a long way to go, I have never felt more hopeful that we can achieve but we need to do this collectively.

x Stella

Introduction

At Stella McCartney, we believe that we all have the power to affect change. We also recognise that our planet is at a turning point, and are committed to making every action count. While we were expecting 2020 to be a monumental year, with world leaders coming together to create a new deal for nature, the global pandemic and international human rights movements have forced us to pause and rethink what we want our industry, economies and communities to be like in the future. If we collectively rise to the challenge, we have an opportunity to (re)think how we address deep-rooted issues and accelerate change in the right direction.

We are releasing this report because we believe information is power and necessary to guide action, so we must first face some hard truths: 75% of terrestrial land has been altered by human activities, wildlife populations have declined by 60% and leading scientists have declared we are in a climate emergency and have until 2030 to cut our global emissions in half and combat dangerous climate change. It is essential that we act now in order to limit global heating to a maximum of 1.5°C, halt the sixth mass extinction and tackle inequality, factionalism and increasingly vulnerable livelihoods.

As former UN Framework Convention on Climate Change head and friend Christiana Figueres said, "We have to be able to honour the fear, to honour the despair, to get in touch with it, but also move beyond it into gritty determination, into the conviction that we, as humans, are smart enough, and we are developed enough as a species, to actually be able to engage in this."

Christiana's words ring truer than ever in this moment – as does her concept of stubborn optimism. This ethos embodies our stance perfectly; the fundamental belief that we can come together and help each other to better the fate of humankind and Mother Earth. We celebrate life and work tirelessly to protect it.

We believe that it is crucial that companies measure, disclose and take action to not just reduce, but reverse environmental degradation. Over the years, we have recognised the value of using our impact results to inform our sourcing decisions, design and innovation research. Nature provides us with goods and services such as food, fibres and timber that we need to live. However, many of these fundamental 'goods and services' are not valued despite being a condition for human survival – such as clean air, fresh water, climate regulation and natural flood defences.

The value of these goods and services tend to be hidden and not accounted for, which has led to companies operating without regard or recognition of their impacts on ecosystems – so much so that we have been depleting our natural environment faster than it can restore itself. Not only is climate change a growing threat to species and ecosystems, but also to people and communities worldwide, especially those that depend most directly on Mother Earth and the services she provides.

Now more than ever, we must come together to support people across the world to ensure their rights are respected, their voices are heard and that we are all working together to protect what we hold dear.

The decisions we make today are critical for our better tomorrow – building our socio-economic resilience and regenerating our social and natural systems so that we avoid or reduce the likelihood of these future shocks. Humanity faces an existential race against time and we must make every action count. We still have hope but we must act now.

We begin this report by reflecting on our sustainability journey since Stella McCartney was established in 2001, and where we stand now. Believing that sharing inspires trust, in Chapter 2 we present our 2018 and 2019 environmental impact results, as well as the updates we have made to the impact methodology since exiting the Kering Group and becoming an independent brand.

Chapter 3 outlines our approach and recent activities to support the people in our supply chain. Each person is vital to the creation of our products and we have a responsibility to ensure every worker is respected, valued and heard.

Chapter 4 sets out our thinking for the future and what our priorities should be as a company.

Our hope is that in publishing this report, we will inspire others to consider their natural capital and account for the value of the 'hidden' services that nature provides us all. Coming together has never been more necessary than it is in this moment. It is imperative that we all accelerate the change needed to protect Mother Earth. In order to do this, we believe we must first acknowledge all that nature provides.

Chapter 01

Where We Came From

Where We Came From

Stella McCartney is a luxury lifestyle brand founded in 2001. With a goal of bringing a conscience to the fashion industry, we are always working to achieve our commitment of being an ethical, modern and honest company. We believe we are responsible for the resources we use and the impact we have on people, animals and the planet.

We are constantly exploring innovative ways to become more sustainable, from designing to product manufacturing to our retail practices. As a lifelong vegetarian, Stella has never used any leather, fur, skins or feathers for both ethical and environmental reasons – setting the standard for the use of alternative animal-free materials.

We have also been making some changes internally. After 17 years of partnership, Stella purchased Kering's stake in our company in 2019. Today, Stella McCartney spans women's ready to wear, menswear, kids' clothing, accessories, swimwear, lingerie, a performance wear collaboration with adidas, fragrances and more – with stores in New York City, London, Los Angeles, Paris, Milan, Tokyo, Shanghai and Beijing. Our collections are now sold in 77 nations through 863 specialty shops and department stores, and ship to 100 countries via online.

Supporting circularity, the brand is embracing new business models that will transform how clothes are produced, sold, shared, repaired and reused; promoting long-lasting products with extended use to reduce our environmental impacts. With a global family mindset and spirit, we are also committed to empowering women and supporting workers' rights to create the world we want to see.

We believe that it is our duty to use our voice and platform to bring attention to these critical topics and to share our progress. While we have made significant progress on reducing some of our biggest impacts over the past 10 years, we know that we have still have more work ahead of us. We are invigorated and hope that others in the industry –and world– will join us in pushing towards a brighter future.

In Figure 1, we recap our journey as a brand to date.

Where We Came From

Figure 1. Timeline of our most important sustainability milestones to date

YEAR	ACHIEVEMENT
2001	Establishes the House of Stella McCartney, founding the first vegetarian luxury brand and building responsibility into the core of the business; no leather, no fur, no skins - ever
2003	Starts to power all UK locations with renewable energy from Ecotricity
2008	Uses organic cotton for the first time in main collections
2009	Launches the McCartney's Meat Free Mondays initiative, encouraging people to forgo meat one day a week to improve their health and reduce their carbon footprint
2010	Bans use of PVC in all collections First carbon offset as a brand
2011	Launches eco eyewear collection using cutting-edge technology to create plant-based resins and plastics Partners with the International Trade Centre's Ethical Fashion Initiative to support artisans in Kenya with fair trade accessories collections

YEAR	ACHIEVEMENT
2012	Partners with the Natural Resources Defense Council (NRDC) on their Clean by Design programme, becoming the first company to bring it to Europe Decides not to sell fragrances in China due to Chinese laws requiring animal testing Bans the use of plastic water bottles in all Stella McCartney offices Uses bio-acetate for the first time in eyewear and Apinat, a biodegradable rubber, in shoes All the wood in stores and offices is Forest Stewardship Council (FSC) certified, ensuring it comes from sustainably managed forests; all of our packaging and paper is also either FSC-certified or from recycled sources Joins the Ethical Trading Initiative, a leading alliance of companies, trade unions and NGOs that promotes respect for workers' rights around the globe
2013	Completes first Environmental Profit & Loss account to provide an in-depth map of environmental impacts across the whole supply chain Dallas store receives LEED certification, one of the most-recognised international standards for building sustainability Lining of all Falabella bags switches to recycled polyester, created from recycled plastic water bottles Introduces Eco Alter Nappa material in shoes and bags - an innovative material that has a coating created with over 50% vegetable oil, a renewable natural resource that allows us to use less petroleum in our products

YEAR	ACHIEVEMENT
2013	Starts using LED lights in stores to reduce energy consumption Bans the use of angora
2014	Becomes the first fashion brand to join the Wildlife Friendly Enterprise Network Partners with the NGO Canopy and makes a public commitment to ensure that by 2017 none of our viscose or cellulose fabrics would come from ancient or endangered forests Introduces bio TPU rubber for shoe soles made from 49% renewable resources, reducing our dependence on petroleum-based materials Launches the Clevercare initiative, a simple reminder to consider the environment when washing and caring for your garments Initiates multi-brand collaborative effort to build respect and recognition for workers within a highly skilled artisanal supply chain
2015	Introduces regenerated cashmere to ready-to-wear collections Launches study into environmental impacts of Use and End of Life phase of products Launches Fur Free Fur

Where We Came From

YEAR	ACHIEVEMENT
2016	Sources all viscose used in ready-to-wear from certified-sustainable forests in Sweden, achieving the commitment made in 2014 Publishes first Environmental Profit & Loss report offering a detailed insight into environmental impacts across the whole supply chain, from farm to finished product, for 2015 Replaces all virgin cashmere knitwear with a regenerated cashmere yarn, Re.Verso™, that greatly reduces environmental impact Launches Falabella GO, a collection of backpacks and travel bags made from recycled nylon Initiates productivity and wage analysis pilot to raise worker wages
2017	Achieves Cradle to Cradle Certified Gold-level certification for wool knitwear yarn, a fashion industry first Starts partnership with ECONYL®, an innovative regenerated nylon fibre created from reclaimed fishing nets, carpets and post-consumer waste Announces partnership with The RealReal, the leader in authenticated luxury consignment Announces partnership with BOLT Threads and debuts the first garments made with vegan Microsilk™ at MoMA and Paris Fashion Week Co-hosts the launch of the Ellen MacArthur Foundation's 'A New Textiles Economy' report and commits to moving towards a more circular business model

YEAR	ACHIEVEMENT
2017	Starts using lower-impact metals such as aluminium in our bag chains Launches holistic supplier improvement programme in China to build better HR management systems and improve working conditions in our factories
2018	Launches second innovative material with BOLT Threads - MYLO™, a leather-like material made from mycelium Launches the UNFCCC's Fashion Industry Charter for Climate Action Launches the first vegan Stan Smith with adidas, named the most-popular sustainable product in 2018 by Lyst Makes Global Plastics Commitment with the Ellen MacArthur Foundation - committing to eliminate all problematic and unnecessary plastic items; innovates to ensure the plastics we do need are reusable, recyclable or compostable; and circulate all the plastic items we use to keep them in the economy and out of the environment Launches Loop trainer, our most sustainable sneaker yet - recyclable, made with eco-friendly materials and utilising a revolutionary locking system to attach the shoe's upper and sole, thus eliminating the need for glue Opens Old Bond Street flagship store, our most sustainable store to date Bans the use of mohair Initiates the creation of a multi-brand industry collaboration in Italy, focusing on increasing awareness around social sustainability and empowering suppliers

YEAR	ACHIEVEMENT
2019	Partners with Canopy on #ThereSheGrows campaign to raise money and awareness for the Leuser Ecosystem, a critically endangered forest habitat in Indonesia Announces collaboration with Google to develop an opensource to¬¬¬ol to assess raw material impacts adidas by Stella McCartney launches first-ever products made with Evrnu's Nucycle™ yarn, made from liquefied cotton waste Launches the Stella McCartney x Hunter boot, made with certified sustainable and traceable rubber Summer 2020 show is our most sustainable collection ever Introduces our Responsible Sourcing Guide to suppliers - our most detailed and comprehensive guidance on our sustainability standards and policies to date Initiates pilot project with &Wider, listening to direct feedback from workers in our supply chain Joins the G7 Fashion Pact Launches Stella Sustainability Hub for suppliers
2020	Launches KOBA® - a faux fur containing 37% plant-based content, reducing our use of virgin petroleum-based materials Launches COREVA™, the world's first 100% plant-based, renewable and biodegradable stretch denim - innovatively replacing the common synthetic and petrol-based elastomers with natural rubbers to make it completely plastic-free Endorses the ILO's COVID-19 Call to Action in the garment industry Develops multi-dimensional human rights risk assessment tool to build understanding of potential threats to workers throughout the supply chain

Chapter 02

The Value of Nature

The Value of Nature – 2018/2019 Environmental Impact Results

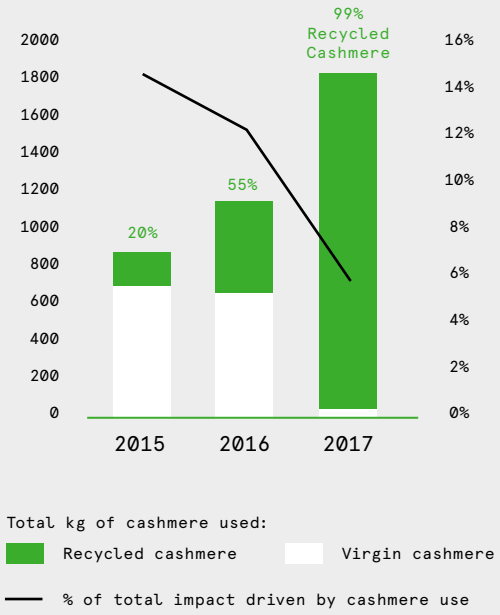
Fashion directly relies on nature for raw materials and resources, and negatively impacts it through the creation of waste and pollution. Mother Earth is rich with biodiversity and provides important, and often irreplaceable, ecosystem services. A 2012 study by The Nature Conservancy and the Corporate EcoForum estimated that the planet's "natural living infrastructure" provides $72 trillion a year of "free" goods and services that support the global economy.

In order to be a responsible business, we believe that it is imperative to understand the full extent of our impact on the natural environment and ensure that when we make decisions, we are always mindful of these impacts and are working to minimise or reverse them where possible.

We do this by taking a natural capital accounting approach, detailing the ways that businesses depend on ecosystem services and how our activities affect the natural environment. The Environmental Profit & Loss (EP&L) is a groundbreaking tool that was developed by Kering to measure and monetise the environmental impact of its Group activities. The tool uses natural capital accounting methods to place a monetary value on environmental impacts resulting from company activities – from the extraction of raw materials to the manufacturing of products to direct operations required to sell those products. Since becoming an independent company, we have been working on customising the tool to better suit our portfolio of materials and supply chain. We will continue to use it to account for the impact of Stella McCartney on nature and leverage results to inform the way we act as a business. For details on our methodology, what is measured and included in the scope, please see Appendix I.

Our Impact So Far

Figure 2. Cashmere impact vs kgs consumed from 2015-2017



Since first adopting the EP&L in 2013, we have been working hard to reduce our environmental impacts. We have spent many years managing this impact by phasing out the highest-impact materials or processes identified and replacing them with lower-impact alternatives. Having such a strong focus on the raw materials we use has allowed us to delve deep into our supply chains, gain traceability of fibres and build strong relationships with our suppliers. We made some important decisions as a business based on the learnings from the tool, such as banning the use of virgin cashmere in 2016 and cellulose-based fibres coming from ancient or endangered forests.

The tool has enabled us to engage and work closely together with our suppliers to use more sustainable materials and have meaningful conversations about the importance of reducing the impacts of their mills, such as through the Clean by Design programme that we have been participating in since 2012. We have also been investing in improving the efficiency of our own operations by taking actions like switching to renewable electricity and energy-saving equipment.

Since first publicly reporting our EP&L results in 2015, we saw a consistent decrease in our environmental impact versus business growth. For example, when compared to 2015, our 2017 EP&L intensity was 16% lower despite total sales being 20% higher. This was largely due to our strategy to phase out high-impact materials and maximise our use of lower-impact alternatives. Our most significant savings were achieved by eliminating our use of virgin cashmere, using forest-friendly viscose, reducing our use of brass and increasing our use of organic over conventional cotton.

Taking virgin cashmere for instance, the graph below shows the evolution of our cashmere impact results over 2015-2017. As illustrated by the bars, after switching to recycled cashmere the proportion of impact associated with cashmere (as indicated by the orange line) consistently declined from 28% in 2014 to 5% in 2017 due to our move towards pre-consumer recycled cashmere and away from virgin cashmere. For more information about this decision, please see our 2015 EP&L report.

Another important decision that we made was committing to never using viscose originating from ancient or endangered forests, which are defined as naturally rare forest types, forest types that have been made rare due to human activity or forests that are ecologically critical such as those of high species richness or containing elevated concentrations of rare and endangered species. Instead, we have partnered with viscose suppliers that have had their sourcing third-party verified and only source from sustainably-managed forests – a balanced way of using forests at a rate that meets their regeneration capacity so that they are preserved for future generations.

In order to better capture the impact of this commitment in our results, we also commissioned a peer-reviewed Life Cycle Assessment (LCA) that evaluates and compares the environmental impacts of sourcing Man-Made Cellulosic Fibres (MMCFs) from different feedstocks and forest management systems. We hope that with this evaluation, we can improve data available for MMCFs that captures the lost ecosystem services associated with deforestation and the impacts of different viscose-sourcing practices. Our LCA is publicly available and can be found here.

In 2015, we commissioned the first consumer use and end-of-life study for luxury, which involved a survey of over 1,000 of our customers in the UK. This allowed us to better understand how our products are cared for and handled at the end of their use and to quantify the footprint of this important part of the product life cycle. While it has been our intention to incorporate t his into our environmental impact assessment tool, it has not been possible to align the methodologies yet. Nevertheless, the insights gained helped inform our sustainability approach and led to our 2017 Clevercare campaign, a communications and labeling initiative that encourages everyone to consider the environment when washing, drying and taking care of our garments. In the same year, we also announced a partnership with the RealReal to incentivise the resale and second life of products – helping to ensure they never end up in landfill. We have also partnered with a number of innovators to accelerate the development and scaling of their recycling solutions.

Using renewable inputs in a way that is in line with nature's regeneration capacity alongside recycled materials is part of our wider efforts to transform the business into a circular model. Our long-term vision for a circular fashion industry is one where products and materials are kept within the system and reused for as long as possible, or are safely returned to the ground as nutrients. In this way, finite resources are protected and fibres are grown in a restorative way to ensure sound environmental health for future generations.

Developing Our Environmental Impact Methodology

We took our exit from the Kering Group as an opportunity to review our impact methodology and improve the representativeness of the tool, especially given our distinct sourcing profile. Our objective was to improve how the tool accounts for impacts at the regional level where Stella McCartney sources from and manufactures in, and the main materials that we typically use for all our collections. While the structure of the tool (as described in Appendix I) and data requirements have remained unchanged, we have reviewed underlying data and incorporated more from our specific key raw material and manufacturing suppliers.

We have also amended the scope and calculation flow to further customise the methodology so that it best reflects our reality.

When developing a corporate accounting tool to measure progress over time, there is always a trade-off between incorporating the most current data to improve the methodology and holding the methodology constant so that year-on-year change is easier to track. We are always evolving as a company and industry, and acknowledge that we need to be agile and flexible so that when better data or new analysis becomes available we are able to incorporate these improvements into the tool. Nevertheless, we decided to take this moment, at the start of a new chapter in Stella McCartney's history, to invest time and resources into determining the best way to model the impacts of our key materials and suppliers in order to tailor the tool to our supply chain as much as possible – with the hope to minimise the need for methodological changes in future.

A detailed overview of the key changes, new data integrated and sources can be found in Appendix II and III.

Our 2018 & 2019 Results

Following the aforementioned changes and updates to the tool, our total valued impact on nature in 2018 was estimated to be €8.22 million – with a very slight decrease in 2019 to €8.21m.

Our 2017 results were €7.38 million but given the change in scope, methodology and underlying data, it is not possible to directly compare our 2018/19 results with previous years. Our most-used materials by volume are:

1		COTTON (26% of total material use in 2018, and 28% in 2019) – consistently our most-used fibre since we use it across all product categories (73% of which was organic)
2		POLYESTER AND POLYURETHANE Driven by our use of vegan leather in shoes and bags
3		WOOL Used in our ready-to-wear and knitwear
4		BRASS Driven by our Falabella bag chains
5		VISCOSE An important carryover material used in ready-to-wear and our linings (which we verify to be free from ancient and endangered forests)

The material portfolio changes between ready-to-wear and our shoes and bags can be seen in the comparison tables below:

RTW	
MATERIAL GROUP	%
Cotton	42
Wool	15
Polyester & Nylon	11
Viscose	08
Plastic Trims & Soles	06
Other Synthertic Fibres	04
Silk	03
Other cellulose-based fibres	03
Brass	03
Faux Leather	02
Paper	02
Other Metal	01
Other Plant Fibres	01
Other Animal Fibres	01
Rubber	0.3
Recycled Cashmere	0.3
Other Material	0.1
Wood	0

SHOES AND BAGS	
MATERIAL GROUP	%
Plastic Trims & Soles	29
Faux Leather	18
Brass	14
Other Metal	11
Wood	09
Polyester & Nylon	09
Cotton	05
Paper	03
Other Synthetic Fibres	0.5
Other Plant Fibres	0.2
Rubber	0.1
Other Material	0.1
Viscose	0.1
Other Cellulose-Based Fibres	0.1

Table 1. Summary of Stella McCartney fibre usage in 2019 (RTW vs Shoes & Bags)

Our 2018 & 2019 Results

Figure 3 provides a recap of the way that fashion value chains are divided into tiers, and more details on the scope of our assessment can be found in Appendix I.

When compared to our 2017 results, although not a like-for-like comparison given the different scopes and methodologies, the relative distribution of impacts across tiers has not changed, with the majority of impacts driven by raw material extraction (Tier 4). This is consistent with all our previous results.

Table 2 shows the change in the way our total impact is distributed across environmental impact groups. The biggest change is in the land use impact category. Where greenhouse gases (GHGs) previously represented our biggest environmental impact group, it is now land use that accounts for over a third of our total. This is driven by the new information incorporated about natural materials, both animal-based and plant-based fibres, that occupy large areas of land that may have been converted from other land-use types for industrial use. We will look more closely at the drivers of our land use impact later in the report.

TIER		
4	 Raw Material Extraction	Cultivation and extraction of raw materials from the earth, plants, or animals
3	 Raw Material Processing	Processing of raw materials into intermediate products
2	 Material Production	Production and finishing of materials (e.g. fabric, trims) that go directly into finished product
1	 Finished Production Assembly	Assembly and manufacturing of final products
0	 Office, retail & distribution centers	Corporate real-estate not involved in production process

Figure 3. Supply chain tiers

Our 2018 & 2019 Results

	PROPORTION OF IMPACT		
ENVIRONMENTAL IMPACT GROUP	2017	2018	2019
Air Emissions	07%	07%	07%
GHGS	36%	27%	27%
Land Use	29%	37%	37%
Water Consumption	12%	09%	10%
Water Pollution	07%	18%	17%
Waste	09%	02%	02%

Table 2. Distribution of total impact by environmental impact group from 2017-2019

Looking at our results by tier and environmental impact category allows us to see which parts of our supply chain and raw material usage contributes to each type of impact. Figure 4 below shows the distribution of the 2019 results across the value chain and by environmental impact indicator.

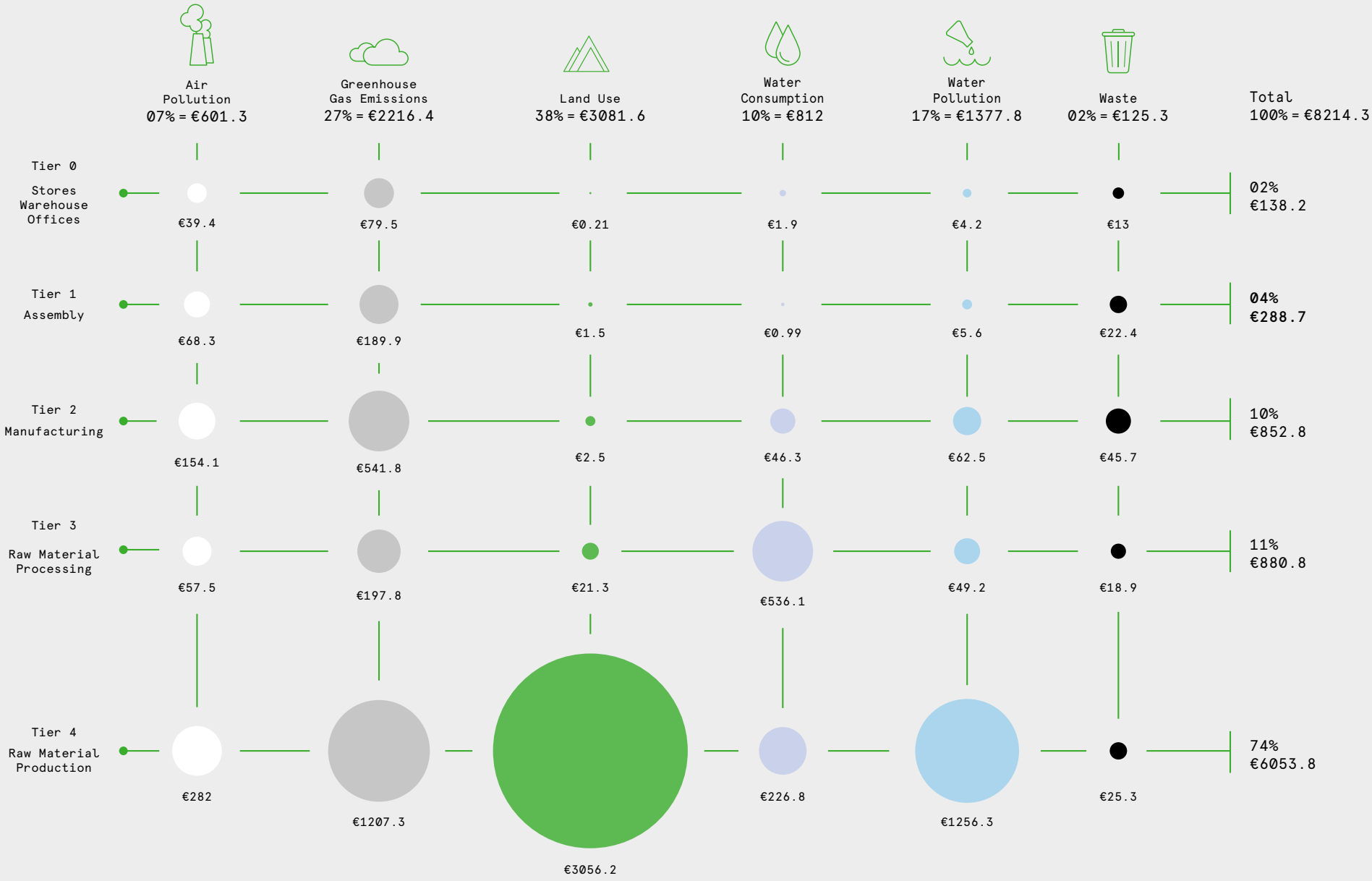
What is consistent across the 2 years is that our most significant environmental impacts are in the rawmaterials extraction phase (farms, forests, mines, etc), the furthest back in the supply chain. As shown in Figure 4, 78% of our impacts in 2019 were driven by Tier 4.

GHGs and land use are the biggest environmental impact types in both years.The following sections are a deeper dive into these two most significant environmental impact categories – the key drivers behind them and how we aim to address them going forward.

But before getting into this, it is worth bringing our attention to another material impact area. Outside of GHGs and land use, water pollution in Tier 4 is another notable hotspot of impact. This is driven by our use of brass, which accounts for 77% of our water pollution impact. The issues with mining of copper (copper makes up around 12% of brass' composition) are well known to us; we have been working to phase out this material and develop alternatives that have lower impacts and are more recyclable.

Breakdown of 2018/2019 Results

Figure 4. Breakdown of 2019 EP&L results by Tier and Environmental Impact Group (in €'000s)



Land Use

Two-thirds of the planet's terrestrial and aquatic ecosystems are now significantly degraded due to human activity such as agriculture, mining, logging and fishing. Although there are still a few areas of semi-pristine nature, almost all have been modified by people in some way. Knowing this, it is not surprising that land use impacts make up 38% of our total environmental impact – the biggest of all our environmental impact categories.

Fashion supply chains occupy huge areas of land – from farms, forests and mines where fibres or resources are extracted from, to the footprint of the buildings that house manufacturing processes and retail operations. When land is used to grow fibres, raise animals or extract metals or oil, there tends to be a loss of ecosystem services, biodiversity and degradation of soil health, especially if it was converted or is not managed properly. In the IPBES Global Assessment Report on Biodiversity and Ecosystem Services released in 2018, leading experts warned of the acceleration in loss of nature and argued that the risks posed by biodiversity loss should be considered on the same scale as those of climate change.

	2018	2019
Total land use (ha)	6,976 ha	6,974 ha
Valued impact (€)	€3 million	€3.1 million

Table 3. Summary of land use and valued impact

The table below shows the total land occupied by our business operations in 2018 and 2019, as well as the valued impact.

As shown in Table 4, the materials that drive our land use impact are animal-based and plant-based fibres where wool and cotton combined make up 90% of our total land use impact across all tiers in the supply chain. It should be noted that we have avoided significant land use impacts through previous decisions such as stopping the use of virgin cashmere and ensuring that all of the forestry products consumed come from sustainably managed forests. The valued land use impacts are not just driven by the area of land required for fibre production, but also by location-specific factors such as type of biome, number of different species in the region, amount of land conversion and associated loss of ecosystem services – highlighting the importance of having traceability of the fibres we use down to the farm-level.

	HA	€	% OF VALUED IMPACT
Wool	6,258	2,590,438	84%
Organic Cotton	279	134,647	04%
Conventional Cotton	113	74,796	02%

Table 4. Top 3 materials and their contribution to our land use impact (2019)

Land Use

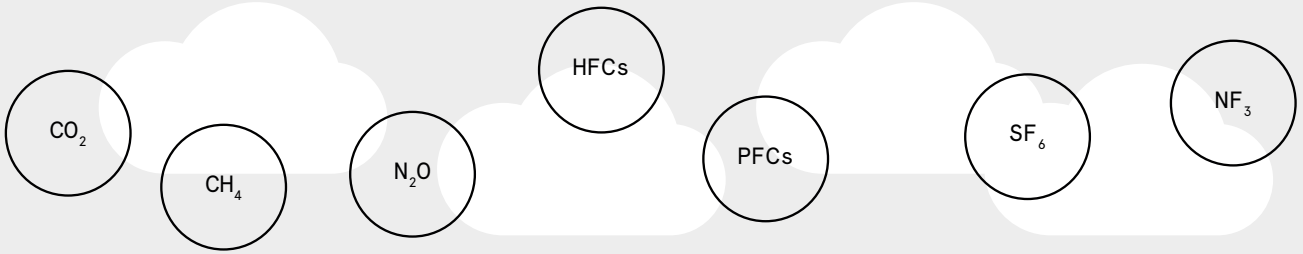
Since Stella McCartney was established in 2001, we have never used animal leather, fur, feathers or skins for ethical reasons. However, these materials also have very highly valued environmental impacts because of the land required for animal rearing and growing crops for feed, greenhouse gas emissions related to the methane generated by ruminants and the tanning impacts of leather production.

The company was built on Stella McCartney's personal beliefs and on the core principle that no animal should be killed or harmed for the sake of fashion. Animal welfare has always been at the heart of the brand and is a priority when sourcing animal-based fibres to ensure that our fellow creatures are never hurt for our products. While wool has been a focal material for years, our priority has always been the wellbeing of the animals. To ensure that animal welfare is protected we rely on animal welfare experts, who support us in developing best in class on-farm standards as well as conduct on-farm visits and assessments. However, these latest results have brought into focus the material's contribution to our land use and climate impact; this makes sense given that the wool we source is grown extensively, occupying a large area of land.

Extensive agriculture uses small amounts of inputs relative to the land area being farmed. In our model, we assume that all land being occupied for an activity relating to our production has undergone some conversion; therefore, there has been a loss of ecosystem services. Fibres coming from extensive farming systems are associated with large amounts of lost natural capital. However, we are aware that this is not always the case in our supply chain – for example, some large farms that we source from are on pristine land with no conversion, and we have collected data directly from these supply chain partners to better reflect the realities of their practices and impacts on the ground. We also updated our assumptions about the local area, such as the biome mix, though this could have been further improved had there been better availability of some biodiversity metrics. This highlights the importance of knowing the farms we source from, where they are located and the types of farming systems and practices that are used.

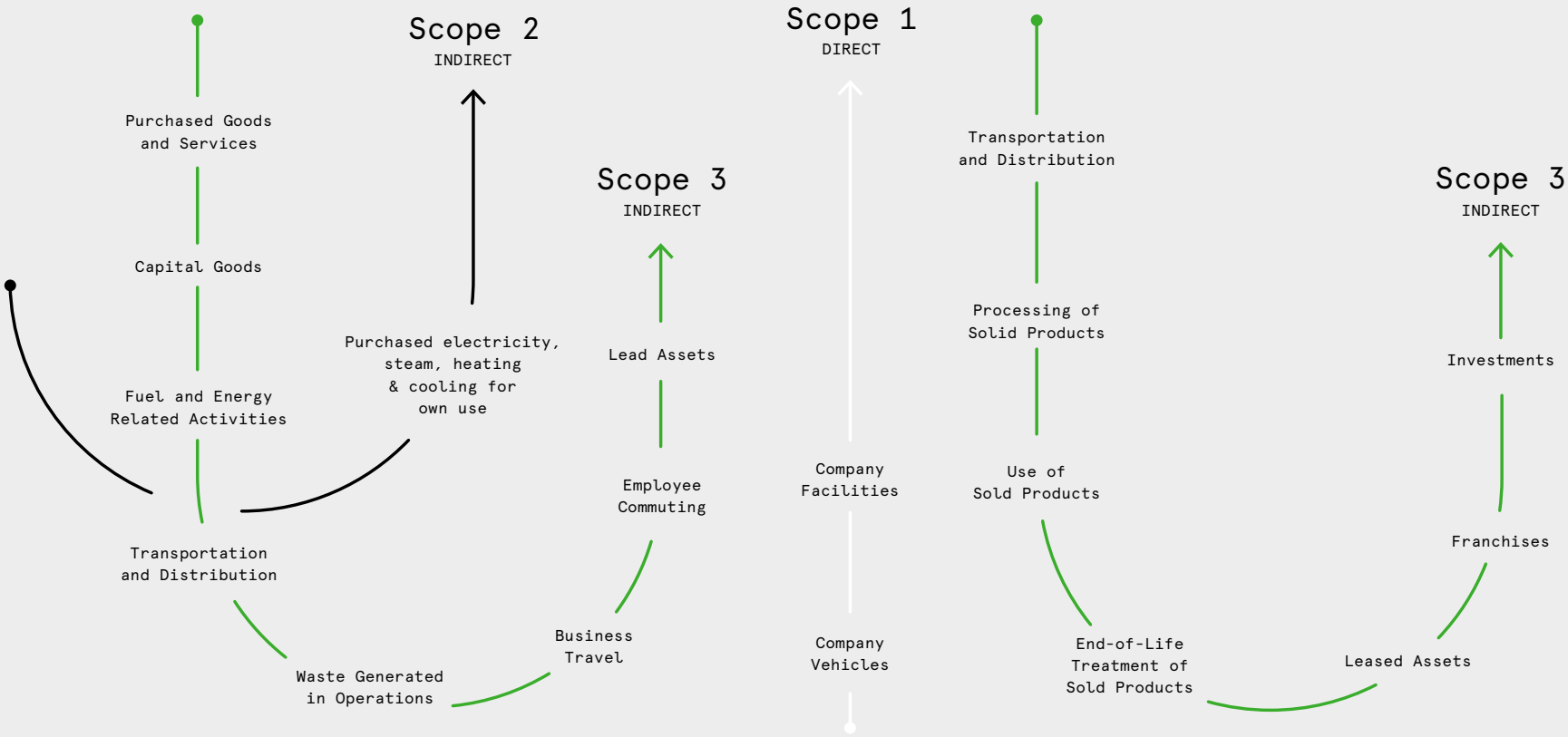
In recent years, we have carefully selected partners based both on animal welfare criteria and also their environmental stewardship and good land management practices. However, we will take this further and do more to promote the restoration of these landscapes and ecosystems.

Greenhouse Gas Emissions



We have been accounting our greenhouse gas emissions since first using the EP&L tool in 2013, which calculates Scope 1 (direct emissions from sources that are owned or operated by Stella McCartney), Scope 2 (electricity indirect emissions) and some Scope 3 emissions (eg. purchased goods and services). See Figure 5 below for an explanation of these scopes:

Figure 5. Explanation of Scope 1, 2, 3 greenhouse gas emissions



Greenhouse Gas Emissions

Compared to other environmental impact categories, our greenhouse gas emissions are more evenly distributed across all tiers rather than being mostly concentrated in one. However, when categorised by the Greenhouse Gas Protocol's recommended scopes, the majority of our emissions have consistently been in Scope 3 since first using the EP&L. This means the biggest opportunity for reduction lies outside of our direct operations, which makes it all the more important to identify where the emission hotspots are in our supply chain as well as the suppliers and materials that have potential for reductions or energy efficiencies. This is also why we think it is so important to have collaborative relationships with supply chain partners because it is only through working together that we can achieve the urgent GHG reductions that are required.

In 2019 we emitted approximately 27,210 tonnes of carbon, which equated to a cost to society of €2.2m.

Table 5 shows a breakdown of our GHG emissions in 2019 across tiers, plus their valued impact. The biggest concentrations of emissions are in Tier 2 and 4, the manufacturing and raw material extraction phases, both of which are Scope 3 emissions.

Of our total GHG impact, 44% is driven by our use of wool – making it our highest-impact raw material in this category. The next highest-impact material is cotton, which accounts for 11% of our entire GHG impact.

TIER	GHGS (KGCO2E)	GHGS (€)	% BREAKDOWN
0	976,249	79,523	04%
1	2,331,042	189,882	09%
2	6,651,238	541,798	24%
3	2,428,835	197,849	09%
4	14,821,122	1,207,302	54%
TOTAL	27,208,486	2,216,354	

Table 5. Breakdown of GHG emissions across Tiers (2019)

Addressing our Impact on Nature

It is now widely recognised that climate change and biodiversity have many interdependencies. According to the Millennium Ecosystem Assessment, climate change is likely to become one of the most significant drivers of biodiversity loss by the end of the century. However, biodiversity makes an important contribution to climate change mitigation and adaptation through the ecosystem services it supports. The IUCN have declared that halting the loss and degradation of natural systems, and promoting their restoration, have the potential to contribute over one-third of the total climate change mitigation required by 2030. Therefore, conserving and restoring biodiversity is critical in avoiding devastating climate change.

With this in mind, and together with the insight that land use and GHGs are the largest impacts that our business has on nature, we are carrying out further research and location-specific, site-based assessments to understand the specific drivers of these impacts in order to develop our approach to mitigating them.

NATURE-BASED SOLUTIONS

We are also exploring the potential of nature-based solutions, particularly regenerative farming principles, in addressing both our land use and greenhouse gas impacts – especially since they are both driven by our use of fibres from agricultural systems. Restoring the health of the land is important for farmer livelihoods and building resilience to the changing climate, and is also an effective way to draw carbon out of the atmosphere. Nature provides a number of carbon sinks that capture and store carbon emissions, such as forests, soils and peatlands. For example, land absorbs approximately 29% of all anthropogenic carbon emissions and oceans have sequestered up to 20-30% of all emissions since the 1980s. Nature-based solutions focus on conserving these carbon sinks and have the potential to provide one fourth of the climate mitigation needed to meet the 1.5°C goal set out in the Paris Agreement.

For many years, farming and agriculture have become heavily industrialised and dependent on the application of chemicals to maximise yields and profits. However, over time this has led to the degradation of soil health – meaning more chemicals are required to achieve the same yields, resulting in an addiction to these toxic, fossil fuel-derived inputs. Agriculture has the potential to provide solutions to climate change and nature loss, rather than contributing to these challenges. While we recognise that this requires a long-term and large-scale systemic transformation in the global agricultural system, we want to ensure we are doing our part to drive this change by engaging all actors in our supply chains and external networks on this important solution.

We aim to promote a way of farming that prioritises the restoration of soil health, improves carbon sequestration, enhances biodiversity and has a positive social impact for farmers and local communities. Additionally, higher soil carbon levels improve water-holding capacity and infiltration, nutrient availability and ultimately the resilience of farms to climate change and extreme weather events.

WOOL

When applying this concept in the context of wool supply chains, planned rotational grazing provides a way of managing pasture and grasslands that avoids the overgrazing of grass and allows for adequate rest and restoration of the pasture between grazings. This is also often called holistic management, with one of the key underlying principles to this way of working being looking at how grasslands were historically grazed and mimicking these patterns. For example, North American bison and other herbivores would roam grasslands, churning the soil with their hooves and fertilizing the land with their dung, which stimulates plant growth. Under the rubric of holistic management, wool growers look to recreate these conditions with livestock, such as sheep and cattle.

Working this way has proven effective in helping to regenerate degraded systems, improving topsoil and its ability to draw down carbon. In his TED Talk, Allan Savory, who coined the term holistic management, claimed that by deploying these methods we could "take back" half of the planet's arid grasslands: "There is only one option —I'll repeat to you, only one option— left to climatologists and scientists, and that is to do the unthinkable and to use livestock, bunched and moving, as a proxy for former herds and predators and mimic nature. There is no other alternative left to mankind." We are looking to support these growers and work with our supply chain partners to transition to these holistic land management systems.

Addressing our Impact on Nature

COTTON

We have also been using organic cotton as much as possible since 2008 – cotton that is grown without the use of toxic chemical inputs such as fertilisers and pesticides. These are polluting to air and water, harmful to the wellbeing of workers and local communities, and degrade soil health, which can make farmers even more dependent on their application to achieve the same yields over time and creating a vicious cycle. The below diagram compares the difference in impact of crop farming when cotton is grown conventionally and organically in Turkey:

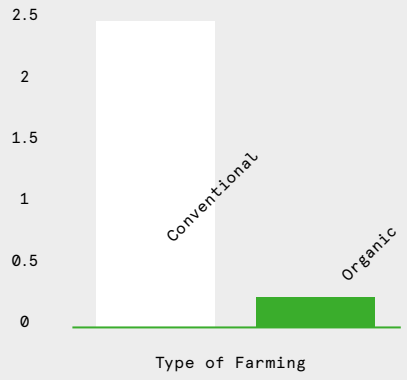


Figure 5. Comparison of impact per kg of conventional vs. organic cotton grown in Turkey

According to our latest methodology, switching from conventional to organic cotton grown in Turkey provides an 89% reduction in impact per kg, which is why we have promoted the use of this method of growing cotton for years. As cotton is our most-used fibre by volume, we have been continually working on increasing our use of organic cotton, as well as improving our understanding of our key suppliers' sourcing of fibres to gain as much traceability as possible in order to calculate regional impacts.

However, there can be a net negative environmental impact even when fibres are grown organically. While organic farming systems eliminate the use of toxic inputs, unless regenerative farming practices are employed this typically only leads to a reduction in negative impact rather than a positive restoration of lost ecosystem services. We are working closely with a supply chain partner to test a suite of regenerative farming practices in order to rebuild soil health, increase soil organic carbon, improve water-holding capacity, enhance biodiversity and increase productivity and yields.

We have been exploring the potential of regenerative agriculture in our cotton supply chain. A Biologically Enhanced Agricultural Management (BEAM) method, developed by the US scientist David C. Johnson PhD, employs the application of microbiologically-diverse extracts, created from a compost made in a Johnson-Su bioreactor to regenerate, or bring in new and more vigorous microbial life to restore the soil's microbiome population, structure, biodiversity and functionality. When used in combination with other practices such as cover crop and reduced tillage, the BEAM process demonstrated a 25-times increase in active soil fungal biomass, an annual average capture and storage of 10.27 metric tonnes of soil carbon per hectare per year, as well as a doubling of crop yields. We have been working with Dr. Johnson and supply chain partners to assess the effects of applying the BEAM method to begin rebuilding healthy soils in our cotton supply chain in Turkey.

FIBRES FROM FORESTS

Forests are the lungs of the planet and home to 80% of the world's known terrestrial plant and animal species. They have also been identified as a priority nature-based solution, with trees being incredibly powerful carbon sinks that can store CO2 both in their biomass and soils. Protecting and restoring forest ecosystems is vital in our fight against climate change. More than 150 million trees are logged every year for the fashion industry, with the number of trees being cut down annually and turned into fabric doubling between 2013 and 2020. Stopping deforestation has been a high priority at Stella McCartney, which is why we changed our viscose sourcing policy and redesigned our packaging to ensure we only source from sustainably managed forests and use recycled content wherever available. We have partnered with the NGO Canopy, lobbied governments for better conservation and are working with innovators that are developing fibres from alternative forest-free feedstocks.

Chapter 03

The Value of People

The Value of People

Workers at our long-time factory partner Brunello, based in Italy, manufacturing fabrics made from organic cotton and sustainable viscose.

We aim to have a positive impact for everyone that we depend on and for those who depend on us in return. The future of our world relies on Mother Earth and people. While humans and nature are tied together, the two topics are often separated out – as we have done here, but recognise that in reality the two are inseparable. We want to live in a world free of discrimination, poverty and exploitation, where everyone has a voice that can be heard.

The fashion industry and Stella McCartney rely on people – those who make our clothes, the farmers who grow the crops for our materials, our employees and our customers. We believe everybody in our supply chain should be treated fairly, and with respect and dignity. Each person should be recognised and valued equally. We aim to build modern and resilient supply chains that provide desirable jobs, foster people's skills, strengthen workers' voices and advocate for vulnerable groups.

We recognise that the world is not a fair and just one, meaning neither are some areas of our global supply chain – however, we are working hard to build the right systems, make improvements and take steps towards the society we want to see.

This includes working hand-in-hand with our supply chain partners to build a better future. We aim to build open and collaborative relationships with all of our suppliers, and take the time to understand the complexities and contexts of our sourcing regions. We endeavour to collaborate with suppliers, NGOs and other local stakeholders in a way that brings value to the workers that sustain our supply chain.

This year, working in partnership is more important than ever. As we reach this turning point and strive to make the year 2020 a catalyst for positive change, we are looking at how we can use partnership to accelerate activities and progress.

OUR STANDARDS

After we became an independent company in 2019, we launched new policies and guidelines to our suppliers outlining our requirements and expectations relating to social sustainability. These include our Code of Conduct, Responsible Sourcing Guide, Modern Slavery Policy and Subcontracting Policy.

These policies outline the standards we expect our suppliers to uphold to ensure workers in our supply chain are treated fairly and with respect. We understand that sometimes our suppliers might need support to comply with these policies. We are committed to supporting them in making any required improvements to ensure workers in our supply chain are treated with care and respect.

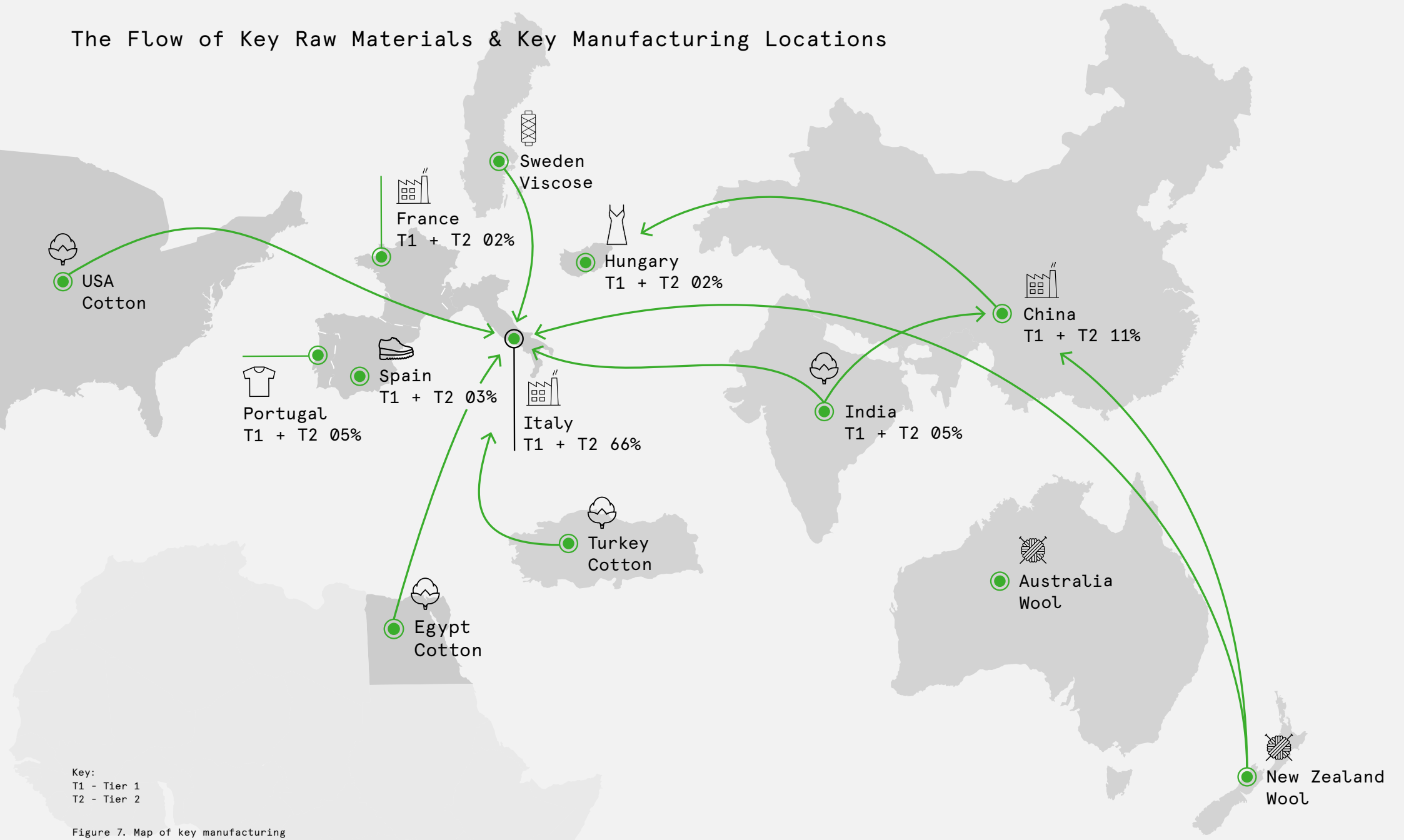
OUR SUPPLIERS

We source our materials and products through a carefully selected network of global suppliers, many of which have worked with us since Stella McCartney was founded. Our supply chain is predominantly composed of small workshops that specialise in particular techniques and processes; for example, in Europe, the average number of workers in a facility is 37.

We partner with suppliers in key sourcing countries such as Italy, Hungary, Portugal, China and India (see Figure 7). In each location, we seek to build our understanding of the culture and context of the region. Working collaboratively with our suppliers and local experts, we are building partnerships and driving progress to ensure fair working conditions and the wellbeing of workers.

Further information about our supply chain and our due diligence processes can be found in our Modern Slavery Statement, which we publish annually. Additionally, as part of our overall brand due diligence, we also complete detailed annual reporting as a part of our membership to the Ethical Trading Initiative and have been rated as a Leader through this process.

The Flow of Key Raw Materials & Key Manufacturing Locations



Key:
T1 - Tier 1
T2 - Tier 2

Figure 7. Map of key manufacturing and sourcing locations

The Flow of Key Raw Materials & Key Manufacturing Locations

Each of our suppliers, just like our workers, is unique. We always aim to build a personal relationship with each one and work hand-in-hand with them to understand their practices and systems. Where we identify room for improvement, we work with suppliers to address root causes of any issues – though we recognise this can take time. Sometimes, immediate action must be taken to ensure workers' rights are not infringed and we will take urgent steps to rectify any serious issues identified.

Although we choose not to rely on social compliance assessments alone, we have found that they can prove a useful tool in gaining insight into our suppliers' practices and potential risks in our supply chain – especially when we begin working with a new partner.

Assessments help us to collect data and address immediate issues as well as pick up on indicators that may highlight complex embedded issues. Throughout any investigation and remediation process, we aim to protect workers and their livelihoods and work with suppliers to ensure this. Should a supplier not engage and strive to meet our standards and resolve any identified issues within a given time period, we may consider terminating our business relationship or, for proposed suppliers, not initiate production.

Once a supplier is included within our supply chain, we look for ways to support and work together to build better working conditions for our workers.

The Flow of Key Raw Materials & Key Manufacturing Locations

EXAMPLES OF OUR SUPPLIER IMPROVEMENT PROGRAMMES INCLUDE:

- In China, we have worked with six of our 14 direct suppliers to implement a holistic programme to develop better management systems since 2017. We have been working hand-in-hand with the suppliers to understand the root causes of the issues and complexities they face, avoiding an audit approach wherever possible. The programme covers five areas, which we believe are key elements of fair working conditions: ethical hiring, wages, working hours, health and safety, and social dialogue.

  The programme includes face-to-face training for our suppliers' management teams, as well as an implementation period with remote support. After this stage, follow-up visits were completed to understand the impacts and challenges of the training provided and to give extra support if required. We believe it is important to hear feedback from both suppliers and workers, so we include surveys to understand the views of the workforce and cross-check results. We continue to work with a local partner in China to complete regular visits and provide support and guidance to these suppliers as they seek to improve their ways of working.

- Where we identify areas for improvement which are shared across suppliers, but specific to local contexts, we try to identify local stakeholders to help us develop solutions or initiatives that can be applicable for all relevant suppliers. In one such context, throughout 2016 and 2017, we conducted extensive research interviewing local workers, suppliers, academics, students, a sociologist, a labour rights lawyer and productivity experts to better understand how we might seek to tackle endemic challenges faced by suppliers in a key sourcing region for us. We learnt that productivity in these factories could potentially have a large impact on workers' salary packages. This led us to work with a productivity and efficiency expert to evaluate current supplier systems and identify areas for improvements. We have also reviewed our own pricing mechanisms to ensure that we are being fair to suppliers when placing our orders and subsequently raised our payments. This multi-year programme has included working with a key local partner to monitor wages on a regular basis, and to track improvements at each supplier and highlight any areas of concern that may arise. We continue to speak to workers and conduct surveys at every site to understand any feedback they might have.

- Similarly, in 2014, we spent time understanding the complexities of a small network of suppliers working on hand-crafted products that require a high-level of skills. Although we source only a small amount from these suppliers, we wanted to understand the realities facing these highly-skilled workers and began collaborating with a small group of brands to identify a way to ensure these skills were being recognised appropriately and that, importantly, these workers felt this respect and recognition for their dedication and artistry. Together with a small group of suppliers and in conversation with the local government, we built a skills recognition programme focused on soft and technical skills training as well as taking steps alonga roadmap to improve wages, working hours and health and safety. Workers trained through this programme have reported feeling an increased sense of pride as well as seeing improvements in their working conditions. We believe that collaboration, partnering with other brands and suppliers to develop tailor-made programmes focused on improving the lives of workers in specific contexts, is the most impactful way to work in supply chains where we have limited influence.

We have a network of suppliers for finished goods, and a separate network of suppliers that provides us with the raw materials to make our products. Although these raw material suppliers are not handling our products directly, they are integral to the production process and we aim to work closely with them to understand their practices and identify areas for improvement before supporting them through this process. We recognise that there are serious human rights risks the further down you go in the supply chain. The global cotton supply chain for example can present risks of forced labour in farms and spinning mills, depending on location. To date, much of our work has been focused on implementing programmes for workers at the finished goods stage of production. However, going forward, we want to build on our existing relationships with raw material suppliers to integrate our social principles into our partnerships and work together to prioritise workers and their wellbeing from mills to farms.

Protecting human rights across our supply chains is an effort that requires constant diligence and adaptation. Textile supply chains are inherently complex systems and we are living in a time of global unrest, which has led to increased levels of vulnerability across the world. While we are not perfect, we are committed to working closely with our network of suppliers to enact changes that will protect workers and provide safe environments and dignified work for the people whom we rely on to produce our products.

The Flow of Key Raw Materials & Key Manufacturing Locations

OUR WORKERS

Each person in our supply chain is unique, with their own story and specialised skill set. They all deserve to be respected, valued and heard.

We aim to work directly with suppliers or through our hand-selected locally based partners to monitor the practices of each supplier on a regular basis and ensure their workers' human rights are respected. We will not begin working with any new Tier 1 supplier without ensuring they meet our standards, prior to launching production.

We want to focus on adding value for our supply chain workers, ensuring their right to fair and decent work, and enabling them to speak up and let their voice be heard.

In Italy, our principle sourcing country, we initiated a pilot last year to create a channel for workers to give anonymous feedback to suppliers and our brand. We worked with &Wider, which specialises in utilising technology to listen to and respond to workers, to introduce direct worker reporting in key suppliers and their subcontractor facilities. Central to this initiative is the ownership and responsibility that suppliers take of the survey tool to listen to anonymous feedback. We have been working closely with the supplier to identify how we can support them to encourage continuous improvement in their facilities. We have introduced similar worker survey programmes in China working with local partners. Across all of our supply chain initiatives, we aim to embed the collection of regular worker feedback into our programme to ensure that we and the suppliers are always keeping channels open and are able to listen to and learn from workers.

We understand that within our supply chain there are some groups that are more vulnerable to discrimination, exploitation and poor practices than others. Through all our activities, we try to identify these workers who may need additional support or protection. Migrant workers, for example, often have unique and valuable skills, but may be in a vulnerable position – having travelled a long way from home, not necessarily able to speak the local language and potentially struggling to understand their labour rights in their new location. Wherever we identify migrant workers in our supply chain, we work to ensure their rights are fully protected, that they understand these rights and have the opportunity to speak out should it be required.

Though women make up the majority of our supply chain, we know we are a long way from achieving gender equality throughout most of the world. The women in our supply chain work hard and build their lives around making beautiful products. We want to recognise the potential discrimination and unfair treatment they face – the often-unequal burden of unpaid care work they may be undertaking at home, the potential discrimination or harassment of female workers by male supervisors that may be buried down the supply chain. We aim to support these women to feel empowered to give feedback, to raise concerns or grievances and speakout when things are not as they should be.

The ability for anyone to raise grievances and have access to remedy are fundamental principles of the United Nations Guiding Principles for Business and Human Rights. We are committed to ensuring that all workers and communities in our supply chain have the opportunity to be heard and listened to. We recognise that this is not an easy task, but we are committed to ensuring that this is always considered and included within any initiatives developed.

A worker manufacturing sustainable fabric at Brunello, a key fabric supplier in Italy

The Flow of Key Raw Materials & Key Manufacturing Locations

OUR COLLABORATIVE APPROACH

We believe in the power that collaboration and working together can bring. That's why, when we find endemic and complex issues in the supply chain, we look to partner with local experts, civil society organisations, like-minded brands and suppliers to bring about long-lasting change. We do this because we recognise that we cannot solve these systemic problems on our own.

We have been a member of the Ethical Trading Initiative (ETI), a leading alliance of companies, trade unions and NGOs that promotes respect for workers' rights around the globe, since 2012. The ETI enables brands to work alongside industry experts to improve the conditions for workers in their supply chains. We take part in several working groups that focus on coming together to discuss and tackle complex issues in global supply chains such as the vulnerability of migrant workers or specific country-related risks.

Earlier this year, we endorsed the ILO's Call to Action in the Global Garment Industry in light of COVID-19 and its impact on the supply chain. We recognise our responsibility to our suppliers and want to work with other organisations and global bodies to build better social protection systems for the future in order to avoid the implications we are now seeing on manufacturers as a result of the pandemic.

On a more local scale, we always aim to identify local expert partners and partnerships to bring about systemic and long-lasting change – such as the partnership mentioned earlier in a hand-crafted product supply chain.

In 2018, we initiated a working group of brands with supply chain presence in Italy to discuss shared understanding and concerns, and to build supplier training opportunities together. By working as one group, we are able to pool knowledge, experience and resources to develop more effective initiatives. It has also enabled us to reach out to worker organisations and government bodies to share and explore potential ways of partnering to improve working conditions and wellbeing in our Italian supply chains.

Looking forward, we believe that more collaborative initiatives and the sharing of challenges and opportunities is key to creating sustainable change within complex supply chains.

Chapter 04

Looking Forward

Looking Forward

Looking forward, we see an ever-changing landscape and an uncertain future – one that is also full of possibilities for positive change and radical transformation. As we said at the beginning of this report, we are stubborn optimists who celebrate life. Nothing is ever achieved by starting with an attitude of defeatism; optimism is the starting point of success. Visionary yet active, we are facing this uncertain future with a balance of positivity and a sense of urgency. We are entering into the most consequential decade for humanity, the choices that we collectively make between 2020 and 2030 will determine what the future of life on our planet looks like.

As a business, we think this means a move from managing and reducing impacts to conserving and restoring nature and its services and doing what we can to transform the industry, creating the systemic change that is needed.

We see a number of steps that we need to take to transform our business to one that has a truly positive social and environmental impact:

STEPS		
1	Mapping the supply chain and materiality assessment	Understanding where we are sourcing from and manufacturing in, the risks in those sourcing locations and measuring our impacts on nature and humans that result from our activities so that we can develop an approach to manage
2	Avoid	Avoiding areas of high risk or eliminating the highest-impact materials or processes
3	Reduce	Reducing negative impacts on nature and humans when avoidance is not possible
4	Restore and regenerate	Going beyond simply reducing negative impacts by rebuilding lost ecosystem services and restoring human rights and wellbeing in our sourcing locations - putting more back into nature and society than is being taking out
5	Transform	Actions that support systemic change beyond our company's own impacts

Looking Forward

Over the past few years, we have been mapping our supply chain and using the natural capital accounting methodology to understand which are the most material environmental impacts in our direct operations and supply chain. We have used our on-the-ground experiences and stakeholder consultation to understand the impacts on the people in and around our supply chain. Based on those learnings, we have been avoiding the materials that we identify as highest-impact as well as high socially and environmentally risky sourcing locations and reducing our impacts by switching to lower-impact alternatives.

While we endeavour to keep reducing our impact by continuing to invest in innovation and the development of lower-impact materials, we want to promote the restoration and regeneration of nature in our supply chains and beyond – especially given the geographic knowledge of our sourcing locations and relationships with suppliers that we have hand-selected over the years. This involves scaling regenerative agriculture, continuing to support forestry conservation efforts and using our voice and platform to keep this high on the agenda. While we try to ensure that workers have their rights respected in our supply chain, we endeavour to invest in technologies and initiatives that support workers and communities in building feedback mechanisms, offer access to remedy and restore any infringed rights.

We are currently seeking advice from experts and academics, and are learning more about nature-based and rights-holder informed solutions. We are speaking to workers, suppliers, farmers, landowners and communities in our supply chains about their needs, what challenges they face and what enabling conditions are missing that are required for scaling up restorative and regenerative practices. We are working with governments to change legislation and bring about what we see as necessary changes to ensure our planet is protected and that businesses are required to act responsibly.

We believe in a future where accounting for your impact on nature and taking from the planet only what it can naturally regenerate is common practice. We aim to see waste eradicated, with individuals respected and protected at every level of the fashion value chain. We believe businesses ought to be held accountable for their impact, and that leaders should take responsibility for ensuring we leave a habitable planet for our children and their children.

We are working towards that future and we hope that you will join us.

Appendix I. Scope

The methodology that we use to measure our impact on nature is derived from the Environmental Profit & Loss tool developed by Kering, which was designed to value the societal impacts resulting from changes in the natural environment caused by a company's activities, from the extraction of raw materials to the manufacturing of products to direct operations required to sell those products.

It uses a natural capital approach to examine the way in which we depend on these `ecosystem services' and allows an organisation to see the impact of its activities on the natural environment.

We organise the fashion supply chain into the following Tiers:

TIER		DESCRIPTION
0	Direct operations of stores, offices and warehouses	Impacts associated with running our offices, stores and warehouses
1	Final product manufacturing and assembly	Impacts of our suppliers' operations that carry out cutting, sewing, printing, embroidery, finishing, packing or any other type of final assembly or finishing operations
2	Material manufacturing	Manufacturing of yarns, fabrics, trims, components or other materials that go into the final manufacturing and assembly of our products; processes include spinning, weaving and dyeing
3	Raw material processing	Impacts of processes such as ginning (cotton), pulp mills (viscose) and smelting (metals)
4	Raw material extraction	Impacts of crop growing, animal raising, metal mining, forestry, oil extraction for synthetics

Table 7. Explanation of Tiers in EP&L

Appendix I. Scope

The tool also looks at a broad range of environmental impact areas, not just carbon emissions, with more than 62 indicators of emissions and resource use:

Table 8. 6 Environmental Impact Areas that we consider

ENVIRONMENTAL IMPACT AREA	UNIT	DESCRIPTION
Air Pollution	kg emissions of pollutants (NOx, SOx, PM2.5, PM10, VOCs, NH3)	These reduce the quality of the air, with negative consequence on people's health and the natural environment
Greenhouse Gas Emissions	kgCO2e (CO2, N2O, CH4, CFCs)	Drives climate change which affects health, livelihoods, economies and the natural environment
Land Use	ha of tropical forest, temperate forest, inland wetland etc. that is converted or occupied in our whole supply chain	Natural land areas provide essential services to society such as climate regulation, providing goods and services that support livelihoods, and recreation spaces important for wellbeing
Waste	kg of hazardous waste and non-hazardous waste	The disposal of waste can release greenhouse gas emissions and other air pollutants, leach into water bodies and soils, and cause disamenity around disposal sites
Water Consumption	m3 of water consumed	Water used for corporate or industrial purposes can reduce the availability of clean water for local communities; if this results in increased consumption of dirty water, this has an effect on health and reduced water availability can impact local natural environments and provision of ecosystem services
Water Pollution	kg of pollutants such as heavy metals, nutrients, toxic compounds	If released into waterways, water pollutants can seriously impact health if ingested via drinking water or bioaccumulation in food; the release can also lead to eutrophication that affects fisheries and marine life

Appendix I. Scope

Processes that occur at any point in the fashion supply chain can cause a change to one or more of these six environmental impact types. To determine the magnitude and type of change caused by different processes such as raw material extraction or fabric production, the EP&L tool uses a combination of primary data collection, such as data collected directly from suppliers about their manufacturing processes, and secondary data, such as Life Cycle Assessments. These sources are used to derive quantities of pollutants released or resources consumed for a particular process. Careful consideration was given to select the best available data to base these calculations on (see Appendix III for details of selected data sources).

The next stage in the calculation is to measure the consequence of these changes in the natural environment on people's health and wellbeing. This is where it is important to take local context of the activity into consideration, because impacts are context specific. For example, the release of 1 tonne of an air pollutant has a bigger impact on wellbeing in urban environments compared to rural environments because urban areas are more densely populated so more people are affected. Another example is if water is extracted from a water-scarce region where there is greater competition between industrial and domestic users, and the cost to society of that water being used for fashion rather than for local populations is much higher. This requires companies to know exactly where all processes for making its products take place. When companies do not have this level of visibility of their supply chain and materials, it is possible to use proxy data to make an informed guess about where these processes are most likely to take place. However, the challenge here is that it is not easy for companies to address these impacts when the exact location is unknown.

The cost to society is modelled and then valued in monetary terms using welfare economics and expressed in Euros of impact. The valuation approach used was developed by PwC UK and is consistent with the policy recommendations of the European Commission. Full methodology papers can be found on PwC's UK website or by following this link: https://www.pwc.co.uk/sustainability-climate-change/assets/pdf/pwc-environmental-valuation-methodologies.pdf.

Expressing all of these different environmental impacts in one common unit allows us to compare indicators side by-side and to target our sustainability strategy to specific hotspots in the supply chain, identify our highest-impact materials and focus on the main types of environmental impacts. Without this level of information, companies are at risk of being ignorant of their contribution to major environmental problems like global heating, loss of biodiversity or deforestation. Another risk is that organisations could be misdirecting their sustainability efforts to parts of the supply chain or environmental impact areas that are not the most material.

Appendix II. Methodology Changes

Table 9. New data sources and amendments made to the underlying methodology

Category	Type	Detail
RAW MATERIALS		
Cotton	New Data	This is our most-used fibre by volume. We are aware the impacts of crop growing differ by region depending on farming practices, soil type and climate so we used the regionalised version of the Textile Exchange organic cotton LCA rather than a global average.
Viscose	New Data	In 2017, we published a comparative LCA that examined the impacts of 10 different man-made cellulosic fibres. As part of this study, we collected primary data from our main viscose supplier. We integrated the LCA data into the methodology, especially since the majority of our viscose comes from this supply chain.
Wool	New Data	We collected data from one of our supply chain partners to better represent the farms that we source from. We decided to apply a 50% economic allocation to the LCA data to account for the portion of the value of the sheep associated with the wool production. For all other types of wool that we use, we model the impacts based on the best available LCA for wool production. In this study, we decided to update the economic allocation from 37% to 35%. This was because the previous figure was calculated as an average economic allocation of three locations - one of which was not a major sourcing country for Stella McCartney, so we removed it from the calculation.
	Change to existing data	
Cashmere	Change to existing data	Since we only use pre-consumer regenerated cashmere from one supplier, we incorporated an LCA commissioned by the supplier that measures the environmental impact of the clipping, fraying and grinding processes required to make the fibre.
Faux Leather	New Data	This is an important material for us since we do not use any animal leathers. Our faux leathers are typically made from synthetic materials - mainly polyurethane, which does not have a readily available LCA. Where polyurethane was previously modelled on an elastane LCA, we updated this to an LCA dataset for polyurethane foam. We also collected primary data from our key suppliers to capture the impacts specifically of the coating process and the benefits of water-based polyurethane compared to solvent-based polyurethane.
Polyester	Change to existing data	We acknowledge that the LCA driving the modelling of polyester and other synthetics is outdated; however, we could not find a better alternative. The only change made was to the way the impacts are distributed across process steps.
Recycled Nylon	New Data	We use a chemically recycled nylon called ECONYL®. We incorporated datasets for FDY and POY ECONYL®, which refer to two different spinning processes.
MANUFACTURING IMPACTS		
Manufacturing Impacts	New Data	The calculation of Tier 1 and 2 manufacturing impacts run in a different way to the raw material impacts in that they are driven by the amount of production done for Stella McCartney rather than kilograms of materials used. We collected annual facilities-related environmental data from our key fabric, yarn, finished goods and packaging suppliers to supplement the underlying data in the tool. Data collected included types of energy used, total energy consumption, water usage, waste generated, wastewater treatment information and production volumes in one year. We also changed the calculation to be driven by production volumes rather than annual spend as a business.

Appendix II. Methodology Changes

Table 9. New data sources and amendments made to the underlying methodology

Category	Type	Detail
VALUATION METHODOLOGY		
Inflation	Change to existing data	The valuation coefficients are expressed in 2018 Euros. The coefficients are inflated to 2018 prices using a global average inflation rate (sourced from the World Bank). Coefficients are exchanged from 2018 USD to 2018 EUR using an average inflation rate from between 2012 and 2018.
Social Cost of Carbon	Change to existing data	The GHG valuation coefficient is estimated using the Social Cost of Carbon (SCC). The IPCC recommended in AR4 that the SCC is inflated by 3% per annum (on top of currency inflation) to account for the nearing in time of the effects of climate change. The IPCC's AR5 report had no further comment on inflating the SCC beyond year-on-year currency inflation so we agreed that the SCC inflation rate will be limited to 2013. Beyond 2013 prices, the SCC/GHG valuation coefficient will be inflated by the world average inflation rate only.

Category	Type	Detail
SCOPE CHANGE		
Direct Impacts Only	Scope Change	We decided to only report the 'core/direct' impacts, which are the direct impacts of our operations and our suppliers. We removed 'peripheral' impacts, which are indirect environmental impacts such as the impact of machinery production or chemicals manufacturing for the machines and chemicals that our suppliers use to make our products. This is the impact of our suppliers' suppliers. The only indirect impact included is the impact of electricity generation. We made this decision as our intention is to use these results to inform our action as a business and felt we could not always influence our suppliers' suppliers who we currently have limited leverage with.
Denim	New Data	This is an important product category for us and makes up a significant proportion of our cotton consumption. As there is little data available that specifically looks at denim production, we collected data from our key fabric supplier and denim laundry and incorporated it into the tool. We created a separate business unit in order to track the progress of our denim, as opposed to grouping it with other business units.
Waste	Scope Change	We incorporated waste factors from Textile Exchange to approximate total quantities of raw materials extracted for the volumes of yarn and fabric that we purchased in 2018 and 2019. This is important because there is some waste at each processing stage so we include this assumption to have a better idea of volumes of raw materials grown or extracted for our final production.

Appendix III. Data Sources

Table 10. Impact data sources chosen for key materials used by Stella McCartney

KEY MATERIALS	SOURCE AND AUTHOR
Viscose	Stella McCartney commissioned LCA (2017): "Life Cycle Assessment Comparing Ten Sources of Manmade Cellulose Fiber"
Conventional cotton	A.K. Chapagain et al. (2006) "The water footprint of cotton consumption: An assessment of the impact of worldwide consumption of cotton products on the water resources in the cotton producing countries" Ecological Economics, Volume 60.
Organic cotton	Textile Exchange (2014): "The Life Cycle Assessment of Organic Cotton Fiber - a Global Average"
Recycled cashmere	Supplier's own data
Wool from our approved supplier	Supplier's own data

KEY MATERIALS	SOURCE AND AUTHOR
Wool from other suppliers	USDA study that draws on multiple publications including the Agricultural Statistics Database, National Pesticide Database, USGS Estimated Use of Water in the United States and US EPA Inventory of Greenhouse Gas Emissions and Sinks
Virgin polyester & nylon	Plastics Europe (2005)
Recycled polyester	Plastics Europe (2005) supplemented with supplier's own data
Silk	Astudillo et al. (2014): "Life cycle assessment of Indian silk" supplemented with on the ground research in China
Recycled nylon	Supplier's own data