

# Ethical CORPORATION

March 2017

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Logistics firms go electric

**All at sea**  
Shipping's emissions challenge

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## Editor's letter

# Welcome to the March 2017 issue

The picture on our cover this month reflects what is driving the move to make transport more sustainable. Our children will feel the full brunt of climate destruction if solutions are not found soon in the only sector where CO<sub>2</sub> emissions are still rising. Meanwhile worsening health problems from air pollution in fast-growing cities is given the issue short-term urgency.

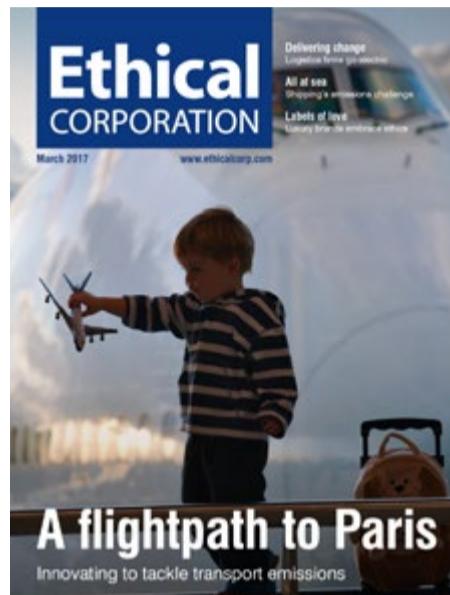
In our briefing on sustainable transport we look at how logistics companies, including UPS and DP DHL, and corporate fleets are innovating with new fuels, vehicles, and routing to cut their CO<sub>2</sub> emissions in line with the Paris Agreement.

We turn to the even more challenging sectors of shipping and aviation, where there are still no binding climate targets. Airlines like KLM are making slow headway in sourcing alternative fuels, partnering with business to bridge the funding gap, but the shipping industry is even more at sea. Companies like Maersk are working hard to argue for levies on fossil fuels to incentivise the investment that is badly needed.

Our second briefing is on how luxury brands, once bywords for excess and bling, are now embracing sustainability. This is driven by well-heeled millennials, who are increasingly demanding that products have social and environmental value as well as snob value. We look at how fashion powerhouses such as Kering and LVMH have integrated sustainability throughout their diverse brands. We also feature case studies on how Nespresso is helping coffee farmers in war-torn Sudan, BMW's linking of senior executive pay to sustainability performance, De Beers' work to take the rough edges off diamonds, and how Brilliant Earth is mining millennials' desire for ethical jewellery.

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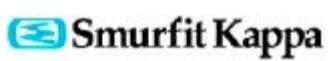
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# Deliver Social Purpose and Impact



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The end of CSR and the dawn  
of the Social Purpose Era

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MIKE DOTTA

# Delivering the Paris Agreement

By Angeli Mehta

**Transport is the most intractable sector for tackling climate change, with road freight emissions the biggest culprit. We look at how the logistics industry is innovating in new fuels and vehicles to accelerate progress**

Transport has proved a tough nut to crack when it comes to tackling climate change. Road transport, which accounts for about a fifth of the EU's total CO<sub>2</sub> emissions, is the only major sector where greenhouse gas emissions are still rising, according to the European Commission.

All new technologies that could replace fossil fuels have cost, infrastructure and supply chain issues. And while research into alternative fuels for cars, lorries, trains, planes and ships is under way, biofuels have implications for land use and can compete with food production, while electric vehicles are only carbon-neutral if the electricity comes from renewable sources. The inexorable rise of e-commerce may also be adding to the challenge.

The urgent need to address climate change, and the attention now being focused on respiratory health, means that transport emissions is shooting up the corporate agenda. And with road freight CO<sub>2</sub> emissions now the fastest growing component of transport emissions, both in Europe and globally, according to the OECD, logistics companies are at the sharp end.

Logistics firms are discovering that having sustainable operations has become a key requirement before any contract is even discussed, explains Peter Harris, director of sustainability in Europe for logistics giant UPS.

*The attention on respiratory health means logistics is shooting up the agenda*



Deutsche Post DHL this month made the bold commitment to reduce all logistics-related emissions to net zero by 2050 as its contribution to the goal of limiting climate change.

The company's target applies to both its own and subcontractors' activities (see box). This is "not just some green stuff" but a tough business decision, asserts CEO Frank Appel. And he's confident that if governments hold firm to their Paris obligations, companies will follow.

But there's no "silver bullet" in the search for a replacement for petrol and diesel, observes Harris. Different technologies will find their home in different niches, says Brian Robinson, commercial vehicles lead for the Low Carbon Vehicle Partnership, which is trying to speed up the transition to sustainable fuels in the UK. It might be 30- to 40 years before another fuel is "as ubiquitous as diesel is now."

But first, there are big advances to be made running current operations more efficiently. "The instinctive reaction is to start looking at advanced technology," says Elizabeth Fretheim, director for logistics sustainability at Walmart. The US firm began examining whether it had the right equipment and whether it was being used to best advantage. It found driving techniques, for example, could improve fuel economy by up to 35%.

UPS began programming its vehicle routing system in 2004 so drivers made as few turns as possible across traffic, and has saved 10 million gallons of fuel, emitted 20,000 tonnes less CO<sub>2</sub>, and delivered 350,000 more packages every year as a result. Its latest routing system, Orion, will be fully rolled out in the US this year and is expected to slash operating costs by \$300-\$400m a year. Already, drivers using the software are travelling six to eight miles less each day.

## New Fuels

Much of the innovation for fleets has focused on low-carbon alternatives to diesel. For years, drivers were encouraged to switch to diesel on the grounds that it produced fewer carbon emissions, but since the VW emissions testing scandal and widespread alarm about worsening air quality in cities, the government is being urged to rethink. A new tax scheme for diesel vehicles may be announced in the autumn.

***There's no silver bullet in the search for a replacement for petrol and diesel***



Deutsche Post DHL is targeting net zero emissions



At the end of 2016, Waitrose, John Lewis, and Argos announced they were running trucks on biomethane sourced from food and farm waste. Waitrose now has 12 dedicated gas vehicles, and another 44 dual fuel hybrids. CNG Fuels' Leyland fueling station is providing the biomethane.

The John Lewis partnership says there is a “compelling business case” to switch from diesel. Each of the gas trucks costs 50% more than one that runs on diesel, but will repay the extra costs in two to three years with fuel savings of £15,000 to £20,000 a year. With the vehicles likely to be running for another five years, the company expects overall lifetime savings of £75,000 to £100,000, compared with a diesel equivalent.

Biomethane has been taken up enthusiastically in Scandinavia, where 30 cities power buses with biogas derived from anaerobic digestion of sewage, and household and food industry waste.

However, in the UK, biomethane is not an unlimited resource – thanks to efforts to cut landfill and food waste. In addition, there is a much greater financial incentive for the output of anaerobic digesters to go to the gas heat network rather than to transport. However CNG, which is developing a network of filling stations, says it has sourced enough fuel approved under the Renewable Transport Fuel Obligation. This mandates the industry to produce 5% of fuel from renewables, and helps bridge the price gap between biomethane and diesel. Director Baden Gowrie-Smith believes we’re at a tipping point. “There is just no other solution to heavy trucking that works – or is on the horizon.”

Innovate UK has just announced the winners of funding for low carbon freight and logistics projects: French industrial gas group, Air Liquide, as well as logistics group Keuhne + Nagel are amongst those who will explore biogas in larger HGVs (up to 44 tonnes). They are both also piloting liquid nitrogen refrigeration units in trucks. Sainsbury’s successfully trialled this technology last year, and is now testing CO<sub>2</sub> as a refrigerant, which it says has 3,000 times less global warming potential than traditional refrigerants.

## Harnessing hydrogen

Another potential fuel, hydrogen, will get a boost from the Tokyo Olympics,



Peter Harris, director of sustainability in Europe for logistics at UPS

**Walmart found driving techniques could improve fuel economy by up to 35%**



### Overhead charging allows lorries to recharge on the move

which aims to leave a hydrogen-economy legacy with 100,000 hydrogen fuel cell vehicles on the road by 2025. Japanese car-maker Toyota was one of the founding members of the Hydrogen Council, launched in January at Davos. The council members – car-makers, rail group Alstom, and energy companies – argue it is an ideal fuel with which to decarbonise the energy requirements of the transport sector. It is also being explored as a replacement for natural gas in the heating grid. A £7m Ofgem funded scheme to pump hydrogen into Keele University's gas network starts [this year](#).

There are several methods of producing hydrogen – one of which is using electricity to split water. Efficiency is a problem, but ultimately electrolysis could provide a means to harness excess renewable energy, which could be stored as hydrogen, providing a buffer for intermittent daily and seasonal electricity generation.

"Countries like South Korea are looking at going fully hydrogen for virtually all transport so they could provide a game-changer in terms of technology," says Daniel Hayes of LowCVP.

An EU project is focusing on the bus network, which could ultimately have relevance for trucks. It aims for 144 hydrogen buses across Europe: Stagecoach is running six in Aberdeen, but at €1.1m each they are expensive and the fuel cell technology they're using has a lifespan of just five years.

**Sainsbury's is testing CO<sub>2</sub> as a refrigerant with 3,000 times less global warming potential**



Infrastructure is a major issue: ITM Power has just opened its first hydrogen fueling station on a petrol station forecourt, at Shell's services on the M25. It has three other dedicated fueling stations. Elsewhere, the French postal service and Coop Switzerland are trialling hydrogen fuel cell vehicles; Liverpool-based Ulemco is converting diesel vehicles to dual fuel, which it says offers a 70% reduction in CO<sub>2</sub> emissions compared with standard diesel vehicles. Last year it delivered the first hydrogen-powered refuse trucks to Fife Council in Scotland.

Walmart is using hydrogen fuel cells to power its forklift and palette trucks at a distribution centre in Alberta. It is anticipated that 530 tonnes of CO<sub>2</sub> will be avoided every year, as well as improving productivity and efficiency.

The company is also exploring a range of fuels for its delivery trucks, including biodiesel: "We need to move as an industry," suggests Fretheim. "There needs to be enough people saying 'this is what we want' to encourage innovators to invest. We alone don't have enough demand for that to make sense."

## Smart-charging

Electricity is a growing option for smaller vehicles. But major hurdles include availability of commercial vehicles and power supply. UPS has had to convert mid-life diesels into electric vehicles. It now has over 100 on the roads, but is running out of options for conversion. ([see box](#))

Recharging an electric truck fleet places dense power demand on one location. UPS had to increase the power capacity of one of its London sites to allow more vehicles to be charged, "which cost us a ton of money" explains Harris. Moreover UPS doesn't own the assets. So there is potentially much to be gained from an Innovate UK smart charging project. At the moment, a vehicle battery will start recharging as soon as it is plugged into the grid, but a smart grid system would delay and spread charging activity to avoid periods of peak demand. The project "will be instrumental not only to us but to the whole market," says Harris. Another project with Tevva Motors will see it trial range extenders: where a depot is beyond the return range of an electric vehicle, a small generator would recharge vehicle batteries on the way in and out of a city, but allow emissions-free deliveries within it.



ENERGY.GOV

ITM Power has opened its first hydrogen fuelling station at Shell's services on the M25

**A smart grid system would outspread charging activity to avoid periods of peak demand**



What about charging on the move? Inductive charging for buses has been trialled in Milton Keynes, and Utrecht. It is being used in Genoa and [Torino, in Italy](#), where energy consumption over a pilot phase was three to five times less than diesel. Although expensive, a US study suggested pay back could be achieved [within four years](#).

And why not overhead? Last year the first “e-highway” opened just north of Stockholm: a 2km stretch where Siemens has installed overhead power cables to allow lorries to recharge as they travel along the motorway, using retractable pantographs. The Swedish trial is using hybrid Scania trucks, which revert to battery or gas once off the motorway and making deliveries. Testing is also under way at two of the world’s busiest container ports – Los Angeles and Long Beach – where truck traffic is dense.

Where traffic density is an issue in cities, both UPS and DHL are abandoning four-wheel vehicles in the final mile. Electric vehicles provide great benefits, says Harris, “where the challenge is emissions – but if it’s congestion, then you’re still occupying road space.”

In Hamburg, UPS electric vehicles deliver containers to agreed city centre locations in the early morning. The packages are delivered on foot, and by tricycle (sometimes electrically assisted). Harris says the model could potentially be rolled out in other cities. This is also the model being explored by DHL ([see page 12](#)).

There is a great deal of innovation across the logistics sector, but supporting signals are sought from governments. The argument is that support should be directed to where the most impact can be made. In the UK, industry is still awaiting publication of the government’s Emissions Reduction Plan, which the department for Business, Energy and Industrial Strategy indicated would be published by the end of February. The plan will set out a roadmap for meeting the government’s target of cutting the UK’s greenhouse gas emissions 57% below 1990 levels between 2028 and 2032. ■



DHL is delivering packages by electrically assisted vehicles

**UPS and DHL  
are abandoning  
four-wheel  
vehicles in  
cities for the  
final mile**



## DPDHL goes electric to power zero-carbon drive

By Angeli Mehta

**The German logistics giant is aiming for 70% of its deliveries to be emissions-free by 2025**

Deutsche Post DHL hasn't waited for technology to catch up to make progress in cutting carbon emissions. When no commercial electric vehicles were available for its parcel and mail delivery needs, the world's largest logistics group, with locations in 220 countries and a workforce of 510,000, built its own.

The company realised the writing was on the wall for diesel vehicles in city centres and turned to a spin-out from the university of Aachen in Germany for its modular electric Street-Scooter delivery van. DPDHL liked it so much it bought the business in 2014 and is now developing prototypes of larger vehicles. This year some 10,000 vehicles will be made, assembled from more than 30 manufacturers' components. The modular design makes it easy to replace damaged parts such as bumpers. And it is recyclable.

### Electric competitive with diesel

"If you look across total cost of ownership we proved that electric vehicles can be competitive today with similar diesel vehicles," asserts marketing director Marcus Arens.

In the next couple of months DPDHL will decide whether to respond to requests from other firms to sell to them. Although whether it wants the responsibilities of being a provider is another question.



E-commerce is changing DHL's express business, so alongside the StreetScooter are bike couriers, and the latest innovation, an electric-assisted cubicycle, can take loads of up to 125kg, easily transferred between van and tricycle. It is piloting the "city hub" in Frankfurt and Utrecht. Not only is it emissions-free, but a cubicycle can make up to twice as many stops as a van in an hour.

These technologies will help DPDHL to get towards its 2025 goal of ensuring that 70% of its pick up and deliveries in the first and last miles are clean, meaning either electric (from renewables) or on foot.

That target is one means of assessing progress towards zero emissions in 2050. The group wants to increase carbon efficiency by 50% by 2025, compared to 2007 levels. Its previous target was met four years early, thanks to more efficient aircraft, moving to dual fuel LNG/diesel for its UK HGV fleet, and raising buildings standards.

## Engaging employees

By 2025, DPDHL wants to get more of its employees involved in environmental and climate protection activities. It wants them (and its business partners) to plant one million trees every year and is aiming for more than half its sales to incorporate green solutions such as carbon offsetting initiatives, and the use of more aerodynamic trailers.

The group measures and scrutinises its carbon emissions as carefully as it does its financial data, says Christof Ehrhart, executive VP for corporate communications and responsibility. DPDHL has signed up for the science-based targets initiative and is working with WWF to improve the methodology for logistics.

It is also committed to the UN's sustainable development goals, which Ehrhart describes as "a business plan approved for the planet". In its latest [CSR report](#), released last month, the company said its group-wide programmes would focus on quality education (SDG 4), decent work and economic growth (SDG 8), sustainable cities and communities (SDG 11), climate action (SDG 13) and partnerships for the goals (SDG 17). It has also created a tool showing how its products and services are addressing sustainable development issues worldwide. ■



Electric-assisted cubicycles can take loads of up to 125kg

DHL



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# Safe landing sought in journey to sustainable biofuels

By Angeli Mehta

**Progress on cutting aviation emissions is hampered by supply concerns, while shipping is navigating even choppier waters**

There was some hard lobbying for shipping and aviation to be brought into the scope of the Paris climate agreement in 2015. Their carbon emissions grew at double the rate of other sectors between 1990 and 2010, and without radical action there is a danger they will hoover up much of the global carbon budget “permitted” under the Paris Agreement. But failure to agree who is responsible for emissions released by ships and aircraft into international spaces means there are still no binding targets.

Action outside of the UN process has been painfully slow. But last year, the UN’s aviation agency, ICAO, finally managed to get a deal for a carbon offsetting and reduction scheme that will peg emissions to 2020 levels.

***Biofuels are the future, but expect the field to be littered with carcasses’***

## Offsets ‘not the answer’

Stefano de Clara, international policy director of the International Emissions Trading Association (IETA), explains that to get everyone on board, ICAO agreed a voluntary phase from 2020-2026. “But a lot of countries did opt in so 87% of emissions will be covered from the start.” The rules have yet to be ironed out: “Will airlines go for the cheapest offsets available or will the supply chain create additional pressure to do more?”



This will help contain carbon growth but all airlines agree market-based measures are just a temporary approach, says Adam Klauber, director for sustainable aviation at the Carbon War Room. The US organisation works to overcome market barriers to a low carbon economy. Biofuels are the future, he says, but “expect the field to be littered with carcasses – technology or financial victims.”

BA's project with Solena to create 16 million gallons of jet fuel a year from London's household waste was one such casualty last year, rendered uneconomic by low oil prices and a lack of government support.

The big challenge is that aviation will be competing with other sectors that intend to use biofuels, so there will be serious implications for land use and policy support. According to the UN, just keeping aviation emissions at 2020 levels is going to need 170 new biorefineries to be added every year between 2020 and 2050.

Aviation does have one huge advantage over other transport sectors in terms of fuel distribution: airports provide fuelling hubs. IATA estimates delivering biofuels to 190 airports would fuel 80% of flights.

The price of biofuels has fallen, but they're still comparatively costly, at around double the price of kerosene. Demand is needed to encourage production at the sort of scale that would cut costs. And that needs investment. It's a vicious cycle. Airlines are trying to create the market by off-take agreements and making equity investments in producers.

In the US, the Renewable Fuel Standard programme helps bridge the price gap. It mandates that increasing amounts of fuel come from renewable sources, but such policy instruments are rare.

## Alternative fuels

Biofuels aren't zero-carbon, but they can produce up to 80% less carbon emissions than kerosene because they emit only the carbon which the feedstock absorbed while growing. Manufacture will also produce emissions, which is why the whole lifecycle of any new fuel needs to be very carefully monitored.

Several feedstocks have met the stringent technical standards for their use in aviation. So far the industry is testing blends of between 30% and 50% biofuel to kerosene mix. The challenge is to develop a supply chain from genuinely sustainable sources that don't cause indirect land use changes.



PHILIP PILOSSIAN

Freight carrier Fedex set a target of 30% fuel efficiency savings

*Even replacing pilots' paper flight manuals with tablet computers helped cut fuel use*



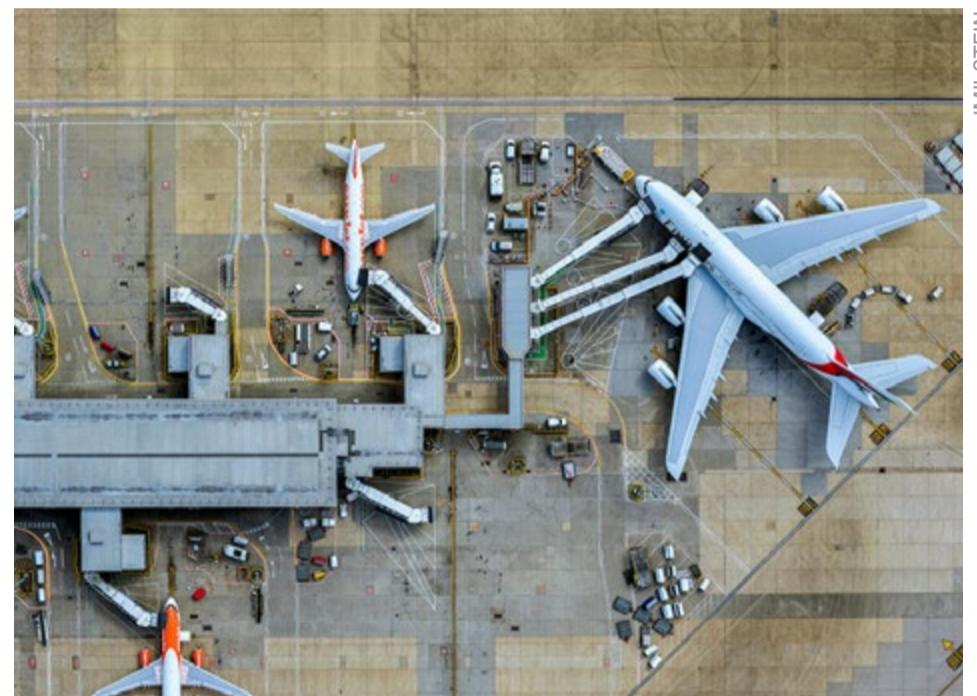
**United Airlines** and **KLM** are buying fuel made by **AltAir**, from renewable agricultural waste and used cooking oils; New Zealand's **Lanzatech** has engineered a microbe that can convert waste carbon dioxide from industrial plants into alcohol, which is further processed to convert it to jet fuel. Pre-production plants are running in China, and **Air New Zealand** and **Virgin Australia** are guaranteed customers. **United Airlines** and **Cathay Pacific** have invested in US-based **Fulcrum Bioenergy**, which will be producing biofuel from gasified municipal solid waste in 2019. The biorefinery is being built in Nevada by Abengoa, which itself produces renewable energy.

Forest biomass is proving attractive in Scandinavia and the US, but depending on the type of forest material used, greenhouse gas emissions could actually increase. Using fast-growing crops like poplar, or waste from sawmills might produce fewer emissions. Airlines will want to see lifecycle analysis and know that fuels are certified by the **Roundtable on Sustainable Biomaterials** (RSB). In Europe, there are no biofuels available that meet the EU RED standard (based on RSB). "The amounts available are very limited and meeting certification criteria under RED is too expensive to incentivise the measure," according to Fokko Kroesen, corporate manager for environmental strategy at KLM.

## Efficiency gains

Airlines agreed a voluntary target of a 25% reduction in fuel consumption by 2020, compared to 2005 levels. Since each kilogram of fuel saved avoids 3.16kg of CO<sub>2</sub>, huge gains can be made by improving efficiency. Freight carrier **Fedex** set a target of 30% fuel efficiency savings, which it achieved five years early in 2015. It's now committed to using 30% alternative jet fuel by 2030. At its hub, organisational improvements have cut taxiing time, saving fuel.

One of the world's biggest freight companies, **UPS**, is replacing the aluminium and polycarbonate containers that hold packages on board with fire-resistant containers that are 27-45kg lighter. In 2015, this initiative saved 662,000 gallons (2.5 million litres) of fuel. Installing "blended winglets" – upward sweeping extensions on wing tips – reduces drag and saves fuel; jet engine washing removes particulates (which would otherwise affect engine performance); even replacing pilots' paper flight manuals with tablet



Gatwick airport has an ambitious plan to cut emissions by 32.6%

*The price of biofuels has fallen, but they're still double the price of kerosene*



computers helped cut fuel consumption. Taken together, UPS says it's avoided 111,000 metric tonnes of CO<sub>2</sub> emissions since 2010: the equivalent of taking just over 23,000 cars off the road for a year.

## Airports

It's not just in the air that differences can be made. Last October 17, airports from around the globe, along with Carbon War Room, signed the [Airports Sustainability Declaration](#), committing to collaborate to share innovations and best practice to improve sustainability. One signatory, **Gatwick Airport** has an ambitious plan to cut emissions by 32.6% and energy use by 16.5% by 2020. This month it opened a new £3.8m plant, developed with logistics group DHL, that will allow it to turn cabin waste from international flights, known as category 1 waste, into energy to power the plant itself and heat the north terminal, the first facility of its kind in the world. The new plant will deal with 2,200 tonnes of category 1 waste Gatwick processes each year, boosting the airport's recycling rate from 49% today to 85% by 2020.

Stewart Wingate, Gatwick's CEO said Gatwick's rigorous target to cut its emissions was working: "Despite passenger numbers doubling, our environmental footprint is better today than it was in the early 1990s."

**Heathrow**, the other UK signatory to the declaration, this month announced its Heathrow 2.0 sustainability strategy, promising that its planned third runway expansion will not add to the airport's CO<sub>2</sub> emissions ([See Heathrow's carbon neutral plan is still blue-skies thinking, page 23](#)).

## Shipping

In comparison with the progress made on air emissions, the shipping industry is all at sea, with no chance of eliminating fossil fuels any time soon. It's taken years of discussions just to reach the point where – next year – the International Maritime Organisation will produce a roadmap for cutting emissions. What that plan looks like will be subject to many political battles. "We want to see a long-term emissions trajectory to bring shipping in line with the Paris Agreement." says John Kornerup Bang, head of strategy and shared value projects in **Maersk** transport and logistics.

The IMO will also require large ships (over 5,000 tonnes) to log fuel consumption data (the EU requires owners of large vessels arriving and leaving from its ports to report CO<sub>2</sub> emissions from 2018). IMO member governments have also agreed to curb air pollution through a cap on sulphur emissions.



ALAN JAMIESON

Enercon's turbine delivery ship uses four Flettner rotors to cut fuel consumption by 15%

**Airports have begun collaborating to share innovations and best practice**



The industry has set up the Sustainable Shipping Initiative – which tackles a range of issues from the way our oceans are used, to the treatment of communities living around ports. “Shipping is a bit invisible: people don’t understand how much in their home comes by sea,” says SSI general manager Ian Petty.

Meanwhile, better routing, slower speeds, improved scheduling and agreed arrivals; biocide-free anti-fouling coatings, which protect ship hulls against corrosion; and the attachment of marine creatures are all having an impact on fuel consumption. Anti-fouling coatings can improve efficiency by 5-10%.

SSI is trying to push new propulsion technologies. Wind – through the use of kites and sails – and large rotating cylinders, called Flettner rotors, offer opportunities to cut fuel consumption between 10 and 60% according to modelling carried out by University College London. Flettner rotors were designed in the 1920s, but it is only relatively recently that they’ve been explored as an extra means of propulsion to cut fuel consumption. German wind turbine manufacturer Enercon has its own turbine delivery ship, which uses four Flettner rotors to assist the diesel engine, and cut fuel consumption by around 15%.

Some inspiration may come from the Ecoship, expected to make its maiden voyage in 2020. It will carry passengers, not cargo, but its 55,000 tonnes will be hauled by a hybrid (LNG/ marine diesel oil) propulsion engine; renewable energy for added propulsion will come from solar-panelled sails and retractable wind generators. The shape of the whale has inspired its aerodynamic hull; waste water will be recycled and waste heat from cooling systems reused. All these innovations could cut emissions by 40%.

Petty explains that available technologies such as new propellers are not being widely taken up because of access to capital, and so-called split incentives. A ship owner may pay for upgrades, but the charterer of the vessel – who pays for fuel – gets the benefit. SSI is working on financial models that will overcome these hurdles.

To meet COP21 targets, shipping needs to cut its emissions by 25-30% each decade: “Technologies will get us small improvements but a step change is needed.” Kornerup Bang wants to see a levy on fossil fuels rather than the carbon offsetting measures that have been agreed in aviation. A levy, he says, will provide a much more straightforward signal to the industry.

“The next big leaps will have to come in innovation and public policy – legislation to disincentivise the free riders and incentivise big capital innovation.” ■



The Ecoship will have solar panels and wind generators

***‘Shipping is a bit invisible: people don’t understand how much in their home comes by sea’***



MAERSK

## Boxing clever to cut emissions

By Angeli Mehta

**Denmark's Maersk is partnering with customers, deploying big data and upgrading its fleet to make shipping more sustainable**

Danish shipping company Maersk Line has cut emissions per container moved by 42% since 2007, and is aiming for 60% by 2020. It has cut fuel consumption through a basket of measures: choosing optimal routes given wind and currents; slower speeds; and cargo planning.

"An important aspect of this optimisation is how we use big data to guide our decisions," explains Mads Stensen, senior global adviser on sustainability. Maersk Line's Global Voyage Centre in Mumbai monitors fleet performance 24 hours a day, which means better fleet management, delivery times, onboard issue resolution and energy efficiency.

It will monitor the impact of a \$125m energy efficiency retrofit on 12 Maersk vessels that use the ports of Los Angeles and Long Beach. The ports are contributing \$1m to a real-time tracking system, which will record emissions from the ships at sea and in berth. Fuel consumption data will be collected alongside variables such as weather, and sent via satellite to the performance centre, where it will be used to boost operational efficiency.

The fuel consumption of each ship is expected to decrease by 10%, which will cut CO<sub>2</sub> emissions, alongside polluting sulphur and nitrous oxides. At the project launch last November, it was described as "the equivalent of strapping a Fitbit onto a large container ship".



The wider fleet is undergoing a \$1bn upgrade, while Maersk's newest vessels, 20 Triple Es, are billed as the largest most energy-efficient ships on routes between Europe and Asia. They carry 2,500 containers more than their predecessors, but Maersk claims emissions per container are 35% lower than its competitors. Hot exhaust gas is used to produce extra energy to propel the Triple Es, which are designed to sail at slower speeds, while lower propeller revolutions and larger propellers mean less power is needed to move them.

The Triple E is also designed for recycling. Its "cradle to cradle passport" lists and describes all the materials used in its manufacture, and their locations, so they can be separated. Maersk says it should be possible to recycle most of the materials to make new ships, while safely disposing of anything else.

But the company can only make so much progress alone, so it began asking how it could enable customers to use their market power to drive the right behaviours, says Stensen. He adds: "Companies need to integrate sustainability into their procurement process, or else [it's] all just empty words."

Maersk approached some of its 50,000 customers – amongst them **Huawei**, **BMW**, **Electrolux**, **Tetra Pak**, and **Philips** – and agreed a series of emission-cutting compacts. With each, Maersk looks at how targets can be achieved by shipping cargo on more efficient vessels or routes. It argues that transparency in reporting shows customers the way to make informed choices in their own supply chains.

With some customers, it might have an additional tailor-made project: Maersk is about to set up a pilot in South America, where it handles a customer's inland transportation of cargo, to improve the safety and employment conditions for the transportation providers' workforce.

Maersk has its eye on technologies across the board, from solar to hydrogen and biofuels, but John Kornerup Bang, head of strategy and shared value projects in Maersk, emphasises the need for regulation to incentivise investment. "All [new technologies] require innovation and investment – all are on the horizon," he says. "Nobody really knows what are the right combinations of solutions – but we know we need to find out." ■



MAERSK

Triple Es are designed to be recycled at the end of their lives

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[View online](#)

## KLM asks customers to fill biofuels funding gap

By [Angeli Mehta](#)

**The Dutch carrier has enlisted help from corporates and NGOs as it pushes the envelope on sustainable fuels**

KLM recognised that sustainability would be an issue with biofuels from its demonstration flight in 2009, says Fokko Kroesen corporate manager for environmental strategy. The Dutch carrier set up a joint venture, SkyNRG, to source biofuels that meet strict sustainability criteria, including for food security and biodiversity. SkyNRG is building an independent sustainability index to help pick the right supply chains.

The company, which was listed number one airline in the Dow Jones Sustainability Index for the eleventh consecutive year, is advised by an independent board made up of WWF in the Netherlands; social justice charity Solidaridad; and Energy Academy Europe, which focuses on research and education for the transition from fossil fuels.

Since early 2016, 300 KLM flights from Los Angeles have been powered with a biofuel made from used cooking oil in a 30:70 blend with conventional jet fuel. This is produced by California-based **AltAir Fuels** at its retrofitted refinery. Kroesen anticipates that will reach 500 flights this year. KLM has also trialled a biofuel blend made from the oilseed plant Camelina, grown in semi-arid regions of Spain, and developed as part of an EU-funded project. This powered 83 flights between Oslo and Amsterdam last year. Engine performance improved, while the cleaner fuel reduced sulphur and particulate emissions.



Oslo and Los Angeles airports are the first hubs in the world to offer biofuels through the normal hydrant system for refuelling. KLM and its partners Schipol airport, Port of Rotterdam, Neste Oil and SkyNRG are now trying to create a hub at Schipol.

Kroesen is clear that in the mid- to long-term the aviation industry is going to depend on biofuels to meet its ambitions on carbon reduction. Although prices are coming down, policy support is badly needed to drive investment. Of EU member states, only the Netherlands includes aviation biofuels under the provisions of the Renewable Energy Directive, which binds the transport sector to producing 10% renewable energy.

But this is not enough, asserts Kroesen. Aviation is competing with road transport for the same raw materials. The EU, he argues, needs to encourage financial incentives for the uptake of technologies where they are most applicable. “The scarce feedstocks for sustainable biofuels should be allocated to the sectors that depend on it.”

With a lack of EU support, KLM has turned to business. Its corporate biofuels programme has 11 investment partners, including **ABN Amro**, **Heineken**, and **Nike** as well as the Dutch Ministry of Infrastructure and Environment. The idea is that they each pay a surcharge, which covers the difference in cost between the biofuel and kerosene. In return, the companies cut their CO<sub>2</sub> emissions from business travel and help stimulate the industry. ■



Image caption



View online

ALICE-PHOTO

Transport emissions

## Heathrow carbon-neutral plan still blue-skies thinking

Planning permission for the controversial third runway depends on Heathrow not increasing its CO<sub>2</sub> footprint post 2025, but the airport has not mapped out how it will achieve this, says Terry Slavin

Heathrow this month launched an ambitious new sustainability strategy, promising that its planned third runway will bring carbon-neutral growth, and set new sustainability standards for the industry. Heathrow's CEO John Holland-Kaye described the [Heathrow 2.0](#) strategy as a "landmark in our company's history, [setting] a bold direction towards a future of sustainable aviation".

When it approved the controversial third runway last October, the government said planning permission would be dependent on Heathrow showing the runway won't worsen existing air quality or increase the airport's CO<sub>2</sub> emissions. Critics of the third runway argue that it could dash hopes of meeting the UK's climate change targets because of the difficulty of curbing CO<sub>2</sub> emissions from aircraft.

The document itself is short on specifics, beyond £500,000 in start-up funding for an R&D incubator that the airport says will become a centre of excellence when it opens in 2019, coming up with innovations for the entire industry on tackling aviation noise and CO<sub>2</sub> emissions. And though the planned expansion is due to open in 2025, there is no target to cut

*Less than 1% of the electricity Heathrow uses is produced renewably on site and there is no target to increase onsite renewables*



CO<sub>2</sub> beyond 2020, when the airport targets a 34% cut in CO<sub>2</sub> emissions compared to 1990.

The headline-grabbing announcement was that Heathrow will use 100% renewable energy from this year, joining the RE100 alliance of companies. However this glosses over the fact that less than 1% of the electricity Heathrow uses (2.5MWh) is produced renewably on site, from solar PV and a biomass combined heat and power plant in Terminal 2, and there is no target to increase onsite renewables.

More progress has been made towards establishing an ultra low emission zone at and around the airport by 2025, including a commitment that 100% of Heathrow's ground vehicles will be electric or plug-in hybrid by 2020, and work on driving down freight emissions, including the development of a hydrogen fuelling infrastructure. The plan sets a target of reducing NOx emissions from airport-related traffic by at least 40% by 2020 and 60% by 2025, using a 2013 baseline.

Briefing a small number of journalists, Emma Gilthorpe, the airport's executive director of expansion, and Matt Gorman, the airport's sustainability and environment director, admitted that, until relatively recently, Heathrow's focus has been on cutting its noise and air quality impacts rather than its carbon footprint.

"About a year ago we decided to move away from a three-year planning horizon on sustainability" and take a more holistic, long term approach, she said. Heathrow started by seeking the advice of sustainability leaders Kingfisher, Unilever and Marks and Spencer, "We were advised to be bold. You may not always be clear of the detail but you can have a bold ambition," Gilthorpe said. "It's amazing how you can mobilise an organisation by having a clear, long-term vision."

Most of the Heathrow's ideas to cut its carbon footprint are embryonic, including the recommendation by Tony Juniper, the former Friends of the Earth executive director, that Heathrow should offset increased CO<sub>2</sub> emissions from the new runway by restoring degraded peatlands in the UK – something another controversial client, forestry giant Asia Pulp & Paper, has been doing to reduce the impact of its operations in Indonesia.

"We're not fixed on that," Gilthorpe said, "but the idea received the most traction around our leadership table. There are wider environmental benefits for it too, such as creating new wildlife habitats."

Asked at the briefing whether it was doing enough given the scale of the challenge, Gorman said: "I challenge you to find any other airport with a plan that is as broad as this, as deep as this, and as long-term as this ... that is beginning to talk in terms of carbon neutral growth." ■

*Heathrow's focus has been on cutting its noise and air quality impacts rather than its carbon footprint*

[View online](#)

KOBBY DAGAN/SHUTTERSTOCK

# Sustainability no longer a luxury for premium brands

By Mike Scott

**Buying a Gucci bag or Louis Vuitton dress used to have snob value. Now millennials want them to have social and environmental value too**

There was a time in the not-too-distant past when luxury goods were associated with excess and conspicuous consumption, bringing to mind images of pin-striped currency dealers racing through the streets in bonus-fuelled Porsches and billionaires entertaining supermodels on superyachts.

One thing it definitely was not about was sustainability. As sustainability expert Andrew Winston wrote in the Harvard Business Review recently: "With a few exceptions, it's been an industry not traditionally associated with concerns about environmental impacts, human rights, and wellness, even while those trends have been sweeping through the mainstream consumer products sector."

But many in the sector say that is now changing. "Old luxury was about opulence, excess and bling – and it was very individual," says Diana Verde Nieto, founder of Positive Luxury, a luxury brand consultancy that highlights sustainability initiatives in the sector through its Butterfly Mark. "But times have changed. It is more inclusive. It is about being part of a community while at the same time retaining a sense of the individual."

Sustainability is now a major part of the luxury brand proposition, says Verde Nieto. There are a few key reasons for this. First, luxury brands are facing the

*Because of where they sit in the consumer market, there is a greater risk if luxury brands fail to act responsibly*



same pressures as other companies to take more account of environmental, social and ethical issues such as climate change, resource scarcity, water stress, child and forced labour, bribery and corruption.

These pressures range from the physical realities of climate change, such as droughts, floods and water shortages, to new regulations including the UK's Modern Slavery Act, EU and US rules on conflict minerals, initiatives such as the Sustainable Development Goals and pressure from consumers who – thanks to social media – are better-informed and more engaged than ever before.

Shoppers are increasingly interested in the story behind the products they buy, says Steve Wickham, head of corporate social responsibility at London-based Matrix, a product design and procurement specialist whose clients include The White Company and Miller Harris. "They want to know how the product is made, who has made it and in what conditions," he says.

### High profile, high stakes

Brands can leverage this interest to their advantage if they have the right narrative. The accessories manufacturer Elvis and Kresse, a founding UK B Corp, which uses the Butterfly Mark, takes decommissioned fire hoses from the London Fire Brigade and turns them into wallets, bags and belts. Other materials it uses include parachute silk, tea and coffee sacks, shoe boxes and even old auction banners.

"In the case of the hose, we scrubbed away the soot and grease that builds up after 25 years of active duty and discovered a truly remarkable, truly green textile," the company says.

For luxury brands, the imperative to deal with sustainability issues is heightened by the high profile that being a luxury brand brings. Often consumers are made aware of the issues by celebrities who are one of luxury's traditional constituencies – socially aware stars such as Leonardo DiCaprio and Emma Watson – and because these brands have a much higher profile than more mainstream marques, their behaviour is in the spotlight much more. And with so much of their value tied up in the brand itself, these companies have much more at stake.



Celebrities such as Emma Watson are socially aware

SIMON BURCHELL/FEATUREFLASH

*'When  
millennials are  
at the helm of  
businesses,  
it will be  
unthinkable  
that  
sustainability  
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the heart of it'*



"Because of where they sit in the consumer market, there is a greater risk if luxury brands fail to act responsibly," says Tyler Gillard, head of sector projects at the Organisation for Economic Co-operation and Development's responsible business conduct unit.

Consumers, particularly millennials in the developed markets, are increasingly concerned about ethical issues and they really expect companies to change, Verde Nieto adds. "The world is more interconnected and transparent than ever before and young people expect to see evidence of that. They grew up with it and can't understand why anyone wouldn't behave like that." Millennials are growing up and have more spending power, she says. "But it is when these guys are leading companies that it will get super-exciting. When millennials are at the helm of businesses, it will be unthinkable that sustainability will not be at the heart of it."

### Natural bedfellows

At the same time, the luxury sector is founded on a trust premium based on quality, Gillard says. "If consumers find out a product is tainted by, say, the use of child labour, it may shift people away from that brand. Even if they aren't all that concerned about child labour, these issues will likely still undermine consumer trust and confidence in the brand, for example, to deliver on the quality expected of them.

"But there is also a major opportunity for luxury to become a leader on responsible business conduct because of the nature of their products. Companies are starting to recognise the value of ethical behaviour for their brand and their customers. That ethical behaviour reinforces the premium they charge their customers. There is a real opportunity to equate sustainability with quality."

This point is well illustrated by Elvis and Kresse, which uses many of the luxury sector's buzzwords when it says of its use of old fire hoses: "We wanted to honour this tough, life-saving material, hence our focus on quality craftsmanship and classic, timeless design. We build as much value as we can into each piece and style them for use beyond single seasons. All Elvis & Kresse products are handmade and unique."



Positive Luxury's founder, Diana Verde Nieto

POSITIVE LUXURY

**'Ethical behaviour reinforces the premium luxury brands charge their customers. There is a real opportunity to equate sustainability with quality'**



Luxury and sustainability make natural bedfellows, asserts Marie-Claire Daveu, chief sustainability officer at Kering, the fashion group whose brands include Gucci, Saint Laurent and Stella McCartney (see sidebar). “In luxury, we use so many raw materials from nature. If we want to continue to do business, we have to take care of it. The biggest risks for the world, not just our sector, are climate change, resource scarcity and loss of biodiversity.”

Kering has been a leader in efforts to integrate sustainability into its business through its Environmental Profit and Loss (EP&L) initiative, which it says “makes the invisible impacts of business visible, quantifiable and comparable”. The EP&L measures the environmental footprint in the company’s operations and across its supply chain and then turns that into a monetary value.

“This allows us to tackle where we have the most important impacts, identify new countries to source from and new raw materials to use,” says Daveu.

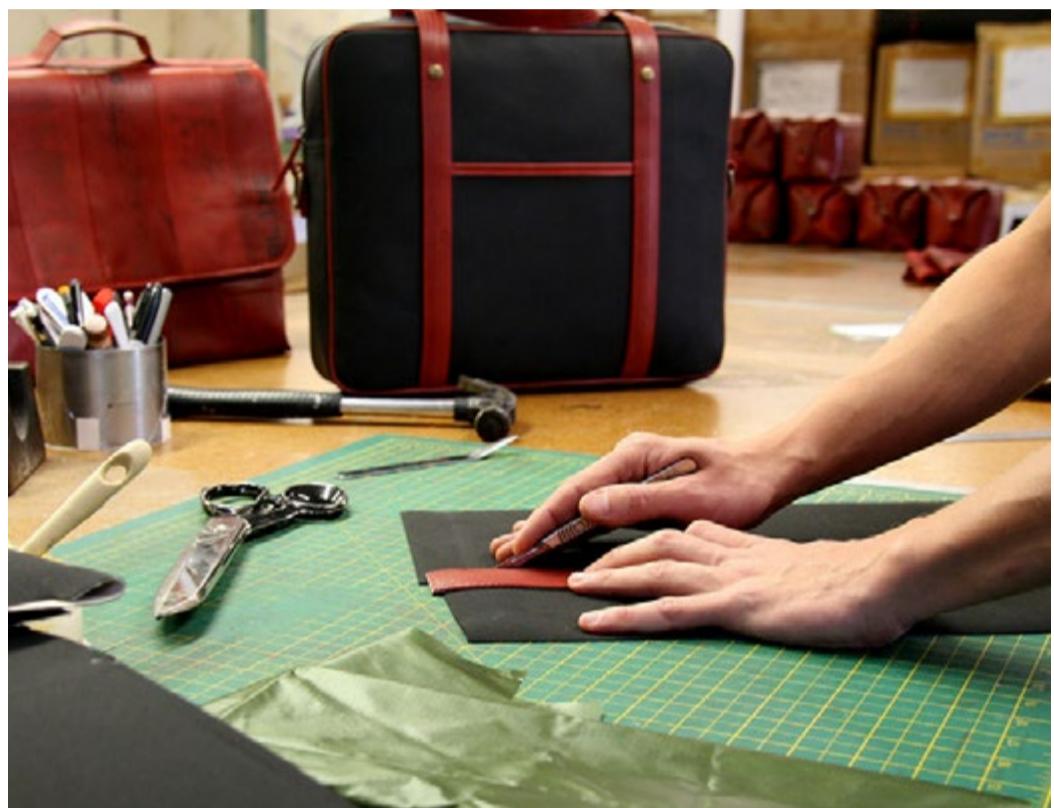
“The EP&L has given us a new way to look at our business, uncovering opportunities that would have otherwise remained invisible, innovating our business models, improving our processes’ efficiency and reducing our environmental impact,” the company adds.

Kering wants other companies to follow its lead, so in 2015 it open-sourced its methodology. “If we want to change the paradigm, we cannot do it alone. If we are real leaders, we have to share,” Daveu says.

### Balancing sustainability with cost

Another behemoth of the sector, LVMH, has a framework it calls LIFE (LVMH Initiatives For the Environment), which aims to tackle nine environmental issues that range from integrating environmental performance at the design stage to securing access to raw materials and material and product traceability and compliance. It also has an internal carbon fund, set up in 2015, whereby every brand in its stable pays €15 per tonne of carbon emissions, which goes towards energy efficiency or renewable energy schemes.

Because of the nature of their products, luxury brands have more control and visibility over their supply chains and often a higher degree of vertical



Elvis and Kresse makes luxury bags from old fire hoses

*‘The first year we used ethical gold, the cost premium was 25%. Three years later, it is less than 1%’*



integration, Gillard argues. In addition, because customers are prepared to pay more for luxury goods, these brands have the financial space to carry out proper due diligence on their supply chains. However, he adds, “the opportunity is there, but is it happening? It is quite varied.”

Daveu argues that the key to bringing sustainability into the mainstream is to ensure that more ethical or environmentally friendly options do not cost more. Kering has committed to sourcing 100% of gold and diamonds in its products from verified operations that do not have a harmful impact on local communities, wildlife or the ecosystems which support them.

“Buying ethical gold costs more, so we have to find a way to make it not cost more. The first year we used it, the cost premium was more than 25%. Now, three years later, it is less than 1%,” she says.

Wickham at Matrix agrees that there is often a perception that sustainability is more expensive but this is not necessarily true. He says his company works closely with suppliers as consultant, trainer, project manager, monitor, auditor and partner to improve performance. “Take the issue of long working hours in factories. If we can help factories to be more efficient and improve the quality, then there will be less rework, you can reduce working hours and so you don’t increase costs.”

### Under scrutiny

Different sectors within luxury focus on different issues, says the OECD’s Gillard, who recently held a meeting with representatives of a range of luxury brands from sectors such as art and antiquities, wine, fashion and jewellery to discuss the [OECD’s new due diligence guidance for responsible supply chains](#). Some sectors, he says, were very engaged in social audits, but not thinking about raw material. Others were very focused on Know Your Customer arrangements and issues around money laundering, but “their focus on social and human rights issues was almost non-existent”.

This divergence is partly because companies deal with the issues that are most material to them, but partly it is because certain sectors have escaped scrutiny. While there has been much focus on fashion and jewellery because



Marie-Claire Daveu: ‘We can’t change the paradigm alone’

***The biggest risks for the world, not just our sector, are climate change, resource scarcity and loss of biodiversity***



of issues around the environmental impact of cotton, forced labour and conflict minerals, there has been little scrutiny of less-known issues such as [conflict financing of antiquities](#), for example.

The key to dealing with sustainability issues lies in the supply chain, which is where most impacts lie – whether that is the use of forced labour by suppliers, the use of conflict minerals, water-hungry and chemical-heavy cotton, even the use of cashmere, which is increasing degradation of grasslands and desertification in Mongolia.

“The main problem is lack of visibility. Most of the challenges with unethical behaviour are further down the supply chain. You have to know your supply chain not just at the first tier but all the way down,” says Phil Bulman, a director at supply chain consultancy Vendigital. “None of the brands want these practices happening in their supply chains, but equally they don’t tend to be that good at looking at their suppliers to try to stamp it out. Companies fail to act at their own risk. Ultimately, these things always get found out.”

### Transparency equals profit

There are a number of initiatives that are helping brands to get greater visibility of their supply chains, such as [KnowTheChain](#), which helps businesses and investors address the risks of forced labour, and [Sedex](#), a platform for sharing audits, information about suppliers and ways for them to improve their performance.

Matrix, which in 2016 won a Queen’s Award for Sustainability, says it takes a “beyond audit” approach. “We focus on what happens the rest of the time. A lot of companies just ask for a box-ticking exercise. Many brands we work with don’t know where to start with their ethical programmes,” says Wickham.

Yet there are real benefits to thinking strategically about issues such as raw materials that go beyond being able to say you are doing the right thing, says Gillard. “By having greater transparency, you have far more knowledge about your raw materials, where they come from, how much you use and how you use them. This is useful not just in terms of your ethics but also for running your business.” ■



The key to dealing with sustainability issues is in the supply chain

**Luxury brands have more control and visibility over their supply chains**



STELLA McCARTNEY

[View online](#)

## Stella McCartney's ethical stance sets tone for Kering

By Mike Scott

**The fast-growing fashion brand has innovated to reduce its environmental impact by 35% per kilogram of raw material**

For Stella McCartney, founder of the eponymous fashion brand, being a responsible business involves managing the company's supply chain in a way that does the least harm to people, animals and planet.

This touches every part of its business. "It isn't just organic cotton – it's organic cotton, plus wind energy, plus not using PVC, plus thousands of other little steps that eventually make a more responsible and environmentally conscious company," says McCartney herself, who admits that: "In many ways we are just beginning our journey towards becoming more sustainable."

The company, which is part of the giant Kering group, has never used leather, skins, feathers or fur in any of its products. This is not just an ethical decision, but an environmental one, McCartney says, citing studies showing that the meat and leather industry is one of the most environmentally damaging in the world.

The toxic chemicals used in leather tanning include chrome, lead, formaldehyde and even cyanide, which are found in groundwater near some tanneries in developing countries.

Since autumn 2013, the company has been using a material called Eco Alter Nappa, made from polyester and polyurethane with a coating made from vegetable oil, as an alternative

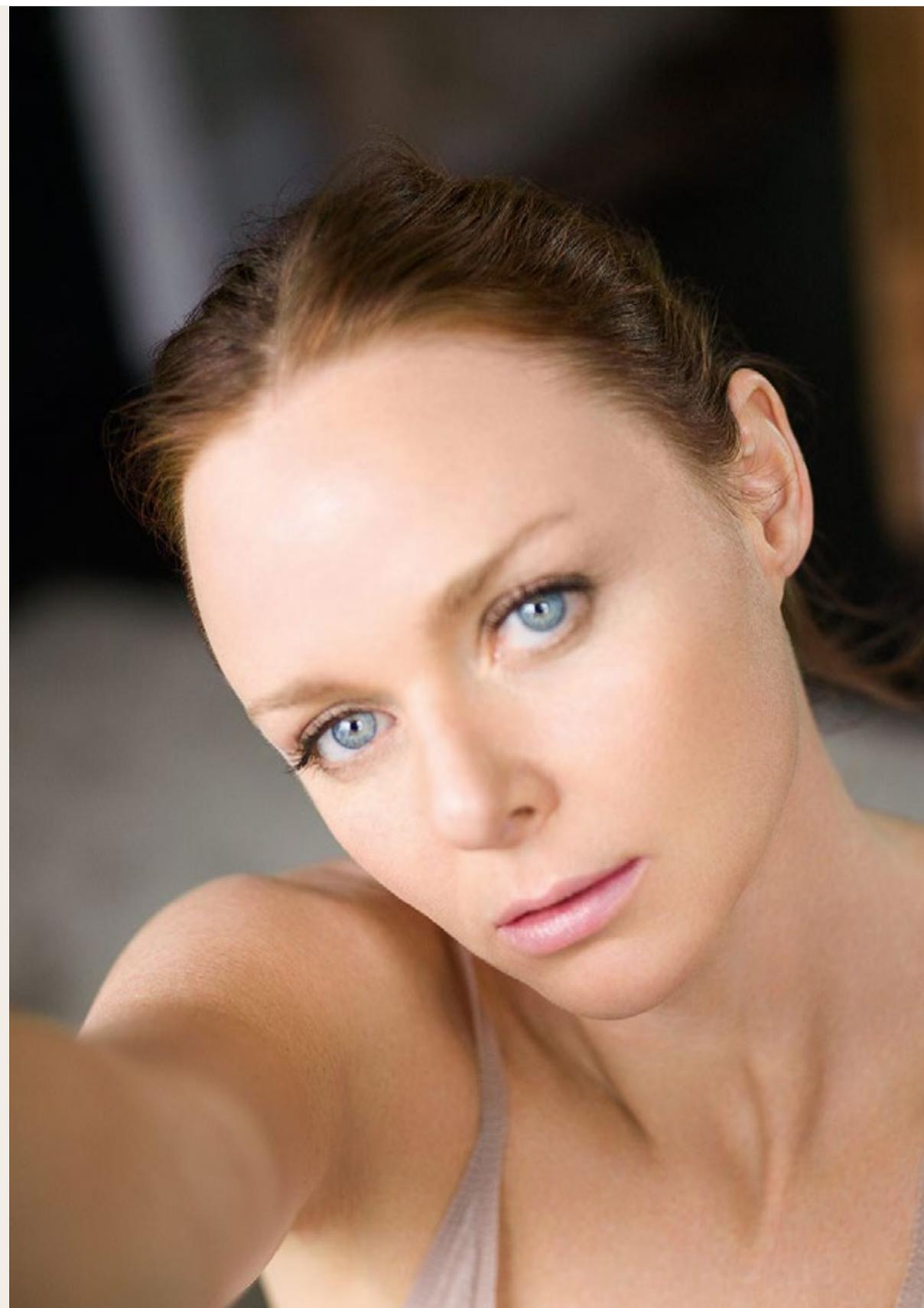


to leather in its shoes and bags. It sources organic cotton wherever possible and all its handbags are lined with polyester from recycled water bottles. From the Spring 2017 collection all of the brand's ready-to-wear viscose will come from sustainably managed and certified forests in Sweden.

Last year, the brand published its first Environmental Profit and Loss Account, which reported that its environmental impact per kilogramme of material used was 35% lower than in 2013, although because of sales growth, this translated into an absolute growth in impact of 7% over the period.

"We're one of the fastest-growing brands that Kering has, and yet our business has reduced its environmental impact by 35%," McCartney said. "More fashion brands need to realise that sustainability can be more profitable. It's not rocket science, in fact it's a bit about going back to where we all started."

The chief sustainability officer at Kering, Marie-Claire Daveu, says McCartney's "courageous" approach, "has inspired all of us at Kering. We look to her and her brand as a role model for the entire group ... She has set an example for the industry on how to innovate in its approach to luxury." ■



STELLA McCARTNEY

Stella McCartney does not use leather in her products



ANDREAS LINDMARK

# How coffee connoisseurs are helping farmers in war-torn Sudan

By [Mike Scott](#)

**Nespresso's coffee sourcing makes up the first significant non-oil export from South Sudan, but a lack of transparency creates challenges**

Luxury coffee brand Nespresso has big sustainability challenges, which no amount of smooth talking from George Clooney can charm away. Its single-use pods have come under fire from environmentalists, and were last year banned by the city of Hamburg. Although the pods use an energy-intensive and polluting resource, aluminium, they are not easily recycled, so much of the aluminium ends up in landfill.

Although the company runs its own take-back scheme in most of its markets to recycle pods, it refuses to reveal actual recycling rates, a lack of transparency that casts a shadow over its Positive Cup sustainability plan, a 38-point list of commitments to create value for its suppliers, consumers and society, as well as for its shareholders.

Nespresso's most compelling sustainability story is in its coffee sourcing, an example of a luxury premium being used to deliver a better product to consumers and a better deal for farmers. This is particularly evident in war-torn Sudan, where Nespresso looked when it wanted to launch a new coffee. South Sudan only gained its independence from Sudan in 2011 and it has been locked in conflict ever since. "The country is reeling from civil war. There was



no infrastructure, no logistics, no roads, no hotels, nothing," says Alexis Rodriguez, green coffee manager at Nespresso.

Despite this, Nespresso saw some promise in working with local farmers in the Yei region of South Sudan to revive the coffee industry in the country, which, along with Ethiopia is one of the cradles of the coffee plant. In 2015, the company launched a limited edition Grand Cru coffee, Suluja ti South Sudan (which means "Beginning of South Sudan" in the local Kakwa language). The coffee, which is produced under the auspices of Nespresso's AAA Sustainable Quality Programme, is now available in six countries – Switzerland, Netherlands, Germany, US, France and the UK – and is the first significant non-oil export from South Sudan. Oil currently makes up 99% of exports.

Since the country's independence, the company has been working with Technoserve, an NGO that trains farmers how to produce coffee and helps them to build production infrastructure to enable them to get it to market. Helped by more than \$3m in funding from the US Agency for International Development (USAID), they have worked with more than 700 farmers to establish the country's first five coffee co-operatives and have set up six wet mills in the Yei region.

"Selling into the local market will not be profitable because no one has any money, so we have to help them get the coffee to Europe," says Paul Stewart, global coffee director at Technoserve. "We get the farmers to organise themselves into co-operatives, train them how to process the coffee using modern technology and they sell the coffee to Nespresso at a 50% premium to the price they would earn in the local market."

Coffee is a great crop from a development point of view, he explains, because it has a premium segment that has grown at an extraordinary rate in the last decade. "That creates a huge opportunity for smallholders all across East Africa, an opportunity that other sectors don't have because they are commodity crops. And the exports are a unique opportunity for South Sudan," he adds.



JOE SHLABOTNIK

Nespresso's single-use aluminium pods are not easily recycled



NESPRESSO

#### TechnoServe green coffee sorting in South Sudan

As in other parts of the world where Nespresso sources coffee, the money the farmers earn enables them to send their children to school, to start small businesses such as making bricks, and to buy motorbikes that make it easier for them to deliver their coffee. Stewart says the programme has also brought more women into the farming process. “We really did a lot of work with the farming community to persuade them of the benefits of having both heads of the household learning about the tasks involved in quality coffee production. It makes it easier for them to plan for the future.”

However, the perils of working in the country have been starkly illustrated in recent months as the conflict spread to the formerly peaceful Yei region. Technoserve has had to suspend its workshops, although it continues to reach the farmers through weekly agronomy training broadcasts over the radio. “We’re hopeful that peace will return soon and the workshops can resume,” Stewart continues.

Nespresso CEO, Jean-Marc Duvoisin, adds: “We believe in the potential for coffee to create a positive impact for farmers in South Sudan and to diversify the economic base of the country. We remain strongly committed to helping coffee farmers revive their industry. Our aim is to create a lasting legacy that will contribute to peace and prosperity.” ■



## BMW miles ahead on road to more sustainable transport

By Mike Scott

**The luxury car brand is the highest ranked carmaker in the Corporate Knights sustainability rankings**

**G**iven the fossil fuels that power them, there are obvious reasons to consider carmakers – particularly luxury carmakers – as inherently unsustainable. But BMW, the German luxury car brand, is trying to change that. In 2016, it was named the most sustainable company in the world by Corporate Knights. The company has “earned some sustainability bragging rights for a wide range of measures from energy, water and waste reduction to innovation and diversity,” Corporate Knights said in announcing the accolade.

The Canadian research group have given BMW top marks for its remuneration strategy linking the salary of its senior executives to their sustainability performance - in stark contrast to the corporate governance shortcomings at its rival and compatriot VW, which are said to have contributed to the Dieselgate scandal. In total, BMW scored above 80% in eight of the 12 key performance indicators used to build the rankings.

Although in 2017 it has slipped from first place to 16th, BMW is still the highest ranked carmaker by some distance, with nearest rival Peugeot-Citroen at number 43. BMW is also the sector leader in the automotive category in the Dow Jones Sustainability Index. “For us,



sustainability is an important part of our identity and our strategy. We have accomplished a great deal in recent years and continue to set ourselves concrete goals for the future," says Ursula Mathar, head of sustainability and environmental protection at BMW.

The company earned plaudits from Corporate Knights for adopting a holistic approach and implementing sustainability throughout the value chain. It also has a clear vision of how it must adapt to changing trends.

"We see electrification and digitalisation as two of the main driving forces for the future," the company says. "Over the next few years, these factors will change the automotive industry more than anything we have seen over the past 100 years." The company wants to change from being an automobile manufacturer to becoming a "provider of the individual premium mobility and services of tomorrow. This vision of the future not only includes vehicles with lower emissions and better fuel economy, it is also about developing new solutions for urban mobility – to improve the quality of life in cities."

Between 1995 and 2015 the group cut the CO<sub>2</sub> emissions of its new vehicles sold in the EU by 40%. In 2015, its average CO<sub>2</sub> emission across Europe stood at 127g/km, still significantly above the EU target of 95g/km by 2020, but BMW now has seven models that are either all-electric, like the BMW i3, or combine a conventional engine with an electric motor as a plug-in hybrid.

In addition, 58% of its electricity worldwide comes from renewable sources and it has trialled the use of a 40-tonne electric truck to transport parts. And in an effort to increase transparency and resource efficiency in its supply chain by 2020, BMW has evaluated about 1,900 supplier facilities.

Harald Krüger, chairman of BMW's board of management, said: "Of course, winning ratings and rankings is not our main priority – but it shows that our activities continue to have an impact and that we are on the right track." ■



KARLIS DAMBRANS

BMW has seven models that are either all-electric, like the BMW i3, or are hybrid

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TTTNIS

# Taking the rough edges off diamonds

By EC news desk

**As the world's largest diamond producer, De Beers is working to raise ethical standards for the entire industry**

The need to reduce the environmental and social impact of gold and mineral mining is changing the way many luxury goods companies do business. Almost all diamonds sold in western countries are certified conflict-free through the 15-year-old Kimberley Process, while the Dodd-Frank Act in the US requires companies to ensure conflict minerals are not in their supply chains.

However “conflict-free” only applies to diamonds that are not being used to finance rebel movements against recognised governments. Campaigners say large numbers of diamonds sold in western shops are tainted by violence, human rights abuses, poverty, and environmental degradation. In Africa, where most diamonds are mined, one million diamond diggers earn less than a dollar a day.

With 1,750 tonnes of earth extracted to find a 1.0ct rough diamond, even Canadian diamond mines, which are well-regulated, are often built in environmentally fragile ecosystems, according to The Greener Diamond foundation.

Ensuring that its diamond supply chain is built on strong ethical foundations is crucial to De Beers, the world’s largest producer of diamonds, with 32% of the market by value in 2015. De Beers is also a diamond jewellery retailer, through a 50/50 joint venture with Moët Hennessy Louis Vuitton.



"Diamonds symbolise precious moments in people's lives – and our collective actions must live up to the values and emotions ascribed to them," the company says in its 2015 Report to Society CSR report.

In 2008, the retail arm of the company created Forevermark, an assurance scheme that promises De Beers consumers that their diamonds are beautiful, rare and responsibly sourced. The scheme provides full traceability of a diamond's path through the supply chain, but all De Beers diamonds have to comply with its Best Practices Principles (BPP) Assurance Programme, which it introduced in 2005 to create ethical and sustainable benchmarks not just for diamond mining, but also the cutting, polishing and manufacturing processes.

Purvi Shah, De Beers' pipeline integrity manager, says while the 2003 Kimberley Process Certification Scheme and the World Diamond Council System of Warranties focus on blood diamonds, De Beers saw the need for regulations that could touch on everything from mining to political donations.

"De Beers recognised that there was no stand-alone external standard that addressed all these issues," she says.

In 2011 De Beers aligned the BPPs with Responsible Jewellery Council (RJC) standards, which cover platinum and gold as well as diamonds. In 2014 it added sections covering sourcing from artisanal and small-scale mining and human trafficking.

Shah explains that the impact of the BPP scheme is amplified beyond De Beers' direct mining operations. They also apply to the 90 "sightholders" and accredited buyers of its diamonds and their major subcontractors. About 320,000 employees in the diamond industry from 72 countries benefit from the principles, although only 20,000 of them are De Beers' direct employees and contractors. "We are able to leverage our position [in the industry] to improve standards through the BPP."

Audits are conducted by a third-party verifier and companies are given the opportunity to address shortcomings. About one-third of audits involve desktop reviews and about 10% take



ALICE NERR/SHUTTERSTOCK

An open diamond mine



place onsite. "Clients are expected to enact corrective actions where infringements are identified and we use an online platform for the verifiers to track this progress and to address any infringements, such as a lack of health and safety policies and procedures," Shah adds.

The BPPs are designed to be flexible, allowing them reflect legislative changes such as anti-corruption laws and emerging industry risks.

Shah says when the UK passed its Modern Slavery Act legislation, for example, she reviewed the section on forced labour and human trafficking in the BPPs, and found that it was robust enough to cover the new reporting obligations for managing supply chain risks downstream.

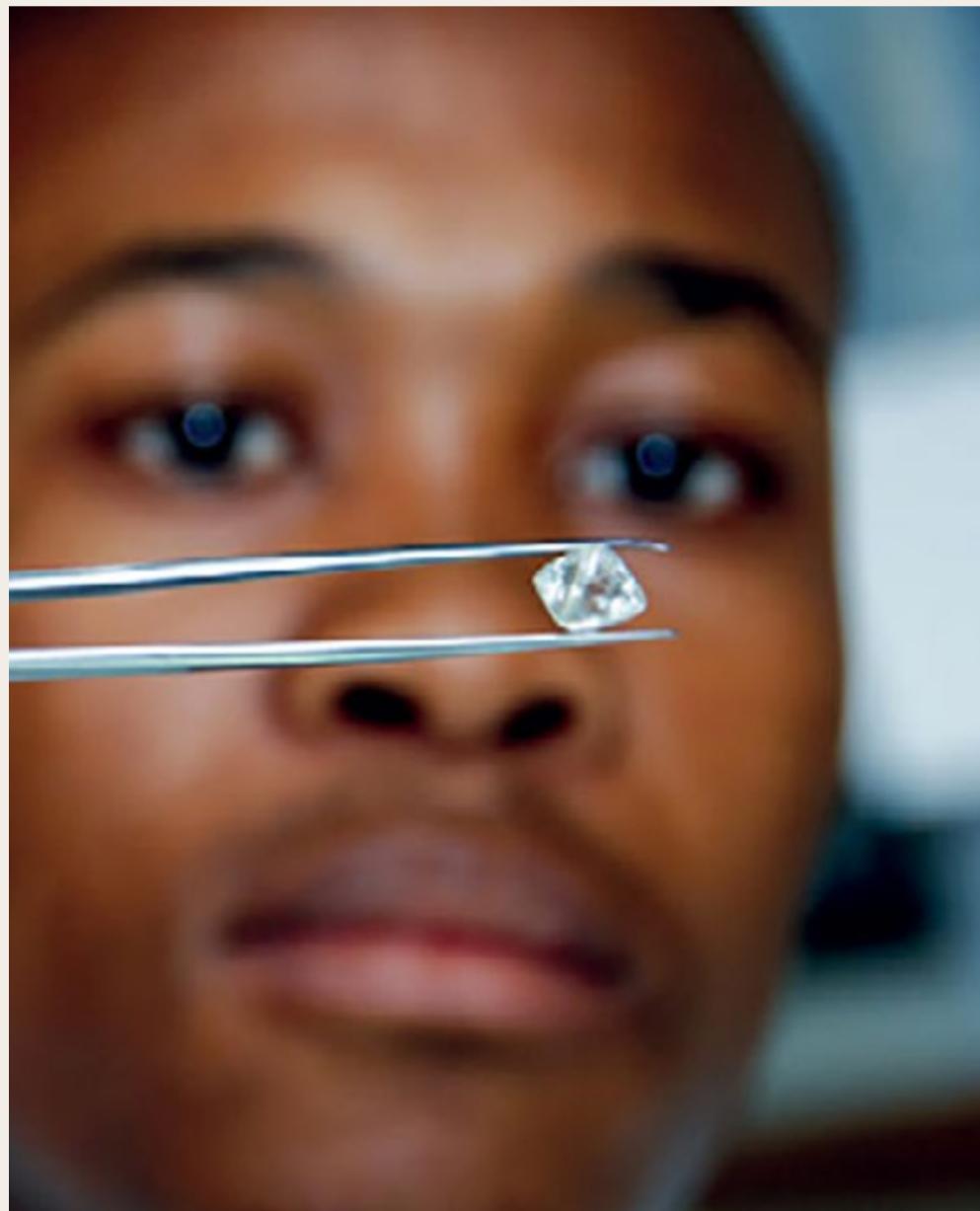
"We've seen that people have strong management practices in place [as a result of the BPPs]. It's about trying to identify the new risks and seeing that they are effectively addressed."

Shah said De Beers is working on collecting better data in order to measure and benchmark the impact of the BPP programme. She points out that purchasing a diamond, unlike a lot of consumer spending, is discretionary.

"It's important to protect consumer confidence in diamonds and for the industry to be sustainable. It's a symbol of love and the product itself should be untarnished."

Labour rights campaigners, however, believe De Beers could do more. Sharan Burrow, general secretary of the ITUC said: "De Beers has navigated the global scandal of conflict diamonds over several decades. They profess to now monitor their operations, but in practice they ask up to 90% of their suppliers to do a self-assessment and only do "independent" assessments in the rest. So if only a third of the self-assessment forms completed by their suppliers are reviewed it would seem that they need to do better."

She added that despite the extraordinary profits made in the diamond industry "low wages, insecure and often dangerous working conditions prevail for workers in their developing economy operations and supply chains." ■



DE BEERS



GILLES PAIRE/SHUTTERSTOCK

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## Brilliant Earth mines millennials' desire for ethical jewellery

By Ellen R. Delisio

**The US company doesn't charge a premium for products made with recycled gold and third-party certified diamonds**

Brilliant Earth, an ethical jewellery company based in San Francisco, sees a growing market among millennials for ethically sourced jewellery. In a survey it conducted last year, 80% of millennials said ethical sourcing was an important consideration when selecting an engagement ring, compared to 66% of the general population.

Partly this is fuelled by growing concern about the gold supply chain (see [Alarm grows over blood gold](#)). Investigations by Global Initiative Against Transnational Organised Crime have shown that criminal gangs have moved into gold mining in Colombia, Venezuela, Peru, Bolivia and Ecuador. Besides labour abuses, illegal mining practices have destroyed large areas of forests and polluted waterways with toxic chemicals such as mercury and cyanide.

Brilliant Earth uses only recycled gold and platinum, retrieved from old jewellery, industrial metals and electronic components. It recently became the first jewellery company to receive independent third-party certification on its diamond sourcing and recycled metal content by SCS Global Services. The diamonds originate from mines in Canada, Botswana, Namibia, Russia and South Africa that adhere to strict labour, trade, and environmental standards.



"The authenticity of our products really resonates with our customers," says Beth Gerstein, who founded the company with fellow Stanford Graduate School of Business alumni Eric Grossberg 12 years ago. "Our business model has lower overheads than traditional retailers, which allows us to competitively price our diamonds. We believe that you shouldn't have to pay more for an ethical product." As for the metals, Gerstein says: "It's not necessarily less expensive because we want to know that it is from 100% recycled metals, so the pricing is comparable to using new material."

Brilliant Earth donates 5% of its profits to communities impacted by mining, and trains miners to use more environmentally friendly methods, such as mercury-free gold mining techniques in Madre de Dios, Peru.

Working with the Diamond Development Initiative, a Canadian organisation whose mission is to make artisanal diamond mining benefit miners and communities, Brilliant Earth is supporting environmental and social projects in areas impacted by mining. In 2015 it began funding a primary school in Lungudi village in the Democratic Republic of Congo.

The company's contributions to the Diamond Development Initiative have funded scholarships to train artisanal miners in Sierra Leone and Brazil in modern mining techniques, health and safety, sanitation and environmental impact mitigation, notes Gerstein.

The two also are collaborating on an initiative to create the world's first Fairtrade diamonds in Sierra Leone. The project works to empower local diamond miners, pay better wages and improve working conditions through the implementation of standards at certified diamond mines. Selling direct to international buyers will eliminate middle men, says Gerstein. She visited the [first development diamond mines in Sierra Leone](#) in summer 2016.

Like others in the jewellery industry, Brilliant Earth is monitoring talk of US President Donald Trump suspending for two years the "conflict minerals" provision of the 2010 Dodd-Frank law, which requires companies to disclose whether their products contain minerals from the war-torn Democratic Republic of the Congo. Any changes will not affect how the company does business, says Gerstein. But she adds: "It would be an unfortunate step backwards for transparency, traceability, and ensuring an ethical supply chain." ■



Mining diamonds sustainably in Sierra Leone

BRILLIANT EARTH



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