This 2016 Environmental Profit and Loss (EP&L) report marks the second year we are publishing our brand specific results. In our 2015 EP&L report we detailed our progress over three years and reported that we have been able to make significant reductions in our environmental impact; we are happy to announce that this trend in reduction of impact in relation to business growth continues.

Following the first release of our global EP&L result last year, we have continued to use the EP&L, a form of natural capital accounting, to measure and manage the impact of our business and supply chain on the environment. For more information on what natural capital accounting is and the EP&L see the Appendix.

Our total EP&L account increased by 2% between 2015 and 2016, a much smaller increase than the growth of the business. This is because the environmental impacts associated with an increase in our sales and production have been largely offset by reductions in impacts associated with our raw material use. In 2016 the total quantity of raw materials was 5% higher compared to 2015, but the impacts of the raw material production stage of our supply chain decreased by 8%. These figures account for changes in the EP&L methodology during 2016.

Stella McCartney’s global 2016 EP&L is estimated to be €6.97 million. This comprises both our direct and indirect impacts, i.e. the environmental impacts of activities that support our core operations and manufacturing but do not directly deal with the materials or components that are in our final products. For example, the impacts of producing the machinery used by our manufacturers is part of our indirect impact. The increase compared to the 2015 result (which was €5.5 million) is primarily caused by updates to the EP&L methodology as a result of better available data. The changes in methodology are explained in more detail in the following section. This increase also reflects our growing business, the inclusion of our new Menswear collection, openings of new stores and different sourcing decisions particularly around the materials we use in our collections.

Figure 1: EP&L impact per kilogram of material used relative to total revenue 2013–2016
Figure 1 shows the evolution of our EP&L against revenue growth since 2013, when Kering’s first Group EP&L was published. To allow fair comparison we have re-calculated our 2015, 2014 and 2013 EP&L results using the updated 2016 methodology. We used these ‘pro forma results’ to do the analysis in Figure 1 and to assess the rate of growth in our EP&L year on year. While our business has been growing steadily since 2013, our environmental impact per kg of material used has decreased year-on-year and overall has reduced by 37% since 2013 as a result of decisions we have made in the materials we use and how we source them.

Methodology Updates Since 2015

The methodology developed by Kering to calculate the EP&L was updated between 2015 and 2016. During 2016 new research, datasets and Life Cycle Analysis (LCA) studies were released. As in the past years this new information was used to update the EP&L methodology and refine valuation approaches. Using better available research and LCA data is important to ensure that the impacts of the raw materials and processes used for our production are as accurate as possible. As a result, the LCA data underlying EP&L impacts were updated for several raw materials, including viscose, wool and brass.

Figure 2 shows what areas drove the updates in the 2016 EP&L methodology when compared to the 2015 EP&L methodology. Using the updated methodology, our pro forma 2015 EP&L is €6.85 million and our 2016 is €6.97 million (a 2% increase from 2015).

2016 EP&L Results

We continue to find the EP&L a valuable tool in locating the biggest impacts in our supply chain. We use the EP&L to track impacts over time as we implement targeted initiatives. As with previous years, the most significant impacts are concentrated in the raw material production stage, which accounts for 62% of our total EP&L in 2016.

Figure 3 shows the distribution of our 2016 EP&L impacts across the different tiers of our supply chain and by environmental impact group. When compared to our 2015 EP&L pro forma, the impact of Tiers 0–3 increased, however the total impact associated with production of raw materials (Tier 4) decreased by 8%.

<table>
<thead>
<tr>
<th>Figure 3</th>
<th>TIER 0</th>
<th>TIER 1</th>
<th>TIER 2</th>
<th>TIER 3</th>
<th>TIER 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>STORES WAREHOUSE OFFICES</td>
<td>€97.7</td>
<td>€58.4</td>
<td>€80.0</td>
<td>€57.6</td>
<td>€138.0</td>
</tr>
<tr>
<td>AIR POLLUTION 6% = €411.7</td>
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<tr>
<td>GREENHOUSE GAS EMISSIONS 30% = €2,084.4</td>
<td>€425.0</td>
<td>€259.6</td>
<td>€431.4</td>
<td>€345.9</td>
<td>€626.6</td>
</tr>
<tr>
<td>LAND USE 52% = €2,355.7</td>
<td>€24.6</td>
<td>€33.9</td>
<td>€61.8</td>
<td>€48.4</td>
<td>€2,064.9</td>
</tr>
<tr>
<td>WASTE 5% = €349.9</td>
<td>€57.3</td>
<td>€68.8</td>
<td>€157.9</td>
<td>€57.1</td>
<td>€8.8</td>
</tr>
<tr>
<td>WATER CONSUMPTION 9% = €649.5</td>
<td>€64.8</td>
<td>€54.7</td>
<td>€85.8</td>
<td>€35.0</td>
<td>€429.2</td>
</tr>
<tr>
<td>WATER POLLUTION 18% = €1,284.5</td>
<td>€59.2</td>
<td>€111.3</td>
<td>€18.9</td>
<td>€154.0</td>
<td>€1,018.9</td>
</tr>
<tr>
<td>TOTAL 100% = €6,971.6</td>
<td>10% = €706.6</td>
<td>6% = €446.8</td>
<td>12% = €835.9</td>
<td>10% = €695.9</td>
<td>62% = €4,286.5</td>
</tr>
</tbody>
</table>
Figure 4 shows the relative changes in our EP&L as compared to our 2015 pro forma EP&L. The increase in our direct operations is related to the opening of new stores and expansion of sales. Our growth in business and production is also reflected in the increase in our manufacturing impact (Tiers 1-3). However, for the first time we are able to report a decrease in impact related to raw material production (Tier 4).

In 2016 the total quantity of raw materials was 5% higher compared to 2015, but the impacts of raw material production decreased by 8%. The improvement in impacts associated with our raw materials reflects the changes and improvements we have made in the types of materials we use and how we source them. For a more detailed breakdown of our raw material usage in 2016—as well as the relative impacts of these materials—see Figure 5.

Our decision not to use leather, fur, skins or feathers in any of our products reflects our ethos but also avoids the environmental impacts associated with the production of these materials. Leather in particular is the highest impact material in the EP&L methodology due to the land required for cattle grazing and growing feed, methane released from the animals, and energy consumption of tanneries. However, we acknowledge that the animal fibres that we do use contribute the most impact in our supply chain. This is driven by the land required to raise the animals and greenhouse gas emissions released during animal rearing. We are addressing this impact in two ways:

1. Over the past two years we have been setting up farm specific projects so that we can ensure that the wool that we use comes from both ethical and sustainable farms.
2. Supporting and partnering with innovators creating new forms of these fibres. One example of this is our partnership with Bolt Threads, an amazing company that is creating a silk that at the molecular level is most similar to a spider silk made by human hands - more specifically they have developed a way to closely mimic silk created in nature by producing a fibre from corn sugar that was fed to a yeast fermentation.
We are also aware that the synthetic fibres we use as alternatives to leather and fur originate from petrochemicals which is a non-renewable resource. In 2016 we increased our usage of recycled polyester by 38% and introduced recycled nylon into our collections.

**Figure 5:** EP&L impacts (€) of key raw materials compared to quantity of materials used (kg)

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**Case Study: Organic Cotton**

Cotton is a thirsty crop and, when grown using conventional farming methods, is one of the most toxic crops too. Cotton was our single most used material during 2016 and around 60% of all the cotton we use in our products is organic. The environmental impacts of conventional cotton production are driven by the large quantities of water required to cultivate the crop, the conversion of land for agricultural use, and the heavy use of toxic pesticides and fertilisers. Cotton farming uses between 2.4%-2.6% of global arable land, but is responsible for 24% of insecticides and 11% of pesticides consumed. Cotton crops also use a huge amount of water: to grow enough cotton for one T-shirt requires roughly 3,000 litres of water.

Unlike conventional cotton, organic cotton is largely rain-fed rather than irrigated. As shown in Figure 6, organic cotton farming uses significantly less water from local water sources resulting in a lower water consumption EP&L impact per kg of cotton when compared to conventionally grown cotton. Organic cotton uses only natural agricultural inputs and does not allow the use of toxic chemicals, which improves soil health and reduces water pollution impacts. Organic cotton farming also supports biodiversity and healthy ecosystems, and helps to mitigate climate change by increasing the ability of soils to sequester carbon.
What’s next

The future of sustainability at Stella McCartney includes embracing innovation and the circular economy, supporting on the ground restoration of the ecosystems touched by the raw materials we rely on and building transformative supply chain solutions.

We recently announced our partnership with Bolt Threads, which was also mentioned above, who manufacture silk using yeast in a closed-loop process (thereby using significantly less water and emitting fewer greenhouse gas emissions compared to conventional silk production). Over the next year we are going to be announcing other exciting innovation partnerships and we will be enhancing the current EP&L methodology and data sets to ensure that we can accurately capture the impact of these innovations.

Filling our knowledge gaps, one of the most powerful things that the EP&L has done for us is help to identify where we need better research and new approaches in analysing our impacts. We also know that the EP&L is only as good as the underlying data that it comprises. Therefore we are continuing our effort in 2017 to commission LCAs that accurately represent our materials and processes. As we gain better transparency over who our suppliers are and where our raw materials originate, we have started to conduct our own studies, starting with viscose. While LCA databases are extremely valuable resources in understanding the inputs and outputs associated with raw material production and processes, we have decided to collect primary data from across our value chain. This includes raw material suppliers to ensure our impacts are as representative and accurate as possible. For example, we know that the impact of synthetic materials is not accurately captured in LCAs or in the EP&L as they do not capture the impacts of microfibre leakage.

Additionally, the current EP&L methodology does not include ocean impacts or biodiversity, which is something we want to change.
Closing thoughts

We are looking at a future where climate change is going to accelerate, exacerbating almost every problem we face as humans, from issues such as water scarcity and our ability to grow crops to less tangible ones such as destruction of wildlife habitats. Because of this we believe that businesses must reconsider how they think about and measure their impacts. They have to go beyond business as usual and embrace radical change. We continue to find that the EP&L serves as a valuable tool to measure our environmental impacts, but more importantly that we are putting our pledge to become a sustainable business into action.
Appendix

Natural Capital Accounting and The Evolution of The EP&L

Natural capital is “another term for the stock of renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)”\(^1\) that provide the ecosystem services\(^2\) that we as humans rely on. Natural capital is one of several other commonly recognized forms of capital. Other more familiar forms of capital include financial, human and intellectual capital. “Natural capital supports all of the other capitals by providing essential resources, that support a healthy planet and underpins thriving societies and prosperous economies”\(^1\). Every year our planet’s natural systems provide an estimated $72 trillion worth of ‘free’ goods and services.\(^3\) This includes more obvious services such as our food, water, fibre, building materials and medicines as well as less visible services such as natural flood control, carbon sequestration and climate regulation.

Stella McCartney does not own natural capital nor does it control significant stocks of natural capital. However, similar to all business’s we benefit from the ecosystem goods and services that they provide and we are interested in how our activities impact natural capital, in part because we want to mitigate the impact that we have.

The EP&L is a form of natural capital accounting that quantifies and monetises the impacts of a business’s activities on the environment through six major categories of environmental impact (greenhouse gas emissions, air pollution, water pollution, water consumption, waste, and changes in ecosystem services associated with land use change). It is a tool that helps us identify and account for the value of natural capital to our business and the impact that we have on that natural capital through the operation of our business and production of our products. The values in the EP&L are expressions of the worth and importance of the benefits that people gain from the environment. These values are human centric; they do not capture the intrinsic right, independent of any human wants or needs, that nature has to exist which is beyond the realm of economics.

It is, however, possible to value small changes in the quality or quantity of the benefits we receive from nature. We believe that valuing these changes (“losses” or “profits”) we are better able to understand and address these impacts in the context of our business and prioritise action to develop a more resilient business.

The EP&L works by first quantifying the changes to the environment caused by a business and then values these changes in monetary terms. The value is determined by the negative or positive impact that a business’s activities have on human wellbeing. An example of this is a reduction in the quality of health due to increased air pollution. Measuring environmental impacts in monetary terms allows us to compare between different types of impacts and better understand where to prioritize actions and target projects.

\(^1\) The Natural Capital Coalition – www.naturalcapitalcoalition.org/why-natural-capital/natural-capital.html
\(^2\) Ecosystem services are the flow of benefits provided by natural capital to people.
\(^3\) http://www.corporateecoforum.com/valuingnaturalcapital/offline/download.pdf