



SUSTAINABLE JEWELLERY

Principles and Processes for Creating an Ethical Brand

JOSE LUIS FETTOLINI






promopress

Adidas by Parley
www.adidas.com/us/parley

BMW AG, Munich
www.bmw.com

Fluid Jewellery
www.fluid-jewellery.myshopify.com

Goldsmiths Fair of London
www.goldsmithsfair.co.uk

Lia Terni
www.liaterni.com

Mayya Saliba
www.mayyasaliba.com

Piñatex by Ananas Anam
www.ananas-anam.com/pinatex/

Tesla Motors
www.tesla.com

Ute Decker
www.utedecker.com

Zaha Hadid
www.zaha-hadid.com

2

REALITIES AND NEEDS

2.1 | Wedding ring by Diamond Foundry

Wedding ring by Diamond Foundry made from 18k gold and diamonds produced in a laboratory.

Photo: Diamond Foundry Inc.

The mark left on nature

The jewellery industry is not only linked to social problems. It produces among the most severe impacts on the environment that our planet suffers. An analysis of its supply chain reveals its effects in terms of both the extraction of raw materials and the manufacturing of pieces of jewellery.

The first major environmental impact can be found in large-scale mining, whether this is for metals or gems.

This type of controlled and industrialized mining is usually done in the open or in underground mines.

Even when this form of mining involves major safety assurances, it should not be forgotten that its impact on the ecosystem is considerable due to deforestation and land encroachment that change the Earth's morphology irreversibly. Since these mining companies belong to large lobbies, in the case of the extraction of metals such as gold, it is very difficult to know if any type of infringement related to toxic spills is being committed during the process of removing impurities, which uses chemical elements such as cyanide. Despite this lack of information, it is estimated that this industry causes 10% of the planet's mercury pollution.

2.5 | Diamond mining
Surface diamond mining in Sakha Yakutia, northern Russia.
Photo: Alice Nerr / Shutterstock.com

Industrialized mining accounts for 80% of the world's gold extraction. The output goes to the finance, jewellery, technology and surgery instruments.

The remaining 20% is extracted through Artisanal and Small-Scale Gold Mining (ASGM), which generally involves underground or placer mining. In most cases, this type of extraction takes place illegally, as the majority of national- and international-level mining regulations focus on large- and medium-scale activities and overlook the real needs of artisanal and small-scale mining. This means that work of this kind is usually undertaken under very precarious conditions.

2.6 | Illegal placer mining
Illegal gold mining in the River Cauca, Colombia.
Photo courtesy of El País Colombia

One of the major environmental issues is the methods used for processing gold to obtain it in pure form. To separate gold from other sediments, toxic elements such as mercury are used in a totally irresponsible manner that has brought with it a huge increase in water pollution.

A large part of that mercury is poured into soils and rivers, but it also evaporates due to the practices that illegal mining operations use to separate the amalgam. The harmful elements then return to the ground through rainfall, and they are scattered for miles around.

The mercury ultimately becomes methylmercury, or organic mercury, which can be assimilated by living beings, creating a cycle of pollution that starts with algae when they assimilate the methylmercury. Microscopic animals that feed on the algae are eaten by small fish, which in turn are eaten by larger fish that accumulate increasingly harmful particles. These fish end up in the human food chain, causing major health problems. Some of the most serious effects here are to the nervous system, and they can take the form of genetic malformations in newborns.

Applying sustainable practices to a jewellery project seems complicated at first, because we can see that many areas will be affected if we undertake our activities in a conventional manner. However, as we will see later, what is needed is to go step by step in developing a strategy that is viable and that does not seek to resolve all of these problems at the same time. We must not forget that we will encounter certain obstacles, since we are going to paddle upstream in doing things differently to the established way. We will require greater knowledge and greater involvement to protect our ethical principles and commitment.

Once sustainability has been brought into a jewellery project, it becomes one of the designer or firm's essential values and is just a starting point—a philosophy with some very clear principles on how things should be done. The idea is not to achieve a few objectives related to sustainability because improvements can always be made and creative and innovative solutions can also be contributed, at the same time as we continually seek the involvement of customers who demand responsible products. We need to share and promote these values by creating a jewellery firm that is also intelligent and that thinks about the future rather than about short-term profits with immediate results.

2.13 | Engagement rings by Jaume Labro

Jaume Labro is a jewellery firm that specializes in Mokume-gane. It backs progressive initiatives at the social and environmental levels. With the sale of each piece, funds are allocated to different associations and organizations that promote school education in certain African countries, mitigate deforestation activities and regenerate the oceans, among other things.

Photo: Jaume Labro

2.14 | GreenPop Project

GreenPop is an NGO dedicated to planting trees through urban greening and reforestation projects, raising awareness about the environment and getting people involved through festivals and workshops throughout southern Africa.

Photo: Johnny Miller

2.15 | Fiore Della Notte earrings by Anna Loucah

In collaboration with Jersey Pearl. Anna Loucah created a limited-series collection called Fiore Della Notte. The goal was to only use sustainable raw materials. The pieces are made with recycled 18k blackened gold supplied by Hoover & Strong, with spinel and rubies that are ethically sourced thanks to Ruby Fair, and CarbonNeutral® ayoka pearls from Jersey Pearl.

Photo: © Anna Loucah

The most widely used materials in these cases are derived from petroleum, which does not biodegrade easily. When there are very small parts, they may end up scattered everywhere.

Giving new life to products that are no longer in use is definitely a sustainable practice because new raw materials are not required in the production process, which contributes to eliminating waste that would most likely end up in a landfill or in places where it can have a polluting effect on the ecosystem.

3.16 - 3.17 | My Milk necklace and bracelet by Cherry Boonyapan

To make this necklace and bracelet, the designer used the seals from the lids of Tetra Pak milk cartons, which have no further use once the carton is open. The collection is part of the Spreeglanz project (Berlin), a platform for new talents.

Photo: Peter Lorenz

New life for rubbish

Another project that also fulfils the characteristics of upcycling is that by the electrical goods firm Balay and the jewellery designer Elena Estaun. This initiative is a surprising one, since the original idea came from a group of assembly-line employees after they saw that there was always a surplus of small pieces that are normally used in the manufacture of various appliances and that end up in the company's recycling process.

3.19

3.18

Thanks to their creativity and inventiveness, along with Elena Estaun's experience as a designer, it was possible to create a jewellery collection that aimed to raise funds through sales for those in greatest need, with the team collaborating with the Adunare Foundation on assistance projects such as soup kitchens.

3.18 | Creative team for the Balay jewellery collection project

Designer Elena Estaun along with the team behind the idea: Ana Isabel Salillas, Victoria Alegre, Celia Añón, Irene Sancerni and Nuria González.

Photo: BSH Electrodomésticos España, S.A.

3.19 | Pendant by Balay

The necklace is made of a metallic piece with rubber that was recycled at Balay's electrical-goods plants. Both the piece and the brass chain are gold plated.

Photo: BSH Electrodomésticos España, S.A.

Amalena
www.amalena.com
Ana Khouri
www.anakhouri.com
Article 22
article22.com
Balay
www.balay.es
Camilla Pietropaoli
www. camillapi.com
Cherry Boonyapan
www.cherryboonyapan.com
Elena Estaun
www.elenaestaun.com
Jaume Labro
www.jaumelabro.com
JEM Jewellery Ethical Minded
www.jem-paris.com
Karl Lagerfeld
www.karl.com
MAG
www.maginternational.org
Maral Rapp
www.maralrapp.com
Missoni
www.missoni.com
Riviera Rebel
rivierarebel.co.uk
SeeMe
www.seeme.org
Tommy Hilfiger
global.tommy.com

4

RAW MATERIALS

4.1 | Rings by Soko
Rings made by artisans in Kenya from recycled metals.
Photo: Jana Cruder

Most raw materials used in making jewellery are closely linked to mining, an activity based on the extraction of nonrenewable materials.

These mining activities involve various stages, each of which has a significant environmental, social and cultural impact. These stages are prospecting, preparing the land, exploiting and, finally, processing the minerals so that they can be used.

The damaging effects produced by each of these different stages are deforestation, destruction of ecosystems and the disproportionate consumption of natural resources. Then there are the health risks and the working conditions that many people in the industry are subjected to.

Each of the stages has a negative impact that in some respects will always be part of jewellery making. For this reason, it is necessary to understand the impact of each of the raw materials that we use and know about the materials' origin and the different processes undertaken before the piece reaches us. This information gives us the power to make certain decisions and think about alternatives when it comes to designing and creating a jewellery piece.

4.2 | A gold mining operation

Locals in Cajamarca, Peru, assessing the impact of gold mining on their land.

Photo: Malú Cabellos

Metals

Large-scale mining

The quintessential and most frequently used noble metals in the jewellery world are gold and silver. The industrialized extraction of these involves mines that are created through excavating or exploding rock, which always takes place following a geological study carried out to ascertain if the rocks contain the metals. This has a big impact on the areas and regions where mining operations are set up, since huge quantities of the earth are removed and polluted. River courses are altered and farming activities are curtailed. The development of indigenous communities is also affected, and they are forced to abandon the place where they were born and raised, something which leads little by little to the disappearance of many aboriginal cultures and populations.

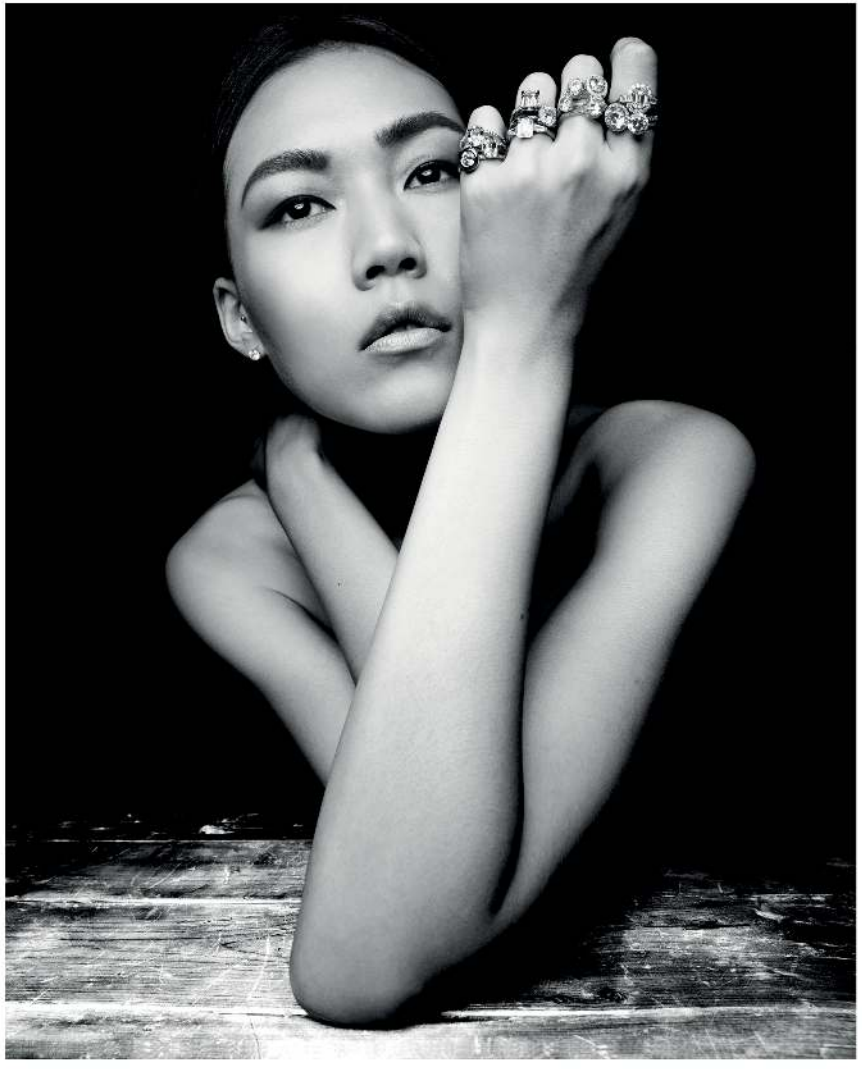
Understanding the impact and origin of raw materials gives us the power to make certain decisions and think about alternatives when it comes to designing and creating a jewellery piece.

4.3 | Gold refining

Fort Knox installations belonging to the Kinross corporation in Alaska, USA.

Photo: Kinross Gold Corporation

But the extraction of metals always brings with it a high risk of pollution of land and water through toxic elements, since the use of acids and cyanide is a standard practice for separating gold or silver from other minerals. Alternatively, different chemical reagents such as lime and flocculants are deployed in the case of copper, a metal used to make alloys such as brass.
As for platinum, chemical reagents, which normally take the form of powerful acids, are also used to separate the platinum particles from the other materials and different metals.



4.21 | Diamond Foundry

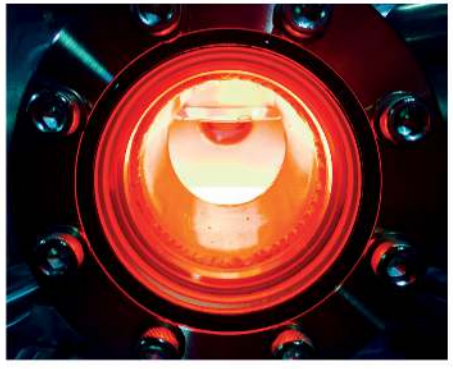
Diamond Foundry is a business from California that has pioneered the laboratory creation of diamonds. Stones of this kind do not invite doubts about their origin (as there is no chance of involvement by intermediaries with questionable reputations), and they have a very low carbon footprint because of the use of renewable energy in the process.

Photo: Diamond Foundry Inc.

Laboratory-produced diamonds

Diamonds and gems created in a laboratory do not have the same hardness and quality as natural diamonds. The difference between the two types results from the fact that the latter type requires a natural process that has occurred over thousands of years. Opponents of artificial diamonds argue that they can destabilize the market owing to their lower price. By contrast, pioneering businesses in this sector such as Diamond Foundry or Pure Grown Diamonds assert that there is great market potential for manmade diamonds, since the conventional diamond industry has lost many customers over the past decade because of its questionable ethics.

But regardless of such controversy, what is true is that diamonds that are not the product of mining also do not come from conflict zones, finance wars or destroy the environment through the effects of mining. This has brought about a shift in the general perception of diamonds from the point of view of ethics and sustainability. Given the circumstances, no sustainable jewellery firm in the sector would hide the fact that the diamonds that it sells have been produced in a laboratory or attempt to deceive the consumer by passing them off as natural diamonds. In fact, this type of diamond has become attractive to new generations who do not want to touch gems that may have come from a conflict zone.



4.22 | Plasma reactor

Photo: Diamond Foundry Inc.

4.23 | Laboratory-made diamonds

Photo: Diamond Foundry Inc.

Chopard

7.19

7.20

In 2013, Swiss high jewellery firm Chopard, alongside Eco-Age, a sustainability-strategies consultancy that was founded by its creative director Livia Firth, joined forces to create a programme called The Journey, with the shared goal of laying the foundations for sustainable luxury.

7.19 | Earrings from the Green Carpet collection by Chopard

Laurel branch earrings from the Green Carpet collection made from 18k Fairmined-certified ethical white gold with marquise-cut diamonds supplied by a certified member of the Responsible Jewellery Council.

Photo: © Chopard & Cie.

7.20 | A Chopard craftsperson setting princess-cut diamonds

A Chopard craftsperson using a burin as part of an artisanal setting technique to make one of the earring sets in the Green Carpet collection.

Photo: © Chopard & Cie.

This initiative led to cooperation between Chopard and the Alliance for Responsible Mining. The fruit of this relationship was Chopard's Green Carpet high jewellery collection, which is made from sustainable Fairmined gold and diamonds from suppliers certified by the Responsible Jewellery Council. The collection was presented at the Cannes Film Festival in 2013.

Thanks also to its collaboration with various international actresses such as Cate Blanchett, who was wearing a pair of its earrings when she won the Best Actress award at the 2014 Golden Globes, Chopard has managed to ignite great interest across the media regarding what the luxury sector should look like now and in the future in terms of ethical practices. It also serves as an example to both high jewellery firms and end consumers.

Chopard and the Cannes Film Festival are an example of how to promote sustainable development in the luxury sector.

Following the rewarding experience of creating the Green Carpet high jewellery collection, in 2014 Chopard took another step forward by using Fairmined-certified gold to make the Palme d'Or, the award that is handed out each year for the best film at the Cannes Film Festival and that was redesigned by the firm in 1998. This undoubtedly introduced sustainable luxury jewellery on the international scene.

7.21

Since then, Chopard has worked with clear objectives to continue its sustainability journey. It has created new partnerships and initiatives so that the raw materials selected comply with strict transparency requirements that guarantee their ethical origins and support for local communities.

7.22

7.21 | Rings from the Ice Cube collection by Chopard

Outside the Green Carpet high jewellery collection, Chopard has also opted for the use of Fairmined-certified sustainable gold in its Ice Cube collection.

Photo: © Chopard & Cie.

7.22 | Palme d'Or from the Cannes International Film Festival

The award is produced from ethical, Fairmined-certified gold held in crystal shaped as an emerald-cut diamond.

Photo: © Chopard & Cie.

Having reached this point in the book, it is necessary to finish off by reflecting on the benefits of launching a jewellery firm in a sustainable manner and the responsibilities that we have within the supply chain.

Reward

Launching a sustainable jewellery project requires a series of indisputable efforts, as we have seen throughout this book. However, due to the nature of the problem that we are seeking to solve, those efforts also produce both personal and professional satisfaction of a kind that is difficult to describe, and this satisfaction is strengthened by the security of knowing that we are contributing to the general good.

Moreover, there are also business advantages and results that can be obtained in the long run.
First of all, the sustainable business option opens up the possibility of accessing new markets that would otherwise be out of our reach.

7.30 | Gold Arc earrings from the Core Gold collection by Tejen made from 18k Fairmined gold

Photo: Dimitri Tolstoï

7.30

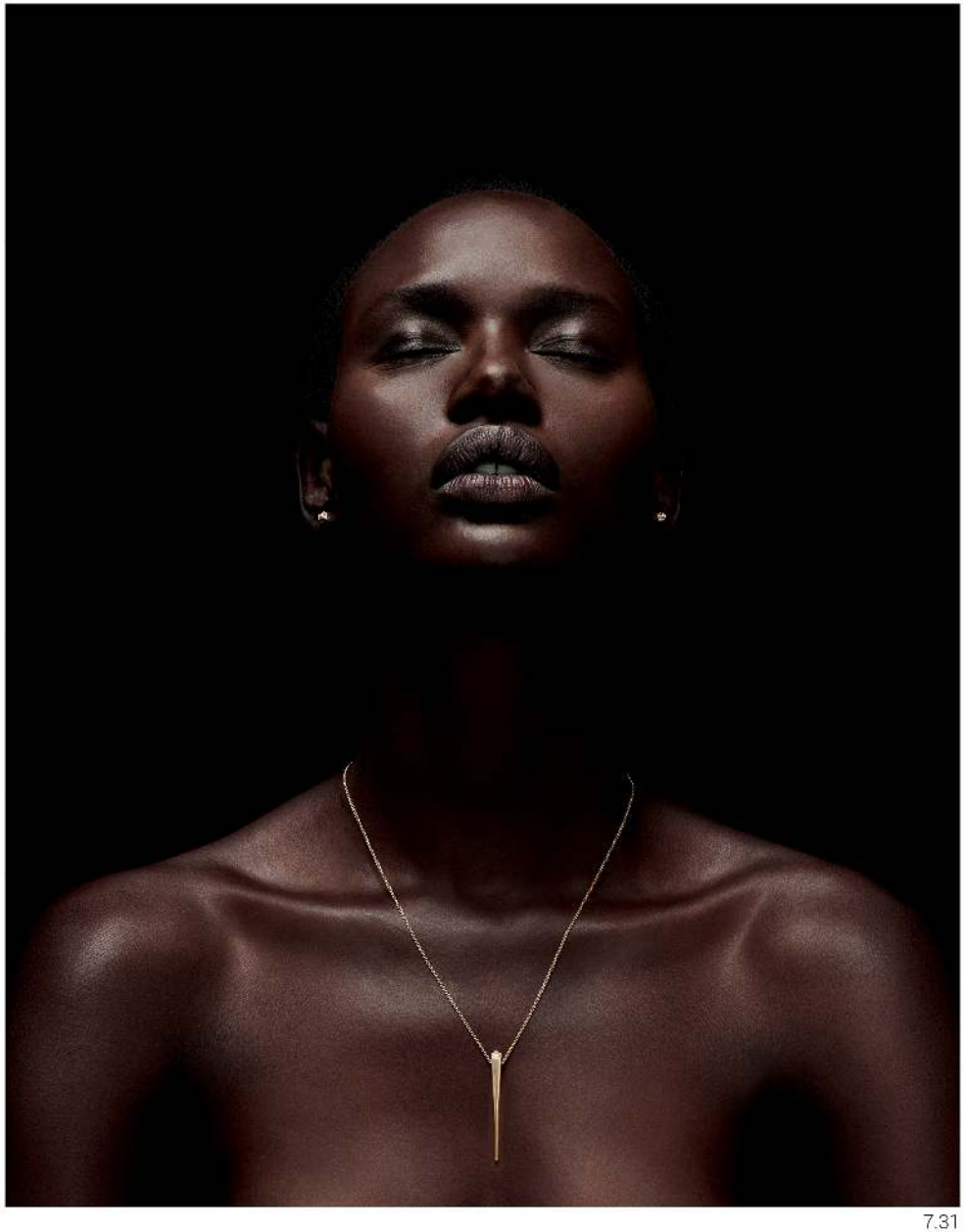
If we know how to position our brand correctly, we can establish customer loyalty as a result of the added value offered by our jewellery. This will likely help us to significantly increase sales.

Another positive aspect is that the product's added value will also by extension be gained by the brand, which will be a positive when it comes to seeking grants or tendering.

7.31 | Pendant from the Core Gold collection by Tejen made from 18k Fairmined gold with a conflict-free diamond

Isabel Encinias and Mark Kroeker are the founders of Tejen, a firm that offers environmentally aware luxury products.
The firm has successfully managed to position itself without the concept of sustainability having been an impediment of any kind to its growth.

Photo: Terry Gates



7.31