

Acknowledgements

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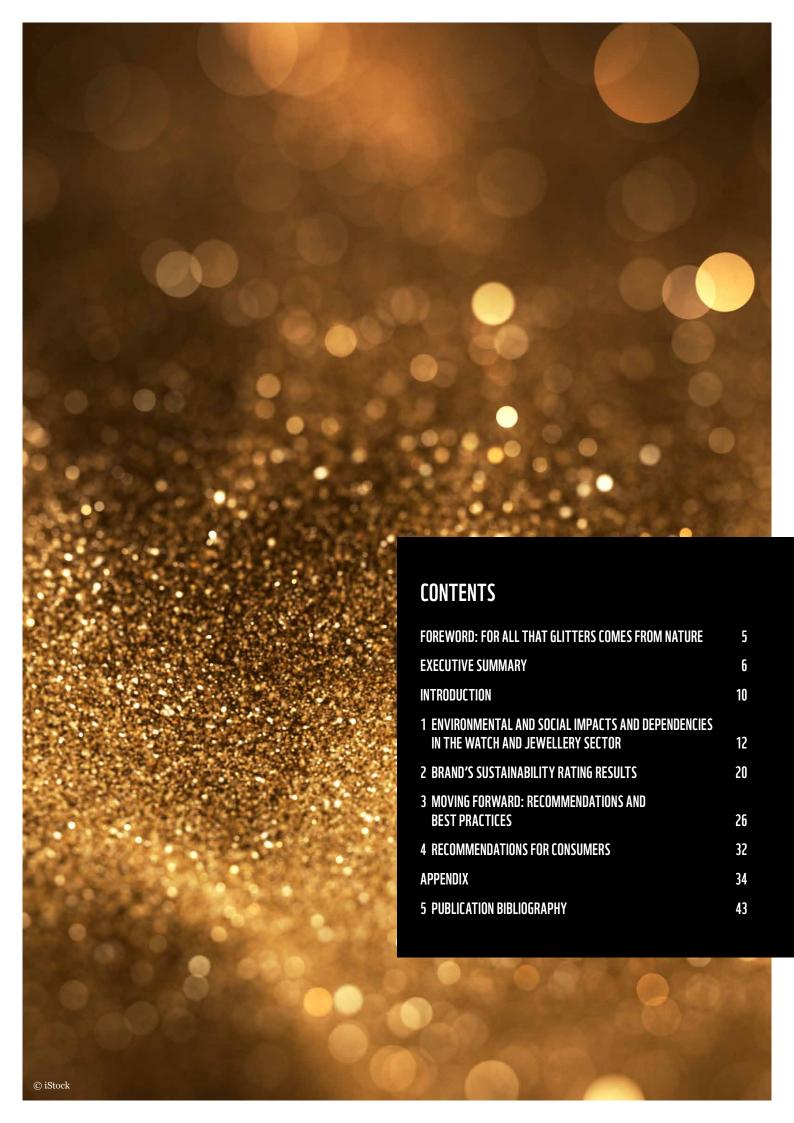
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LIST OF ABBREVIATIONS

- ARM Alliance for Responsible Mining
- ASSM Artisanal and small-scale gold mining
- CDP Carbon disclosure project
- Cole of conduct
- **CSO** Chief Sustainability Officer
- CSR Corporate social responsibility
- EP&L Environmental profit & loss
- **GHG** Greenhouse gas
- **GRI** Global Reporting Initiative
- **ILO** International Labour Organization
- IPCC Intergovernmental Panel on Climate Change
- IRMA Initiative for Responsible Mining Assurance
- KPCS Kimberley Process Certification Scheme
- LBMA London Bullion Market Association
- LSGM Large-scale gold mining
- **OECD** Organisation for Economic Co-operation and
 - Development
- PMIF Precious Metals Impact Forum
- RJC Responsible Jewellery Council
- RMI Responsible Minerals Initiative
- $\textbf{SBTi} \quad \text{Science Based Targets initiative} \\$
- SBTN Science Based Targets Network
- SoW System of Warranties
- **UN** United Nations
- UNGC UN Global Compact
- UNGPs UN Guiding Principles on Business and Human Rights
- WDC World Diamond Council

FOREWORD: FOR ALL THAT GLITTERS COMES FROM NATURE



Wearing a watch or a piece of jewellery made from precious materials such as gold has historically been synonymous with status and elegance. The high-end watch and jewellery market transmits a sense of luxury and prestige as well as a desire for quality and exclusivity to its customers. Conveniently, considerations about the origin of the raw materials used to manufacture each of these objects are often left out of this alluring story. The environmental and social implications of how and where the precious metals and gems were obtained are completely concealed.

WWF's purpose in this report is to challenge the luxury watch and jewellery industry and demand more transparency regarding not only the origin, but also the sourcing of the precious metals used by the world's most important jewellery houses. Current mining activities pose major challenges for nature and local communities. They should therefore be tracked, understood, informed, documented, and analysed. While mostly not involved in the extraction of the precious metals themselves, watch and jewellery brands hold tremendous power to transform the status quo and support the formation of fairer, more transparent, and responsible value chains.

As one of the leading environmental organizations, our purpose is to urge the markets to ensure that the impact of extracting raw materials from endangered ecosystems and vulnerable communities is minimized and that social and human rights core principles are adopted to avoid any possible harm within the value chain by implementing a traceability system that tracks and monitors every step of the process. Today, more than ever, it is necessary to pay attention to the origin of the goods we consume, no matter their market value. In the end 'all that glitters' comes from nature. Regions such as the Amazon and its inhabitants - indigenous peoples and local communities - are witnessing how their soils, forests, biodiversity, water, and ways of life are under increasing pressure from the excessive advance of extractive activities, based on (or stemming from) the growing demand for luxury watches and jewellery around the world. Illegal gold mining, for instance, is one of the main drivers of deforestation, soil erosion, contamination of water and air as well as health issues and threats to indigenous communities.

At WWF, we fight hard against the various threats that are pushing the Amazon rainforest towards the so-called 'point of no return', trying to stop deforestation and end illegal mining in all its forms, with a special emphasis on gold.

The fact that major jewellery and watch brands are intensifying their sustainability engagement is good news. However, there is still a long way to go, and we call on all the leading industry players to strengthen their commitment and accountability in terms of traceability and responsibility along their supply chains. Above all, legality as well as good environmental and social practices along the value chain of watch and jewellery businesses are a crucial step in the right direction. It can boost the development of responsible mining practices in countries like Colombia, where artisanal and small-scale gold mining has been the main livelihood for many communities for centuries.

WWF has supported the transformation towards more sustainable business practices in the sector and will continue expressing, based on science, where any type of mining extraction should be prohibited, while promoting responsible mining processes to preserve ancestral traditions, a dignified way of life for people and protect our nature.

A desirable goal for the future is that more and more companies improve their sustainability efforts, ensure traceable and responsible supply chains, and protect important natural ecosystems of our planet.

Sandra Valenzuela de Narvaez CEO WWF Colombia

EXECUTIVE SUMMARY

Producing luxury goods comes at a high price - not only in financial terms, but also for the environment as well as the people involved in the supply chains. The extraction and processing of raw materials, operation of manufacturing sites, and transportation are all associated with significant environmental impacts. These include air and water pollution, soil degradation, landmass movements and deforestation. Enormous chemical inputs and land transformation are responsible for the fragmentation and destruction of ecosystems and have vast negative effects on freshwater, forests, and wildlife. In addition, the mining and processing of raw materials in particular can be associated with human rights breaches, such as child and forced labour or land grabbing (WWF 2018). Negative impacts resulting from the combined crisis of climate change (IPCC 2021) and global biodiversity loss (SCBD 2020) are becoming increasingly evident. As a result, consumers and legislators worldwide are starting to be more aware of the negative impacts associated with production and consumption and therefore increasingly demand transparency and due diligence from companies for the environmental and social impacts along their entire value chain. In 2018, WWF examined the 15 biggest Swiss industry players to assess how well prepared luxury watch and jewellery manufacturers were for the challenges ahead, how far they could trace their supply chain and how they worked with their suppliers and business partners to protect the environment and people. The report came to the sobering conclusion that only a few brands analysed were able to trace their parts of their supply chain and had taken sufficient measures to prevent, reduce or mitigate risks of negative impacts on the environment (access the full 2018 report here). Against this backdrop, WWF has conducted a renewed assessment of how watch and jewellery brands present solutions to align luxury goods with a contribution to the wellbeing of society and the environment. The 2023 WWF Watch and Jewellery Rating aims to shed light on the sustainability performance of watch and jewellery brands by focusing on their global value chain, particularly the sourcing of critical raw materials such as gold. The rating will show how more ambitious companies are improving the current state and perception of the sector, how others still fall short of what is considered responsible business practices, and what is generally needed to reduce the sector's impact on the environment.

Sustainability rating of luxury watch and jewellery brands

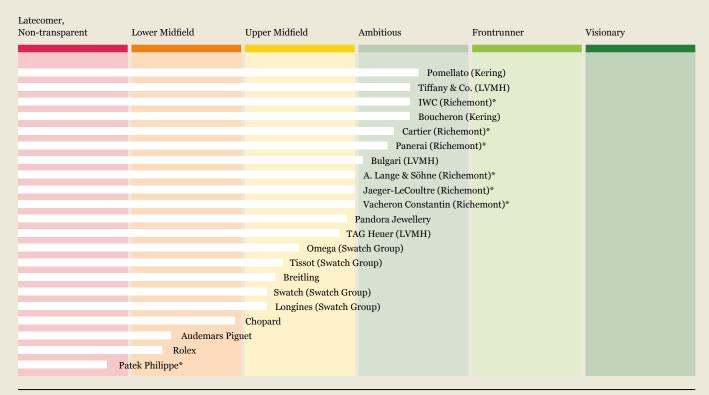


Figure 1: Results of the sustainability rating

Among the 21 assessed brands, 14 took the opportunity to comment on and complete WWF's pre-assessment while the remaining seven did not complete the initial assessment and therefore needed to be evaluated based only on publicly available data. Brands that did not completed the pre-assessment and were only rated on publicly available data are marked with a * in the chart. If individual brands are part of a group, the group name is indicated in brackets after the brand name.

WWF rated 21 of the most well-known luxury watch and jewellery brands with regards to their sustainability performance. The rating analyses brands' performances in the sector with regards to their sustainability strategy, climate action, biodiversity and water stewardship, human rights management, circularity approaches, traceability and transparency in their supply chains, monitoring and reporting of sustainability activities and stakeholder engagement.

The results show that brands affiliated with larger groups such as Kering (relevant brands: Pomellato, Boucheron), Richemont (relevant brands: A. Lange & Söhne, Cartier, IWC, Jaeger-LeCoultre, Vacheron Constantin, Panerai), and LVMH (relevant brands: Tiffany & Co., TAG Heuer, Bulgari) have benefitted from sustainability efforts at the group level. Among these, seven brands demonstrate a commitment to responsible business practices labelled as "ambitious" in this rating. The sustainability efforts of the majority of brands analysed in this rating fall within the "upper midfield" score range. Three brands scored in the "lower midfield". Patek Philippe stands out as the only brand labelled as "non-transparent", implying a lack of available information regarding its sustainability commitments. It is evident that no brand was ranked in the two highest categories, highlighting the significant room for improvement that remains in the industry.

The more detailed results illustrate that there has been significant progress in certain areas since 2018. Especially in terms of materiality analysis and monitoring as well as reporting and disclosure the industry has made substantial advances. The importance of climate protection has also been acknowledged. Some of the brands have already set ambitious climate strategies and science-based greenhouse gas (GHG) emission reduction targets.

However, there is still a great need for further development towards more supply chain traceability and transparency in the industry - two crucial prerequisites for meeting and reporting on all other sustainability targets. The industry's performance regarding stakeholder engagement is currently rather limited: Most companies are not yet engaging their suppliers, employees, and consumers in a targeted and comprehensive way in their sustainability efforts. Above, many companies in the sector are still at the very beginning in the areas of water, biodiversity, human rights stewardship, as well as the implementation of circular approaches.

MOVING TOWARDS RESPONSIBLE BUSINESS PRACTICES

While the overall sustainability performance of the watch and jewellery sector leaves much to be desired, as the results of the rating show, there are individual brands that are already thoroughly engaged with sustainability issues and have developed approaches and measures that can serve as examples for other industry stakeholders. By adjusting their own business practices and engagement with suppliers, each brand can have a positive impact and influence the industry as a whole. Accordingly, the report presents best practice examples of start-ups and established industry players that have developed innovative approaches to improve sustainability, circularity, transparency, and traceability within their value chain. These can focus on a specific topic, raw material or method, but also cover the entire business model and therefore represent the diversity of possible solutions that companies can apply to their own operations.

WWF is calling on brands in the watch and jewellery sector to:

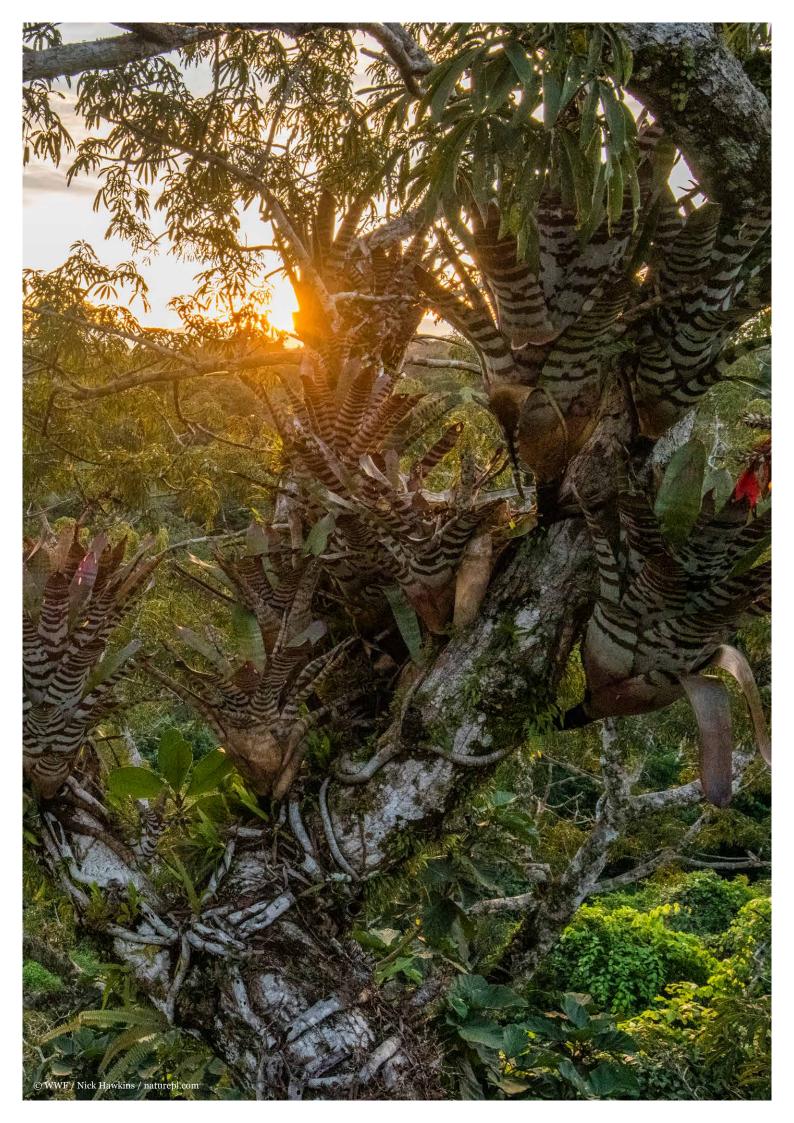
- Increase traceability and transparency along supply chains.
- Conduct a materiality analysis for the development and implementation of a comprehensive sustainability strategy.
- \bullet Integrate sustainability into business practices.
- Improve governance and management of climate, biodiversity, water, and human rights impacts throughout the value chain.
- Adopt circular approaches to reduce the use of primary materials.
- Monitor impacts and publicly report on relevant sustainability issues.
- Collaborate with industry peers and engage with stakeholders.

POWERFUL CONSUMPTION DECISIONS

With their purchasing decisions, consumers can directly influence the priorities of companies and contribute to an improved sustainability performance. The report presents various opportunities for consumers to exert a positive influence:

- Demand higher levels of transparency. Buy from brands that
 are committed to the highest levels of traceability and are
 shouldering the responsibility of achieving transparency
 along their entire supply chains. Ask about the origin,
 working conditions, environmental impact, certification,
 and standards when buying watches or jewellery.
- Practice responsible consumption. Aim at reducing the consumption of new, resource-intensive products while focusing on buying watches and jewellery from companies committed to responsible, transparent sourcing and production practices. Jewellery and watches can also be shared, traded, or loaned for special occasions instead of buying new pieces.
- Reuse and repurpose. When certain items are no longer needed, consider extending their lifetime by reselling them or giving them up for recycling. In recent years, the secondhand market for watches and jewellery has experienced significant growth, creating many opportunities for resale.
- Advocate for more sustainability. Support collective action to advocate for responsibly sourced products. Whenever possible, engage and vote for better policies and regulations to protect nature and human rights.

This report is intended to make an encouraging and constructive contribution to the industry's shift towards greater responsibility, transparency, and accountability.



INTRODUCTION

The production and consumption of luxury goods comes at a high price – not only in financial terms, but also for the environment as well as the people involved in the supply chains. The extraction and processing of raw materials, transportation, and the operation of manufacturing sites are all associated with significant environmental impacts. These include air and water pollution, soil degradation, landmass movements and deforestation. Enormous chemical inputs and land transformation are responsible for the fragmentation and destruction of ecosystems and have considerable negative effects on fresh water, forests, and wildlife. Moreover, the mining and processing of raw materials can also be associated with human rights violations, such as child and forced labour or land grabbing (WWF 2018).

The negative impacts of climate change (IPCC 2021) and the rapid loss of global biodiversity (SCBD 2020) are increasingly evident. As a result, consumers are becoming more aware of the negative impacts associated with production and consumption and increasingly demand transparency from companies when it comes to the environmental and social impacts along their entire value chain. In addition, legislators around the world are increasingly holding companies accountable for the negative impacts of their production and purchasing activities. At the European level in particular, a wide range of regulations have been passed in recent years to reduce the negative impacts on people and the environment in corporate value chains and to improve transparency and traceability (Danish Institute for Human Rights 2023).

Analysing sustainability activities in the watch and jewellery sector

Against this backdrop, the WWF Watch and Jewellery Report 2018 examined the 15 biggest Swiss industry players to assess how well prepared luxury watch and jewellery manufacturers were for the challenges ahead, how far they (could) trace their supply chain and how they worked with their suppliers and business partners to protect the environment and people. The report came to the sobering conclusion that only a few brands analysed were able to trace parts of their supply chain and had taken sufficient measures to prevent, reduce or mitigate risks of negative impacts on the environment (access the full 2018 report here).

In light of this, the 2023 reissue and revision of the WWF Watch and Jewellery Rating not only expands the geographical focus to include international players in addition to Swiss ones (sees Figure 1), but also considers new aspects of corporate responsibility. In the new report, brands are expected to set targets and implement governance and management approaches for their entire supply chain that

specifically address biodiversity, water, circularity, and human rights. Human rights and environmental issues are often inextricably linked, as the degradation of land, soil, and biodiversity or rising air temperatures can often lead to violations of human rights, such as the right to food or access to clean drinking water. As a result, an integrative understanding of environmental and human rights risks must be applied (García et al. 2022). The rating was therefore expanded to include assessment criteria for the corresponding topics.

The intention is not only to examine how and whether the 15 brands analysed in 2018 have improved in terms of their sustainability performance, but also whether the sector as a whole is well prepared to tackle the environmental risks and sustainability challenges along their value chains. The report is in this way aimed at company representatives and should serve as motivation to improve the sustainability performance and efforts to protect our environment. Additionally, the report provides interested consumers and political decisionmakers with a basis for knowledge and decision-making.

While the results of the 2023 industry rating show that more and more watch and jewellery manufacturers and retailers are addressing sustainability issues in a structured way, developing sustainability strategies, setting targets for reducing greenhouse gas (GHG) emissions and reporting publicly on sustainability issues, there is still a lot of potential for improvement. When it comes to concrete measures to reduce negative impacts on water, biodiversity, and human rights along the supply chain, brands in the sector still have a lot of work to do. Engagement with suppliers and other stakeholders in the sector as well as the traceability of key raw materials are still at an unsatisfactory level across the sector. For a more detailed discussions of the results see Chapter 2 and the dedicated section in the appendix.

This report

The report is structured as follows. Chapter 1 provides an overview of key developments in the watch and jewellery sector, the policy landscape, the technological environment and the impact of the watch and jewellery sector on climate, water, and biodiversity. Chapter 2 describes the results of the sustainability rating of the 21 brands (described also in more detail in the appendix). Chapter 3 provides insights into best practices and current approaches to improving sustainability practices along supply chains. Finally, Chapter 4 provides recommendations to consumers, companies and policy makers on what actions can be taken to further improve responsibility, transparency and accountability in the watch and jewellery sector.

WWF VISION

WWF remains committed to its vision of engaging stakeholders from the watch and jewellery industry (e.g. manufacturers, retailers, consumers, refiners and the government) in finding innovative solutions to protect the environment, in particular forests, fresh water and wildlife that are currently threatened in several points of the sector's supply chain. Together, we will transform international markets by producing goods and services sustainably and we will encourage others to become sustainable consumers.

There is still a long way to go to make this vision come true, but WWF believes it to be possible if the industry and related stakeholders continue to take bold, ambitious steps towards transformation.



1 ENVIRONMENTAL AND SOCIAL IMPACTS AND DEPENDENCIES IN THE WATCH AND JEWELLERY SECTOR

Five years have passed since the publication of WWF's first watch and jewellery industry rating, "A precious transition". The report highlighted the environmental issues connected to the industry and urged brands to take responsibility and address these problems. This new report reveals that, since 2018, brands have indeed been putting transitionary processes into practice. It is evident that in terms of sustainability efforts, the industry has advanced notably. The global environmental degradation, however, has also continued to progress and the sector faces a growing number of sustainability risks and challenges.

The following chapters highlight the persisting need for a "precious transition" of the watch and jewellery sector towards improved sustainability performance, based on current environmental and climatic developments. It also provides exemplary insight into the prevalent negative impacts of the industry on the environment and people.

THE CONTINUED NEED FOR A "PRECIOUS TRANSITION"

The latest Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) shows that global average temperatures are increasing worldwide, contributing to a surge in weather and climate extremes, melting ice caps and rapidly retreating glaciers (IPCC 2023).

These climatic changes, attributable to human-driven greenhouse gas emissions, also have a significant impact on the world's water resources: While rising sea levels and floods are destroying livelihoods in some regions, water scarcity is worsening in others. According to the Sustainable Development Goals Report 2023 of the United Nations (UN), 2.4 billion people lived in countries with water scarcity in 2020, and 2.2 billion people had no access to clean drinking water in 2022. At the same time, untreated wastewater, among other things, threatens water quality worldwide (see detailed information page 17) (UN 2023).

In addition to the persistently rising greenhouse gas emissions and changes in the global water regime, human activities such as agricultural expansion, deforestation, mining, and urban sprawl are causing land and sea degradation at a concerning high speed (IPBES 2019). According to the majority of assessments, 20 to 40% of the global land area is currently degraded or in the process of degrading (UNCCD 2022). As a result, biodiversity loss and extinction rates are rapidly increasing. The WWF Living Planet Index illustrates how mammal, bird, amphibian, reptile, and fish populations have decreased by about 68% on average between the years 1970 and 2016 (WWF 2022a). While land degradation is a global concern with troubling long-term effects pertaining to biodiversity loss and climate change, the direct effects of land degradation are felt locally by the communities that live in the degrading areas (UNCCD 2022; see also WWF 2021).

THE WATCH AND JEWELLERY SECTOR'S IMPACT AND DEPENDENCY ON NATURE

The watch and jewellery sector contributes to climate change, environmental destruction, deterioration of water resources, and biodiversity loss. The extraction of non-renewable raw materials, like precious metals, involves deforestation, emissions to air, soil and water, and bares a high number of social risks (Dehoust et al. 2020). About 85% of GHG emissions from the luxury industry are indirect emissions that occur along the value chain (Watch & Jewellery Initiative 2030 2023). Figure 2 shows the large number of different materials that are used in a watch; the extraction, preparation, and processing of all these materials can have a significant negative impact on the environment and people. Companies in the sector therefore bear a particularly strong responsibility to address these issues and reduce the negative environmental and human rights impacts along their value chains - especially at the stage of resource extraction.

While it is now well known that the economy often has a negative impact on climate and biodiversity through its activities, it is crucial to note that the stability of the economy is heavily reliant on an intact environment, too. Businesses have started to become aware of their dependencies on climate and nature to secure future commodity supplies and continue their operations.

Raw materials used in a watch



The extractive industries – being an important input sector of the watch and jewellery sector for raw materials such as gold, diamonds, or (stainless) steel – are, for example, highly dependent on water availability. Important activities in mining, including dust compression, cooling machines, and ore processing, require large quantities of water. Against the backdrop of increasing global water stress, governments have begun to critically review mining licenses and operations in terms of their water consumption. Without proactive and preventive water management and reductions of water consumption, some mining companies could lose their mining permits or face heavy fines in the future (WWF 2022b).

Biodiversity loss and the progressive destruction of the natural environment also pose risks to the global economic and financial system as a whole; according to the World Economic Forum, over 50% of global gross domestic product (equivalent to \$44 trillion) is highly or moderately dependent on the environment and its services (World Economic Forum 2020).

Furthermore, brands that remain inactive in the face of growing environmental crises and fail to adapt their business models also face significant regulatory and reputational risks. In recent years, the demands of policy makers and consumers on the environmental performance of companies have continued to increase (see more in Chapter "Changing Demands and Regulations).

The gold supply chain: An example of the industry's environmental issues

Given that the watch and jewellery sector accounts for the largest demand for gold, having a closer look at the environmental issues along its supply chain is essential. The following deep dive on gold exemplifies the enormous negative footprint of mining and highlights the importance for the industry to rethink its approach to sustainability. In 2021, the watch and jewellery sector consumed 50% of the world's annual gold production (PWC n.d.). The extraction of 1 tonne of gold in mining requires the production of about 100,000 tonnes of waste rock1. This translates to 1000 kg of soil having to be moved to produce a 10g gold ring (WWF 2021). Gold mining can be divided into two main groups: large-scale industrial gold mining (LSGM) and artisanal and small-scale gold mining (ASGM). Large-scale mining is highly mechanised, involves the use of heavy machinery and provides about 80% of the global primary gold production. ASGM, on the other hand, is often informal, less efficient, and eminently labour intensive. Small-scale and artisanal mining employs about 90% of all the gold miners, this corresponds to ca. 10 to 15 million miners globally.

ASGM, which is also an important income source for many people in developing countries, is also often associated with environmental and social issues such as child or forced labour (World Gold Council, 2018).

Gold mining requires large amounts of water, and both large-scale gold mining and artisanal and small-scale gold mining can affect surface and groundwater supplies, as well as the water quality in the vicinity of the mining operations (WWF 2021). In many ASGM operations, mercury – a highly hazardous substance – is used to dissolve gold from the rock, which can be detrimental to the health of the miners. Mercury poisons nearby waterbodies, fish, and soil, threatening biodiversity and the health of local communities (Buderath et al. 2021). Gold is also often mined in forests, including in places like the Amazon rainforest, where mining greatly increases the risk of negative impacts on flora and fauna (WWF 2021). Forest areas are also often home to indigenous peoples, who are particularly prone to land rights violations (Buderath et al. 2021; WWF 2021).

Tracing the origins of gold presents a significant challenge in the industry. The gold value chain, marked by its inherent complexity, involves a multitude of intermediaries and stakeholders, ranging from miners to refiners and distributors. This intricate web of participants complicates the tracking of the gold's journey from its source to the final product. Consequently, determining the exact conditions under which gold was extracted becomes a demanding task, and environmental concerns and human rights violations often remain concealed throughout the value chain. Given the substantial presence of illegal and informal artisanal and small-scale gold mines, certain actors within the value chain may also have motivations to obscure the true origin of the gold. Thus, the imperative to establish transparency and enhance traceability emerges as a pivotal step in the pursuit of responsible gold sourcing.

The subsequent steps in the value chain – the trading and transport of raw materials, the refining and processing, the production of inputs and intermediate products, the manufacturing of the final product, and finally the distribution of the products, which is managed by the brands themselves can also be associated with negative environmental impacts. Various processes, such as refining, the production of intermediate products, manufacturing, the transport of raw materials and intermediate products as well as the operation of stores and warehouses are in some cases accompanied by high energy consumption. This leads to the emission of greenhouse gases and, in some cases, other air pollutants such as particulate matter. Both mining and the refining of raw materials generate waste, which can occupy land or pollute soil and water if it is contaminated with heavy metals (RJC 2023). Some further examples of possible environmental impacts are listed in Figure 3. Additionally, the WWF study 'Impact of Gold' provides in depth information about the topic.

Gold sourcing neither affects all companies nor is it considered the only environmental and social challenge of the watch and jewellery sectors. The use of other metals and materials such as leather, gemstones and plastic often pose similar threats to the environment. However, the gold value chain is a highly relevant example.

Impact hotspots along the gold supply chain

EXTRACTION AND PROCESSING OF RAW MATERIALS

- Deforestation and land degradation
- Pollution of soil and water
- Biodiversity and habitat loss
- Release of toxic tailings and waste waters
- Release of mercury or cyanide into water, soil and air
- Energy use and GHG emissions
- Destruction of land through infrastructure
- Soil movement and production of waste rock
- Acid mine drainage
- Air emissions (e.g. contaminated dust)
- Health and safety issues
- Difficult working conditions
- Human rights violations
- Migration
- Corruption and illegal trading

TRADE

- GHG and pollutant emissions from transportation
- Buidling of infrastructure: land and energy use
- Fragmentation of ecosystems due to infrastructure: impacts on biodiversity and e.g. maritime habitats
- Difficult working conditions



REFINING

- High energy use and associated GHG emissions
- Poor waste management of toxic byproducts like cyanide and mercury
- High water use
- Difficult working conditions

Figure 3: Exemplary illustration of most relevant impact hotspots along the gold supply chain. Source: WWF 2018 with additions from adelphi

The impact the watch and jewellery sector on biodiversity

In addition to the 2018 topics, the WWF Watch and Jewellery Rating 2023 examines the biodiversity-related governance and management of brands in the sector.

Along the value chain of the watch and jewellery sector there are numerous environmental impacts that can lead to effects on wildlife and forests. In particular, the extraction and processing of mineral raw materials has a high environmental footprint. For example, gold mining often involves the destruction of large areas of land, deforestation, and soil degradation to gain access to deposits. In addition, the infrastructure (access roads, worker housing, etc.) built around mines and processing plants contributes to the fragmentation of the habitats, which can negatively impact the migration of species, the access to food, shelter, and the search for mating partners and thus the mixing of genetics. Gold is most often mined in forested areas compared to other minerals, so large-scale deforestation is associated with gold mining. Newly build roads into forests can also enable the increase of illegal activities such as poaching, thereby further exacerbating the situation (WWF 2021).

In addition, due to informality and the resulting often lower enforcement of occupational health and safety standards in the ASGM sector, mercury is often used to separate gold from other materials. Mercury is a very toxic liquid heavy metal. When it enters soils and waters, it can end up in the food chain, where it is deposited in animals and humans and can affect reproduction, survival, endocrine function, immune function, behaviour, and metamorphosis. Amphibians in particular are highly susceptible to mercury poisoning (WWF 2021).

While the impacts of gold mining are particularly high, the mining of other raw materials that are used in the production of watches is also associated with risks for biodiversity: The mining of bauxite and iron ore – raw materials that are processed into aluminium and (stainless) steel and used in the production of many watches – is associated with significant deforestation. Between 2001 and 2019, for example, bauxite mining accounted for about 8% of direct mining-related deforestation, and iron ore mining for about 7% (comparative value: ASGM and LSGM gold mining activities accounted for about 36% of total mining-induced direct deforestation during the same period) (WWF 2023).

Risks to biodiversity can also arise at further stages of the watch and jewellery value chain: The discharge of wastewater and chemicals into soils and waters during manufacturing, for example, or noise emissions and the fragmentation of landscapes and marine habitats during transport can degrade wildlife.

PRODUCTION OF INPUTS

- High energy use and associated GHG emissions (and potentially air pollutants such as particulate matter)
- Waste generation through inefficiencies
- High water use
- Difficult working conditions



MANUFACTURING

- High energy use and associated GHG emissions (and potentially air pollutants such as particulate matter)
- Inefficient waste management
- High water use
- Difficult working conditions

DISTRIBUTION/MARKETING

- High energy use and associated GHG emissions (and potentially air pollutants such as particulate matter)
- Business travel and associated GHG emissions
- Logistics, shipping and associated GHG emissions
- Misleading marketing campaigns

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The impact of the watch and jewellery sector on water

In addition to the 2018 topics, the WWF Watch and Jewellery Rating 2023 examines the water-related governance and management of brands in the sector.

Various water-related risks can occur along the value chain of the watch and jewellery sector. Mining is often associated with the risk of water pollution. Additionally, the mining and processing of mineral resources in high water stress areas can exacerbate water scarcity and limit residents' access to freshwater. When extracting gold from softer deposits, for example, water is used for dredging or removing sediments. This can limit the quality and availability of nearby water resources if the water consumption leads to a drop in the freshwater table or if mining releases pollutants into the surrounding soils and bodies of water. This poses a high risk,

especially nearby large-scale mining sites. Smaller scale ASGM also uses high volumes of water, and there is often no efficient water management in place to capture and recycle or purify water, for example. The frequent use of mercury in ASGM increases the risk of contaminating surrounding water sources, which are also used by residents for cooking and drinking. The discharge of mercury into water bodies also has a negative impact on local wildlife and biodiversity. Similarly, mining waste containing sulphide minerals entering natural water bodies can turn them acidic, also called acid mine draining. Acidic water has devastating effects on human, aquatic and soil health. Another major issue can stem from the leakage from tailings storage facilities. For instance, the leakage of very small amounts of cyanide, a chemical used in the leaching process of gold extraction, can be lethal for vegetation, wildlife, and humans. Furthermore, as ASGM mining often takes place in very remote areas, the transport of materials and machinery to and from the site is often done via waterways, which has a negative impact on rivers and the fish, small animals, etc. living in them (Buderath et al. 2021; WWF 2021).

CHANGING DEMAND AND REGULATIONS

In recent years, watch and jewellery brands have taken increased action to identify, address, and report corporate sustainability issues. According to McKinsey estimates, the share of sustainability-driven fine jewellery purchases will increase from between five and ten percent in 2019 to between 20 and 30% in 2025 (BOF and McKinsey 2021). Industry experts label the phenomenon the "sustainability surge," attributing it largely to a change in consumer behaviour, with millennials and Gen Z consumers increasingly demanding that the products they purchase meet certain sustainability criteria. Recent research suggests that 31% of Gen Z consumers are willing to pay more for products that are reliably sustainable, compared to only twelve percent among Baby Boomers (BOF and McKinsey 2021). Importantly, sustainability-driven consumers not only want companies to commit to certain sustainability standards, but they also want the respective companies to prove that they meet the standards they claim to uphold. This will require companies to engage with these issues in a serious manner in the coming years and highlights the importance of traceability and certification schemes. The consumer demand for evidence of sustainability practices comes amid increasing awareness of past greenwashing and performative social justice practices (BOF and McKinsey 2021).

At the same time, investors and policy makers are increasingly demanding that companies operate sustainably and conduct due diligence along their supply chains. Due diligence requires companies to "identify, prevent, mitigate and account for how they address [the] actual and potential adverse impacts [on people, society or the environment] in their own operations, their supply chain and other business relationships" (OECD 2018b). This means that companies not only need to establish a process for fulfilling their due diligence (as defined, for example, in the Due Diligence Guidance for Responsible Business Conduct of the Organisation for Economic Co-operation and Development (OECD)), but also to draw consequences for their strategic business decisions when negative impacts are discovered. In this way, effective due diligence does not merely aim at compliance with existing regulations but serves as a strategic tool for companies to make long-term sustainable decisions and to reduce reputational and supply chain risks while minimising negative impacts on the environment and people. To achieve this, it is necessary to work with scientifically sound methods and to formulate clearly verifiable targets. Various regulations around the world aim to promote due diligence as a concept or make it mandatory. Among others, the French Corporate Duty of Vigilance Law, the German Supply Chain Due Diligence Act and the proposal for a European Directive on Corporate Sustainability Due Diligence (CSDD) oblige companies to implement due diligence processes. Other regulations take a more specific focus in terms of topic or products, such as the US Dodd-Frank Act, the EU Conflict Minerals Regulation (both related to conflict minerals), the EU Timber Regulation, the Japanese Clean Wood Act (forest products) or the

proposal for the EU Batteries Regulation (batteries) (García et al. 2022; Danish Institute for Human Rights 2023). In addition, several regulations in the EU, such as the Sustainable Finance Disclosure Regulation (SFDR), aim to ensure that financial market participants take negative environmental or social impacts into account in their investment decisions by requiring them to regularly disclose their "principal adverse impacts" in statements. Similarly, the EU Taxonomy Regulation aims to steer financial flows towards more sustainable products by providing clarity on which economic activities can be considered "environmentally sustainable" (Danish Institute for Human Rights 2023). These and similar regulations are also increasing pressure from investors on companies in the sector to operate sustainably and to communicate efforts openly. In March 2023, the European Commission proposed the Green Claims Directive to address corporate greenwashing concerns. According to the proposed regulations, the majority of EU companies must prove their environmental statements using life-cycle assessments confirmed by external sources. Terms like "net zero," "carbon neutral," and "eco-friendly" can no longer be used in advertisements, social media, or packaging unless they have been properly verified (European Commission 2023). Overall, companies are facing significantly higher requirements with regards to their sustainability performance than in 2018.

CIRCULARITY IN THE WATCH AND JEWELLERY SECTOR

In addition, both consumers and sustainability experts are increasingly taking a holistic approach to sustainability, also highlighting how environmental and social issues are linked. For example, the livelihoods of many rural communities depend on artisanal and small-scale mining, but miners also face significant health risks due to the use of mercury and difficult working conditions (see Buderath et al. 2021). Nearby communities are highly affected by the environmental degradation caused by mining activities, as outlined in the previous chapter. This example highlights the multiple connections between environmental degradation, health and social harm.

One important step towards achieving more sustainable business practices in the watch and jewellery sector is to move towards a circular economy. Circularity does not only help to reduce both the negative environmental footprint and human rights issues in the supply chain, but also to match current market trends. Circularity has emerged as a prominent subject of discussion within the retail sector, with a significant proportion of consumers demonstrating their engagement in circular approaches. Approximately 53% of consumers opt to repair their belongings rather than replace them with new ones, while 40% actively participate in the acquisition of second-hand or refurbished goods. Furthermore, 38% of consumers are willing to pay a premium for products that have a longer shelf life or durability

(Deloitte 2022). These advancements are evident in the statistics of the rapidly expanding market for pre-owned watches. Experiencing an annual growth rate of 8%, this segment is outpacing the overall luxury industry's growth, showcasing its burgeoning popularity among consumers seeking more sustainable and cost-effective choices (BCG 2020). The surge in this trend is primarily propelled by millennials, who place great emphasis on tangible sustainability commitments and have now reached a stage in life where a considerable number of them can afford luxury acquisitions (McKinsey 2021).

Using recycled inputs instead of virgin materials is often viewed as an effective way to improve the circularity of the watch and jewellery sector. Nevertheless, claims made around recycled minerals must be viewed with high levels of caution. First, there is currently no alignment of industry standards on the definition of what recycled gold is, rendering it impossible for the public to understand what lays behind the simple term recycled. In addition, currently, gold is considered to be recycled if it has been transformed once after its primary refining from virgin gold. As the demand for recycled gold currently exceeds the supply, some refineries have started to extract virgin gold, melt it down once, and sell it as recycled gold. This practice contradicts the original idea that materials get recycled from products that were already in use. Therefore, a clear definition and strict controls for the term "recycled" is required to create more transparency for all stakeholders and avoid false claims (see box "Recycled gold - it's all about the details" with reference to the definition suggested by PMIF 2022).



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Recycled gold − it's all about the details

Claims from watch and jewellery brands regarding recycled gold in their products must be viewed with caution.

Under OECD and other standard setters such as the London Bullion Market Association (LBMA), the Responsible Jewellery Council (RJC) and the Responsible Minerals Initiative (RMI) (see the appendix for an overview of some sustainability standards and certifications) gold can be claimed to be recycled if it has been transformed at least once after its primary refining from freshly mined gold without ever having seen a consumer. This definition currently represents almost all refined gold that would undertake more than one refining process and does allow freshly mined gold to be labelled as recycled gold (PMIF 2022). In contrast, the Precious Metals Impact Forum (PMIF) has developed a more concise definition with the aim to provide more transparency and clarity. According to PMIF, there is a difference between reprocessed and

recycled gold. Gold may only be called "recycled" if it actually has been a waste product. Accordingly, one can only speak of "recycled gold" if it has been extracted from products with a gold content of less than 2% by weight that are destined to be thrown away but instead were returned to a refinery to start a new life. It means that especially gold recovered from old electronic equipment would fall under the definition. Gold that is reused and produced from products that contain more than 2% of gold in weight with the purpose of changing its state like old jewellery or coins should be referred to as "reprocessed gold". As gold is hardly ever a waste product, most gold from secondary sources used in the watch and jewellery industry should be referred to as "reprocessed" rather than "recycled" (PMIF 2022).

As for freshly mined gold, traceability and transparency are key for responsible sourcing of recycled and reprocessed gold: Identifying the source and reviewing supplier claims through comprehensive due diligence is utmost important to understand and reduce the negative impact of secondary supply chains.

2 BRAND'S SUSTAINABILITY RATING RESULTS

To promote the adoption of responsible business practices within the luxury watch and jewellery sector, WWF has undertaken an updated assessment of industry-leading brands, focusing on the most relevant sustainability topics.

The evaluation criteria were adopted from the WWF Watch and Jewellery Report 2018 and based on scientific, regulatory, and industry-specific developments, updated to conform with current standards. The rating analyses brand performance in the sector with regards to their materiality analysis, sustainability strategy, climate action, biodiversity stewardship, water stewardship, human rights management, circularity approaches, traceability and transparency in the supply chain, monitoring, reporting and disclosure of sustainability activities, and stakeholder engagement. The focus of this report lies on the luxury segment within the watch and jewellery sector. While the 2018 rating prioritised brands owned by Swiss companies, the 2023 rating assessed additional international leading watch and jewellery brands, namely Pomellato (Kering), A. Lange & Söhne (Richemont), Panerai (Richemont), Pandora Jewellery, Breitling, Tiffany & Co. (LVMH), and Bulgari (LVMH). These brands were selected based on revenue, industry relevance, and market share, showcasing a diverse set of the most prominent brands within the sector. As some of the individual brands assessed in this rating belong to a larger group, the group name is given in brackets after the brand name in this report where applicable.



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To implement and ensure the independence of the rating, WWF commissioned adelphi, an environmental consultancy with focus on climate, environment, and development. The final rating scores are based on data derived from publicly available sources as well as responses to a questionnaire tailored for this report. Out of the 21 brands evaluated for the rating, seven did not submit a response to this questionnaire: Patek Philippe and the Richemont Group's brands A. Lange & Söhne, Jaeger-LeCoultre, Panerai, Vacheron Constantin, IWC, and Cartier. As a result, these brands were evaluated based only on publicly available data.

Geographical distribution of the analysed brands

(location of headquarter)



A. Lange und Söhne (Richemont)

Rolex

Patek Philippe

Audemars Piguet

Chopard

TAG Heuer (LVMH)

IWC (Richemont)

Jaeger-LeCoultre (Richemont)

Vacheron Constantin (Richemont)

Omega (Swatch Group)

Swatch (Swatch Group)

Longines (Swatch Group)

Tissot (Swatch Group)

Breitling

Figure 4: Geographical distribution of the analysed brands (location of headquarter)

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Results of the 2023 WWF Watch and Jewellery Rating

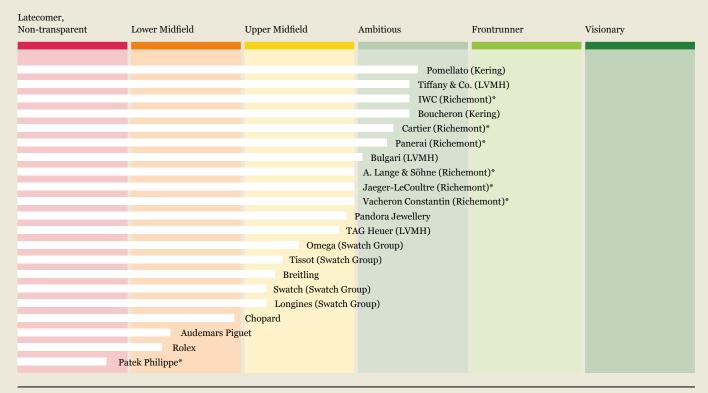


Figure 1: Results of the 2023 WWF Watch and Jewellery Rating

Among the 21 assessed brands, 14 took the opportunity to comment on and complete WWF's pre-assessment while the remaining seven did not complete the initial assessment and therefore needed to be evaluated based only on publicly available data. Brands that did not completed the pre-assessment and were only rated on publicly available data are marked with a * in the chart. If individual brands are part of a group, the group name is indicated in brackets after the brand name.

The final rating results indicate that brands affiliated with larger groups such as Kering, Richemont, and LVMH have benefitted from sustainability efforts at the group level. Among these, seven brands demonstrate a commitment to responsible business practices labelled as "ambitious" in this rating. The sustainability efforts of the majority of brands fall within the "upper midfield" score range. Three brands scored in the "lower midfield". Patek Philippe stands out as the only brand labelled as "non-transparent", implying a lack of available information regarding its sustainability commitments. It is evident that no brand was ranked in the two highest categories, highlighting the significant room for improvement in the industry.

Comparing the overall rating results from 2023 and 2018, it becomes evident that the sector has started its journey towards responsible business practices. In 2018, over half of the assessed brands were rated as "non-transparent". This year, only one brand falls into this category. This trend of greater transparency in communication is also reflected in the increased number of detailed responses received from brands to supplement the assessment of this report. Nevertheless, there is still room for improvement among all the brands. In the present rating no company has managed to achieve a score in the upper two scales ("frontrunner" and "visionary"). One of the main reasons is the lack of traceability and transparency along supply chains. Most brands still face challenges in tracing back raw materials to their origin

and obtaining a comprehensive overview of all stakeholders involved. Traceable supply is key to understanding the impact of raw materials. Only when a brand can understand and measure the impact and environmental and social risks along its supply chains, it can develop effective processes to avoid and reduce them. To demonstrate commitments and actions to the broader public, it is necessary to enhance disclosure in the future.

While the focus of this report is on the rating results, the following chapters will also offer advice on how companies should enhance their engagement to better protect the planet and respect human rights.

F Greenwashing

In today's business world, some companies present themselves as environmentally friendly even though they do very little to reduce the negative the impacts of their business activities. Those companies often only fund or participate in projects that are not directly aligned with their core operations but have a favourable public perception. Trustworthy sustainability engagement starts with a focus on reducing and mitigating the negative environmental and social impacts of the own value chain. Supporting projects and good causes beyond core processes is important but should be supplementary to reducing the own impact.

Some companies also resort to misleading claims, such as "climate neutrality" to create the impression that they are deeply committed to sustainability. These claims suggest no/reduced climate impact of a product while purchasing CO₂ certificates which promise emissions reduction measures elsewhere, as a way to "compensate" for the emissions generated by their own operations. This can serve as a smokescreen or an excuse to continue emitting carbon emissions and does not incentivize actual emission reduction within the company and its value chains. Companies should always prioritise the decarbonisation of their own operations and value chains (towards corporate net zero). Beyond, companies should finance climate action that supports global goals (towards global net zero). More advice for comprehensive climate action can be found in the next chapter.

RESULTS OF THE RATING

Materiality analysis and sustainability strategy

Based on the assessment's findings, a considerable number of brands started to set up comprehensive environmental strategies. The majority conducts double materiality assessments to pinpoint the most pertinent sustainability issues, forming the bedrock of their corporate sustainability strategies. Moreover, some of the rated brands have started to restructure their governance frameworks, placing heightened focus on sustainability management. Leading the way in this regard are the brands that belong to the Kering Group, (Pomellato and Boucheron), and the Swatch Group (Omega, Swatch, Longines and Tissot). These brands have strategically aligned their corporate objectives with insights derived from materiality assessments based on environmental impact data. Nonetheless, there is still improvement potential among all brands evaluated. This involves establishing a dedicated position to report sustainability issues directly to the executive board, disclosing transparently how all sustainability aspects are fully integrated into decision-making processes, and grounding materiality analyses on environmental impact data. Enhancing the quality of materiality assessments and elevating sustainability to a top priority within the executive board's agenda are areas that warrant attention.

Climate action

Considering the overall good scores in this field, it is clear that climate measures are being adopted throughout the industry. While companies emphasise GHG accounting and target setting, the implementation of extensive measures to reduce the carbon footprint can still improve. Tiffany & Co. (LVMH) stands out as an industry leader in sciencebased target setting, displaying short-term, long-term, and net-zero targets, all endorsed by the Science Based Targets Initiative (SBTi). On the other hand, the Kering Group brands Pomellato and Boucheron as well as independent brand Pandora Jewellery have excelled in addressing climate change, showcasing significant progress in reducing GHG emissions in recent years. Businesses must prioritise the implementation of effective mitigation and reduction strategies, aligning their actions with the principles of the Paris Agreement, and apply comprehensive corporate climate strategies as proposed by WWF (see more in Chapter 3).

Biodiversity stewardship

Biodiversity refers to all the different kinds of life that can be found in one area. Within this category the focus lies on terrestrial biodiversity (aquatic biodiversity is covered by the water section). The results of this rating show that the watch and jewellery sector lags behind in measuring and tackling biodiversity risks. Brands' rather unstructured approaches to this topic highlights the lack of clarity on limiting negative impacts on ecosystems and restoring damaged habitats. Influential watch and jewellery brands play an important role in shifting these industry standards by transparently reporting on biodiversity risks in their production sites and supply chains, setting and working towards ambitious targets, and measuring the progress made. In this regard, the recently launched science-based targets for the environment developed by the Science Based Targets Network (SBTN) will provide additional guidance to address the complexities of impacts and dependencies on nature. The LVMH Group and the Kering Group are in the process of piloting SBTN. Brands must assess their entire value chain, prioritise locations and hotspots at high biodiversity risks, and implement scientifically grounded actions. In particular, the transparent and science-based recording and reporting of biodiversity hotspots and risks is key to creating a more widely available database and, as a result, a positive feedback loop in the process of promoting biodiversity risk assessment in the industry and beyond.

Water stewardship

Up until now, brands assessed in this rating have taken limited action in measuring their exposure to water risks and effectively addressing the identified issues. As a result, it is difficult to pinpoint a clear "frontrunner" in this category. The best-performing brands have taken the initiative to publish quantified data on water risks and report their progress in addressing these concerns. However, such efforts often focus on their own business sites, with only minimal consideration

of upstream business relationships. To improve, businesses must adopt a holistic approach to address water stress throughout their entire supply chain. This includes identifying water risks along the entire value chain, setting ambitious targets, and implementing an effective water stewardship programme to mitigate water risks.

Human rights management

Even though the watch and jewellery sector harbours a serious risk of human rights abuses and receives a lot of public attention, the rating reveals that there is still a lot of room for improvement in effectively addressing these risks. Interestingly, the majority of brands score highly regarding their human rights frameworks, as most of them have incorporated human rights policies that are aligned with international policy frameworks such as the UN Guiding Principles on Business and Human Rights (UNGPs). However, when it comes to topics that require brands to take more dedicated action, such as comprehensive and systematic human rights risk assessments or addressing effectively human rights risks and impacts of their own operations as well the entire value chain, all brands lag behind. In this segment of the rating in particular, many of the statements made by brands are rather generic and lack foundation, making a more detailed assessment difficult. To progress, brands must implement comprehensive human rights due diligence processes that cover the entire value chain. This is essential to identify and assess the human rights risks of the own operations, suppliers, and business partners and subsequently take action to address these risks and impacts.

Circularity

Circular approaches have undoubtedly gained significant attention in the watch and jewellery sector in recent years. Nonetheless, the rating results reveal that there is still considerable potential for improvement in this area. Among the assessed brands, only two of Richemont's brands, Panerai and IWC, have achieved "frontrunner" status, primarily due to their well-defined circularity strategies grounded in relevant environmental impact data, including life cycle assessments. Both brands demonstrate a strong commitment to enhance recycling rates and incorporate secondary materials into their production processes. It is imperative that all businesses take concrete steps to limit new resource extraction and drive the transition towards circular value chains. Embracing circular practices will minimize environmental impacts and lead to more sustainable operations. By leveraging the immense potential of rapidly expanding second-hand markets, watch and jewellery brands will not only extend the lifespan of their products, but also align with the growing consumer demand for more sustainable choices.

Traceability and transparency

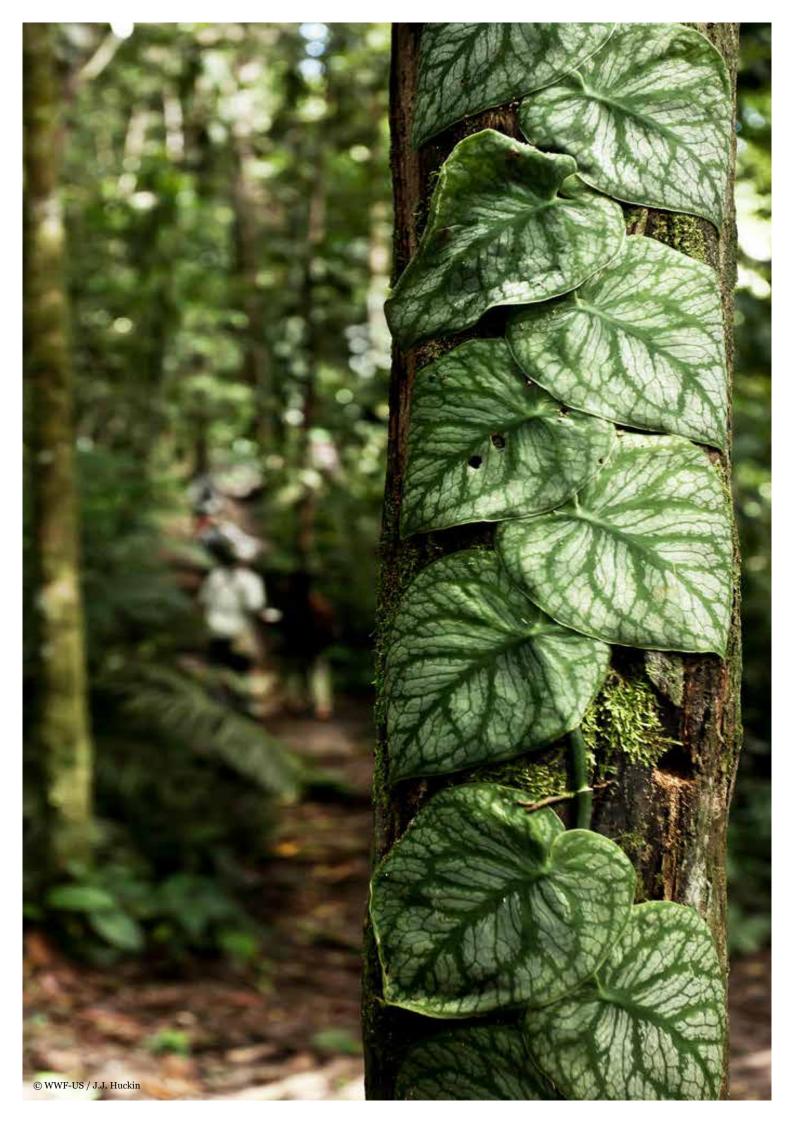
Traceability and transparency along the supply chain form the basis of credible, well-informed engagement. To understand the impact and sustainability risk, brands need to understand where the raw materials come from and how they are extracted or produced. The rating results show that brands still face challenges in this regard. Only some brands are able to ensure traceability beyond their tier 1 suppliers and adopt more sophisticated material certification standards, such as the RJC Chain of Custody or Fairmined certification. Until now, most brands have only limited understanding of the origin of the used raw materials, under which circumstances they were extracted or produced and what impact they create on nature and local communities. Moving forward, full traceability of supply chains should become the highest priority of watch and jewellery brands to ensure credible responsibility and risk management.

Monitoring, reporting and disclosure

One major positive development in the watch and jewellery sector is the increasing public disclosure of sustainability management data. Most companies have taken the initiative to regularly publish externally audited sustainability reports, adhering to the Global Reporting Initiative (GRI) reporting standards. While the rating shows that environmental topics receive substantial attention, reporting about human rights topics remains limited. To progress further, brands must place a stronger focus on monitoring and transparently reporting both internal and external human rights performance, utilising both quantitative and qualitative data. By enhancing reporting practices for activities that address environmental and human rights concerns, brands can strive to attain a "visionary" status within this segment of the rating.

Stakeholder engagement

The rating highlights that there are significant differences in stakeholder engagement between different types of stakeholders such as employees, suppliers, customers, and other businesses. On average, brands demonstrate strong performance in engaging with business initiatives centred around sustainability. Cartier's (Richemont) high rating score in this section results from an active participation in numerous relevant alliances, showcasing exemplary commitment. The decisive factor here is active participation rather than mere membership. At Cartier, for example, this is reflected in the fact that they are a founding member of the RJC, which was established in 2005. Brands generally fare well in engaging with their employees on responsible business practices, e.g. by offering regular training and awareness activities. However, most brands do less to engage with their suppliers or customers. Improvements can be achieved by gaining a better understanding of relevant stakeholders and their specific needs and addressing those needs with a thorough engagement plan. In summary, brands should follow a strongly committed approach to addressing sustainability that is reflected in its proactive stakeholder management.



3 MOVING FORWARD: RECOMMENDATIONS AND BEST PRACTICES

While the overall sustainability performance of the global watch and jewellery sector still leaves much to be desired, as the results of the rating show, some brands are already engaging with sustainability issues and have developed approaches and measures that can serve as examples for other industry stakeholders. By adjusting their business practices and engagement with suppliers, each company can have a positive impact on the sustainability of the industry as a whole.

Accordingly, the following chapter presents best practice examples and recommendations for businesses in the watch and jewellery industry based on the results of this rating and external research. The best practice examples were selected according to their level of ambition in terms of scope, relevance, feasibility, and scalability. It should be noted that this compilation is not an exhaustive list; rather, it provides insight into the diverse range of approaches adopted by brands to enhance their sustainability performance. The intention is to showcase potential pathways that organisations are exploring in their pursuit of greater sustainability and recognise the multiplicity of strategies available to the industry.

It should be emphasised that none of the measures mentioned below in a specific section makes one of those brands an overall frontrunner. Instead, a comprehensive sustainability strategy must cover all business areas and the entire value chain of a company. Responsible business practice must be included in all strategic decisions. Aspects such as transparency and traceability in the supply chain, communication and engagement with suppliers, and public reporting form the basis for enabling the effective implementation of a credible, responsible business practice (Steele 2021).

The structure of the chapter follows the nine thematic categories along which the rating results were presented in Chapter 2. It can also be understood as a checklist of issues that a company must address as part of its sustainability transition.



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MATERIALITY ANALYSIS AND A COMPREHENSIVE SUSTAINABILITY STRATEGY

Among the assessed brands there are several good examples for implementing reliable materiality analyses, developing clear sustainability strategies, and establishing suitable governance structures. Overall, the rating results show the industry has achieved a good level of formalised sustainability governance compared to 2018. In particular, larger groups with multiple brands were able to formalise their strategies and efforts in a concrete way.

Kering Group – materiality analysis & sustainability strategy: The Kering Group has developed a methodology focusing on measuring and quantifying the environmental impact of its operations. Known as the Environmental Profit & Loss (EP&L), it plays a key role in guiding Kering's corporate sustainability strategy, enhancing its operational processes, and supporting the formulation of informed decisions regarding its supply sources and technologies. It converts environmental impact data such as carbon emissions, water consumption, air and water pollution, land use, and waste production along the supply chain into monetary values that allow comparison between natural resource use. All brands of the Kering Group, including Pomellato and Boucheron, refer to the EP&L when formulating sustainability strategies and approaches. To encourage a general movement towards higher levels of sustainability, Kering has made the EP&L methodology accessible to its peers in the luxury industry (Kering n.d.a).

Richemont Group – governance structure: The Richemont Group has recently established a governance structure for environmental management that sets out clear responsibilities and accountabilities for all of its brands, including A. Lange & Söhne, Cartier, IWC, Jaeger-LeCoultre, Vacheron Constantin and Panerai, and makes sustainability a top management issue. With the creation of the Chief Sustainability Officer (CSO) role in February 2022, the group has stepped up its sustainability focus. The CSO works together with Richemont's existing Corporate Social Responsibility (CSR) department and the CSR Committee. As of February 2023, the CSO is part of the Senior Executive Committee, which is responsible for the management of the company and reports to Richemont's board (Richemont 2023). This way of rooting sustainability within the core governance structure instead of viewing it as an isolated topic is the right way forward.

Recommendations – materiality analysis and sustainability strategy

To achieve significant transformative change, sustainability must become an intrinsic component of business operations, embraced, and ingrained within the company's culture and strategic approach:

- Elevate sustainability to a key priority on the executive agenda impacting all business activities – instead of viewing it as an isolated issue.
- Establish a transparent governance framework incorporating a dedicated role for environmental sustainability that directly reports to the executive level.
- Incorporate environmental externalities into all strategic decision-making processes (e.g. by integrating sustainability in financial accounting and reporting).
- Base corporate strategy on a comprehensive double materiality assessment of the company's entire operations, employing environmental impact data, and utilising scientific principles (e.g. life cycle analysis).

INCREASE TRACEABILITY AND TRANSPARENCY

Establishing transparency throughout the value chain is a fundamental requirement for identifying and addressing certain sustainability issues. With highly internationalised and complex supply chains, creating transparency is a major challenge for every watch and jewellery brand.

Breitling – traceable watch: In 2022, the Swiss watchmaker Breitling released the proof-of-concept of its first traceable watch called the "Super Chronomat Automatic 38 Origins". By collaborating with Sourcemap, a company specialising in supply-chain visibility, Breitling can monitor the origin and journey of the watch's raw materials with all intermediaries and producers. Breitling aims to apply this approach across their entire watch collection and all related raw materials such as gold, precious stones, stainless steel, leather, and sapphire crystal by the end of 2025 (Breitling n.d.).

Tiffany & Co. (LVMH) - traceability: By developing an internal chain of custody control, the brand became the first global luxury jeweller to disclose the countries of its newly sourced diamonds in 2020. With the goal of 100% diamond traceability by 2025, Tiffany & Co. (LVMH) was already able to trace approximately 97% of individually registered diamonds to supplier-approved mines in 2021. With its "Diamond Source Warranty Protocol", Tiffany & Co. (LVMH) can provide detailed information for individually registered diamonds which supposedly goes beyond the standards of the Kimberly Process and the Diamond World Council System of Warranties (SoW) (Tiffany & Co. n.d.a). Apart from diamonds, the brand was able to trace 99% of gold, silver, and platinum to either an approved mine or recycled origin in 2021. The remaining 1% was linked to refiners verified by the RJC (Tiffany & Co. 2022).

Recommendations – traceability and transparency

Supply chain traceability and transparency form the basis for all other responsibility commitments. Only brands that know their suppliers and the associated (potential) risks for the environment and communities can take effective measures to eliminate or minimise the risks. Brands can take the following measures to increase traceability and transparency:

- Map the origin of all critical raw materials, analyse the social and environmental impact and risks of raw materials.
- Set (contextual) targets and develop a holistic strategy to achieve full traceability of all raw materials.
- Develop a thorough due diligence process and improved policies to verify the origin of raw materials.
- Engage with suppliers and offer training opportunities to improve data quality received from suppliers.
- Work with credible certification bodies, innovative supply chain mapping providers and explore modern technologies and tracking systems to guarantee full supply chain traceability.

CLIMATE ACTION

Even though climate action has become one of the most prominent topics of corporate sustainability, the rating shows clear differences between leading players in the watch and jewellery sector regarding the reduction of their GHG footprint.

Tiffany & Co. (LVMH) – climate target setting: Among the many brands in the watch and jewellery sector, Tiffany & Co. (LVMH) is one of the few that has set ambitious climate targets, which are already entirely validated by the SBTi. Besides Tiffany & Co.'s (LVMH) short- and long-term targets, the SBTi approved the brand's goal to achieve net-zero GHG emissions by 2040 in June 2023 (Tiffany & Co. n.d.b).

Recommendations – climate action

Recognising the growing significance of corporate climate action, businesses in the watches and jewellery sector must prioritise holistic, science-based target setting as well as the implementation of reduction measures along the entire supply chain. To this end, they should:

- Quantify their GHG emissions (covering scopes 1, 2 and 3) utilising a sound methodology substantiated by a scientific standard such as the GHG Protocol.
- Set ambitious GHG emissions reduction targets for the years 2025-2030 that are validated by the SBTi.
- Establish net zero targets, verified by the SBTi.
- Implement effective reduction measures along the company's entire supply chain and publicly disclose the progress made, ensuring alignment with the targets and reporting on the accomplishments.
- Apply the WWF Fit for Paris guidelines for GHG emission measurement, climate target setting, climate finance, and climate advocacy.



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BIODIVERSITY STEWARDSHIP

Biodiversity stewardship is currently hardly addressed by the watch and jewellery brands assessed for this rating. For this reason, it is even more important to highlight the commitments and initial successes of "frontrunners" to lead the way for brands that have not yet addressed the challenge.

LVMH Group - biodiversity impact assessment and stewardship: The LVMH Group has started to assess the environmental footprint of its entire value chain (covering also its brands Tiffany & Co., TAG Heuer and Bulgari). To this end, the group is using the "Impact World+" methodology, a globally recognised method life cycle impact assessment. It involves localising biodiversity impact indicators to allow examination at a finer scale and the implementation of specific strategies for targeted regions. In addition, the LVMH Group as well as the Kering Group are both pilot companies working with the first Science Based Targets for Nature Framework, which aims to align business actions with international biodiversity protection goals. In line with certain requirements of the framework, LVMH has strengthened its biodiversity commitments. The company has committed to zero deforestation and conversion of natural ecosystems in its operations and supply chains by 2025, having all strategic raw materials certified by 2025, and conserving or restoring 5 million hectares of flora and fauna habitat by 2030 (LVMH 2023).

Recommendations – biodiversity stewardship

Businesses in the watch and jewellery sector must acknowledge the ecological impact of their activities on biodiversity, understand their dependence on the natural resources and proactively engage in biodiversity stewardship to reduce risks:

- Conduct a thorough evaluation of biodiversity risks along the value chain, including own production sites and the supply chain, using relevant indicators to inform about the state of nature (e.g. the WWF Biodiversity Risk Filter indicators).
- Develop and implement water stewardship strategies.
- Follow the SBTN hierarchy (Avoid, Reduce, Regenerate, Transform) when setting contextual targets.
- Collaborate with peers, governments, and communities.
 Invest and participate in collective action platforms and Nature-based Solutions.
- Use your influence to advocate for nature.

WATER STEWARDSHIP

Water risks are increasingly coming into focus as researchers, media and non-governmental organisations warn more frequently of a global water emergency. In particular, companies should focus on assessing water risks and managing them competently (UNESCO WWAP 2023). While the overall performance of brands falls short in the rating, there is one positive exception:

Kering Group – water governance and stewardship: The Kering Group has adopted a more comprehensive water governance and management strategy and has been rated A- by the Carbon Disclosure Project (CDP) in its water security rating. Kering's EP&L statement, which is also applied to the Pomellato and Boucheron brands, uses internal assessment criteria tailored to specific water regions to measure water consumption and the impact of water pollution in monetary terms. On a broader scale, Kering conducts a water risk evaluation for primary activities and those of immediate suppliers utilising relevant tools. The implementation of water management and water conservation initiatives throughout the organisation has helped Kering achieve a reduction of -3.4% in its overall water usage between 2019 and 2021 (CDP 2022; Kering 2022).

Recommendations – water stewardship

Businesses need to recognise the environmental impact of their operations on water, understand their reliance on water resources, and proactively engage in water stewardship to reduce risks:

- Assess and disclose water risks from scarcity, pollution, and floods within operations and supply chains using tools like the WWF Water Risk Filter.
- Develop and implement water stewardship strategies.
- Follow the SBTN hierarchy (Avoid, Reduce, Regenerate, Transform) when setting contextual targets.
- Collaborate with peers, governments, and communities.
 Invest and participate in collective action platforms and Nature-based Solutions.
- Use your influence to advocate for nature.

HUMAN RIGHTS MANAGEMENT

Given the complexity of its supply chains, the watch and jewellery sector needs to ensure sound human rights processes. Businesses across the industry recognise human rights as a critical issue and are taking proactive steps to address and improve their practices. To progress, brands must implement comprehensive human rights due diligence processes to identify and assess human rights risks of their operations, suppliers, and business partners, and based upon that, act rigorously to address human rights risks and impacts effectively.

Pandora Jewellery – grievance mechanism

The Danish brand Pandora Jewellery has implemented a grievance mechanism that meets many important requirements for an effective communication channel. First of all, it is managed externally and allows both employees and external stakeholders to anonymously voice concerns in their native language when they observe violations of laws or the Pandora Code of Conduct (CoC). At supplier level, Pandora Jewellery endorses workers' committees and labour organisations to help workers articulate their problems and grievances. On top of assessing the effectiveness of its whistle-blower hotline based on the UNGPs criteria for grievance mechanisms, the independent brand developed an extensive internal initiative to promote the hotline and foster a culture of open communication in 2022 (Pandora 2023).

Recommendations – human rights management

Considering the sector's high risks regarding human rights violations, watch and jewellery brands should place significant importance on safeguarding them:

- Issuing a policy statement in which the company outlines its commitments to human rights, which is aligned with international policy frameworks (e.g. UNGPs, OECD Due Diligence Guidance, Universal Declaration of Human Rights, ILO Labour Standards).
- Integrate the human rights policy in the governance structure and ensure that it covers the entire supply chain (e.g. via a supplier CoC).
- Ensure compliance with the human rights policy by conducting regular visits, audits, and training at suppliers along the entire supply chain.
- Run regular human rights risk analyses of their operations, suppliers, and business partners along the entire supply chain to identify risks of violating human rights or labour standards.
- Establish an externally managed, easily accessible, and secure grievance mechanism that transparently reports on the number and nature of complaints and effectively handles all claims.

CIRCULARITY

Circularity is both a challenge and a key approach for the watch and jewellery industry to reduce negative environmental and societal impacts along the entire value chain. While implementing circular practices can be complex due to the intricate nature of materials and design processes, embracing circularity is crucial to reduce environmental impacts, promoting resource efficiency, and fostering a more sustainable future for the industry.

ID Genève — circular watch: The Swiss watchmaker ID Genève was founded according to the principles of the circular economy. ID promotes the use of repurposed and recycled parts while focusing on the impact of materials once their life cycle is over. The watches are made of 100% recycled stainless steel, refurbished mechanical movements and 100% green waste for the straps. The modular design allows the watches to be easily dismantled, repaired, or evolved without having to buy a new watch (ID Geneve n.d.).

Kering Group, Richemont Group, LVMH Group – secondhand marketplaces: The pre-owned market for watches and jewellery has been booming in recent years. It is predicted that the used watch market will become the fastest growing segment of the industry by 2025 (BOF and McKinsey 2021). Second-hand watches and jewellery contribute to environmental sustainability by extending the lifespan of products, reducing waste, and minimising the need for new resource extraction and manufacturing processes (BCG 2023). In recent years, several groups owning watch and jewellery brands have invested in this market. For instance, the Kering Group invested in the second-hand platform Vestiaire Collective in 2021. The Richemont Group acquired a marketplace for pre-owned watches called Watchfinder in 2018 and the LVMH Group launched its own resale Platform called Nona Source (Deloitte 2022; Kering 2021).

Recommendations – circularity

Businesses should begin reconsidering their traditional business models and concentrate on fostering innovation related to circularity. This entails emphasising strategies that enhance product longevity, enable recyclability, and reduce material inputs:

- Think about the end-of-life when designing the product and work on solutions, e.g. for the reuse of materials.
- Enhance the longevity of products by improving their durability and repairability (e.g. offering easily accessible repair services).
- Increase recycled content of raw materials.
- Collaborate with the second-hand industry to source preowned product parts and invest in the pre-owned market opportunities.
- Consider alternative materials, industry scraps, waste materials from other industries or lower impact materials.

MONITORING, REPORTING AND DISCLOSURE

Transparent collection, monitoring and disclosure of relevant sustainability performance figures is key to making sustainability meaningful. The effectiveness of sustainability measures can only be assessed through consistent monitoring. Likewise, the sustainability commitment can only be confidently presented to external stakeholders through transparent reporting. As there are several different approaches to this topic, it is necessary to pinpoint practices that cover the most crucial parts.

Kering Group - reporting: The EP&L methodology, which Kering uses to measure, quantify and report its environmental footprint, enables the Group to comprehensively report on environmental impacts in its value chain. It is done by mapping the supply chain, collecting primary and secondary data, determining the monetary value of the data, and analysing the results (Kering n.d.b). The EP&L is also implemented by its brands Pomellato and Boucheron to track and measure their environmental performance individually. The publicly available annual EP&L reports include the EP&L intensity (EP&L cost/1kEUR revenues), the total cost of environmental impact, material traceability, analysis of impact across different tiers and areas, impact assessment per material, mapping of impact and important locations, and the EP&L impact per business unit. The Group-level report includes an assessment of current compliance with Kering's targets to reduce the EP&L intensity by 40% by 2025, drastically reduce carbon emissions, certify all suppliers and achieving a net positive impact on biodiversity (Kering 2022). Additionally, the Group responds to all CDP questionnaires that are made publicly available (CDP 2022).

Recommendations – monitoring, reporting and disclosure

Companies should adopt consistent and structured internal quantitative monitoring and reporting mechanisms for environmental matters, challenges, objectives, and accomplishments. The following approaches can be useful for this:

- Annual publication of a sustainability report with quantitative reporting on all targets that enables comparability in the achievement of goals, e.g. according to the GRI standard that is assured by an independent third party.
- Submit responses to all the CDP questionnaires (climate change, forests, water security).
- Provide transparent communication regarding the annual procurement volumes of essential raw materials.

STAKEHOLDER ENGAGEMENT

By involving key stakeholders such as suppliers, customers, employees, and partners, watches and jewellery companies can foster collaboration, gather diverse perspectives, and establish a shared commitment towards sustainable practices, leading to more effective and holistic sustainability strategies. When it comes to stakeholder engagement, it is important that quality trumps quantity. Membership in industry initiatives, the distribution of sustainability-related information to customers or the organisation of information events for employees or suppliers is only effective if these activities are embedded in the overall sustainability strategy and their actual impact on the achievement of sustainability goals is assessed.

Kering Group - supplier engagement: In pursuit of the goal to establish a "Supplier Sustainability Index" and ensure universal compliance with its standards by 2025, the Kering Group introduced a novel online supplier portal in 2020. This platform functions as both a vendor rating system and a space to exchange sustainability-related information and best practices. Through the portal, suppliers undergo continuous evaluation using detailed questionnaires comprising approximately 300 inquiries. The assessment covers adherence to Kering standards throughout the supply chain, environmental practices, and social performance. The data obtained aids in computing CSR performance metrics for suppliers and determining the focus of future initiatives. Furthermore, the Kering Group has actively trained 650 suppliers in 2021 and conducted 4118 supplier audits regarding social, environmental, and sourcing matters in 2022 (Kering 2023).

Recommendations – stakeholder engagement

Sustainable business practice can only be achieved through collective action requiring the active participation and the engagement of customers, employees, suppliers and industry peers. Given the interconnectedness of the various stakeholders and their shared responsibilities, this collective involvement is paramount to achieve meaningful and impactful sustainable outcomes:

- Endorse and actively engage in business alliances or multi-stakeholder initiatives promoting sustainability and ethical business practices at sector level.
- Promote the establishment of genuine multi-stakeholder initiatives to ensure the involvement of external partners, particularly civil society organisations, across all levels of the governance framework.
- Actively involve suppliers by providing them with sustainability education and training opportunities.
- Inform and educate consumers and employees regarding the companies' sustainability pledges and encourage sustainable behaviour.

4 RECOMMENDATIONS FOR CONSUMERS

The watch and jewellery sector is in the midst of a transformative movement as consumers increasingly take the reins and push for more sustainability in the product range. Estimates predict that, by 2025, approximately 20 to 30% of worldwide jewellery sales will be influenced by the buying behaviour of environmentally conscious customers (BOF and McKinsey 2021). Consumers' growing awareness of sustainability is leading them to increasingly

question the practices of the brands they support and demand more transparency in all areas of business operations. Conventional marketing with unsubstantial claims fails to meet their need for genuine insight into the inner workings of these businesses (BOF and McKinsey 2021). Considering the growing significance and influence of consumer behaviour, the following section lists options for consumers to improve and influence sustainability in watches and jewellery.



PRACTICE RESPONSIBLE CONSUMPTION.

Aim at reducing the consumption of new, resource-intensive products while focusing on buying watches and jewellery from companies committed to responsible, transparent sourcing and production practices. Jewellery and watches can also be shared, traded, or loaned for special occasions instead of buying new pieces.

DEMAND HIGHER LEVELS OF TRANSPARENCY.

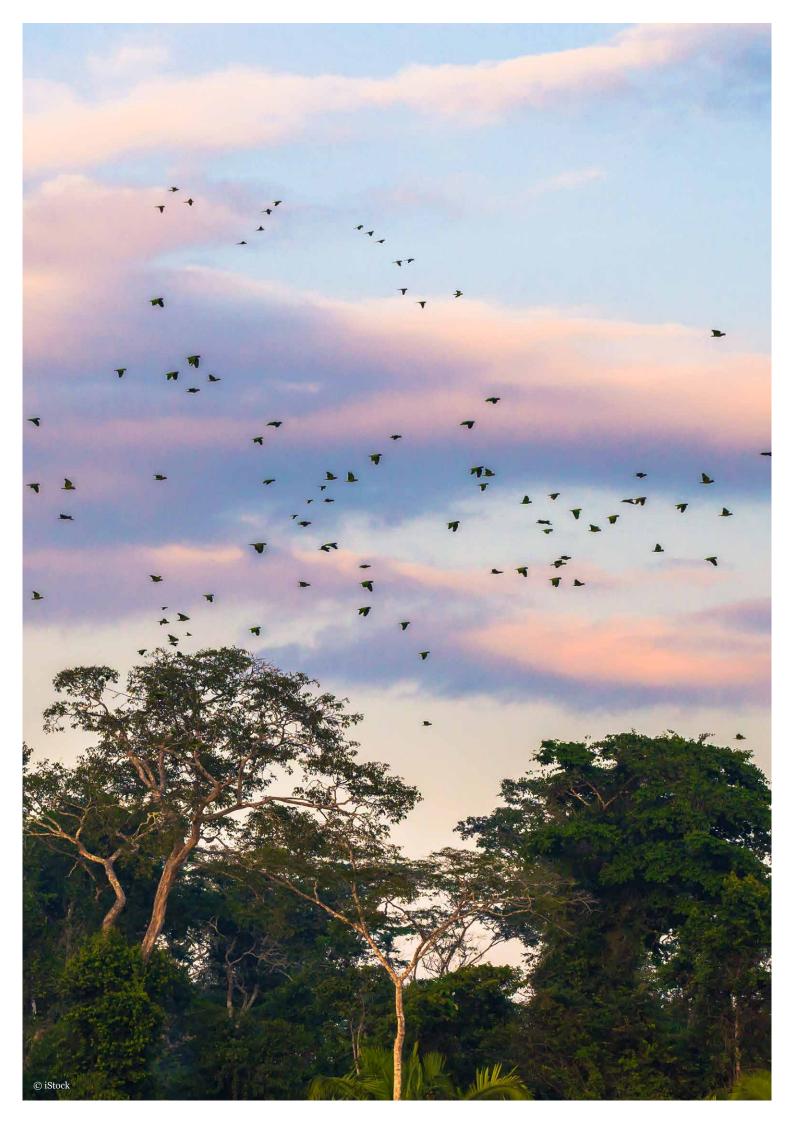
Buy from brands that are committed to the highest levels of traceability and are shouldering the responsibility of achieving transparency along their entire supply chains. Ask about the origin, working conditions, environmental impact, certification, and standards when buying watches or jewellery.

REUSE AND REPURPOSE.

When certain items are no longer needed, consider extending their lifetime by reselling them or giving them up for recycling. In recent years, the secondhand market for watches and jewellery has experienced significant growth, creating many opportunities for resale.

ADVOCATE FOR MORE SUSTAINABILITY

Support collective action to advocate for responsibly sourced products. Whenever possible, engage and vote for better policies and regulations to protect nature and human rights.



APPENDIX

SELECTION OF CERTIFICATIONS AND GUIDELINES

Given the sustainability and ethical challenges faced by the jewellery and watch industry, an increasing number of certifications and guidelines have been established to enhance industry practices. This summary of certifications and standards relevant to the watch and jewellery industry is not exhaustive but serves as an overview of some of the key standards. There are other certifications and industry groups that focus on other materials used in watches and jewellery such as leather and paper. However, as those materials only play a secondary role in this study, the initiatives on this matter will not be further described in the following paragraphs.

While compliance or membership in many of the following certifications and guidelines can be an important step for companies in the sector on the path to sustainability, they also have their limitations, such as voluntary participation and the potential for greenwashing. To further enhance the sustainability performance of the watches and jewellery sector, it is imperative to encourage wider adoption of certifications, strengthen regulatory frameworks, promote transparency, and foster collaboration among stakeholders.

Fairmined

Fairmined is a gold certification program employed by only 5% of the companies reviewed in this report. Developed by the Alliance for Responsible Mining (ARM) in 2007, the certification aaims to promote fair and sustainable practices in artisanal and small-scale mining operations. Above, it claims to ensure that the gold extraction process aligns with principles of environmental preservation, respect for human rights, and sustainable development, in this way fostering positive transformations in the lives of mining communities. Miners who hold the Fairmined certification receive a premium between \$2.2 and \$6 USD per gram of gold sold. The additional income is intended to help miners enhance their mining practices and undertake projects that promote human rights, gender equality, and environmental initiatives. The current version 2.0 of the Fairmined Standard for gold and precious metals was launched in 2014 and is currently under revision. It includes requirements for mining organisations on social development, work conditions, environmental protection, and organisational development. Organisations that undergo a thorough due diligence by ARM and are audited by independent auditors against the exigent Fairmined Standard can sell Fairmined-certified gold to the market. Companies that aim to trade in Fairmined Gold and make claims about it must comply with further requirements related to traceability and claims. By mid-2023, a network of 465 committed businesses in 33 countries have worked with

Fairmined. In the last ten years, over 3,200 certified miners from five countries have sold over 1.7T of gold, generating over 7 million USD for ESG investments in the mines and communities (Fairmined n.d.).

Fairtrade Gold

Fairtrade Gold is an independent ethical certification system for small scale mined gold. The certification is not widely used by the brands in this report. The objective of Fairtrade certification is to prohibit any manifestations of conflict minerals within the gold supply chain to ensure that the trading of gold does not contribute to the exacerbation of instability and disputes in mining regions. Simultaneously, Fairtrade helps small-scale mining cooperatives obtain legal recognition for their activities and empowers miners to collectively counteract instances of bias and unfair treatment. It collaborates with mines to decrease their reliance on chemicals during the process of gold extraction. The aim is to enhance consciousness regarding potential hazards to health and safety, while also guaranteeing the implementation of suitable safety measures, equipment, and protocols. Above, Fairtrade works towards supporting small scale mining producers to improve their livelihoods (Fairtrade n.d.).

IRMA

The Initiative for Responsible Mining Assurance (IRMA), launched in 2006, has established an independent standard for responsible mining. The standard focuses on large-scale industrial mining, covering a wide range of minerals and metals. It provides assessments at mine sites producing all mined materials (except energy fuels), including precious minerals and gemstones, and thus is applicable for the watch and jewellery industry. IRMA is recognized for its comprehensive and rigorous standard, which encompasses four fundamental principles: business integrity, social responsibility, environmental responsibility, and planning for enduring positive impacts. The principles form the foundation for a voluntary system that offers independent third-party assessment of environmental and social performance at industrial-scale mine sites across the globe. The standard has been collaboratively developed by a diverse stakeholder group, including mining companies, jewellers and other companies using mined materials, non-governmental organizations, affected communities, and labour unions. Continuous refinement and testing ensure the standard's global applicability. A distinctive aspect of IRMA's approach is its assessment of individual mine sites, emphasizing adherence to the comprehensive IRMA criteria. Independent third-party auditors conduct rigorous assessments, and mine sites can attain achievement levels ranging from IRMA 50 to IRMA 100, signifying their progress in responsible mining practices (IRMA 2018).

Kimberley Process

This joint governmental, industry, and civil society initiative was established by the UN in 2003 and serves as an international certification system designed to safeguard the integrity of the diamond trade. 33% of the companies reviewed in this report stated to be engaged with this initiative. It is overseen by the World Diamond Council (WDC), an industry association focusing on addressing sustainability issues in the diamond industry. The core of the initiative is the Kimberley Process Certification Scheme (KPCS) under which states implement safeguards on shipments of rough diamonds and certify them as "conflict free". As a supporting body for that certification the World Diamond Council established the System of Warranties (SoW). This voluntary self-regulation program requires all diamond shipments to include a written warranty on invoices throughout the supply chain. The warranty is required each time the diamonds change hands and extends to retail jewellers, providing additional assurance but not covering end-consumers. Companies can engage with the Kimberly Process by ensuring compliance with the KPCS and SoW. It involves implementing internal controls and traceability mechanisms to prevent conflict diamonds from entering their supply chains (Kimberley Process n.d.).

OECD Due Diligence

OECD Due Diligence refers to a set of guidelines and recommendations developed by the Organisation for Economic Co-operation and Development (OECD) to promote responsible business conduct in global supply chains. 90% of the surveyed brands claimed to have used at least one of the OECD Due Diligence guidelines to advance their corporate policies and business practices. Two guidelines are applicable for watch and jewellery brands. Firstly, the OECD Due Diligence Guidance for Responsible Business Conduct supports enterprises in implementing the OECD Guidelines for Multinational Enterprises. It provides explanations of due diligence recommendations and associated provisions. By following these recommendations, businesses can start to prevent and address adverse impacts related to workers, human rights, the environment, bribery, consumers, and corporate governance in their operations, supply chains, and business relationships (OECD 2018a). Secondly, the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas offers endorsed management recommendations for global mineral supply chains. It helps companies approach issues such as respecting human rights, preventing conflict contribution, and promoting transparent and sustainable engagement (OECD 2016).

Responsible Jewellery Council (RJC)

To date, 90% of the companies featured in this report's sustainability rating have engaged with the RJC and implemented at least one of its certifications. The RJC is an industry association that sets standard for responsible

practices in the jewellery supply chain. It comprises companies involved in the supply chain of precious stones and metals, including gold, diamonds and coloured gemstones. The RJC offers certification through two standards: the RJC Code of Practices (COP) and the RJC Chain-of-Custody Standard (COC). In 2024, members will have a completely new standard for laboratory grown diamonds (LGD) and laboratory grown coloured gemstones. Upon joining the RJC, members must obtain a Code of Practices certification within two years. Audits are conducted by independent authorised auditors; the RJC issues certifications on the basis of the independent audit reports. Aligned with the OECD Due Diligence Guidance and the UNGPs, the Code of Practices ensures compliance with international standards. The RJC goals are aligned with the UN 2030 Agenda and the 17 Sustainable Development Goals. The voluntary RJC Chain of Custody certification seeks to provide confidence regarding the sourcing, tracing, and processing of products and materials throughout the supply chain. Both Standards function as a management system rather than product standards as they evaluate a company's risk management. The COP includes a provenance claim provision which allows members to make a published claim, which must be independently audited as part of the company's compliance audit. The COC standard requires detailed records to demonstrate compliance with the standard, covering precious metals (RJC n.d.).

Swiss Better Gold

The Swiss Better Gold holds a prominent position in the gold industry, as indicated by its engagement with 43% of the brands included in this report's rating. Launched in 2013, the initiative aims to promote transparency, traceability, and responsible business practices throughout the ASGM value chain. To do so, Swiss Better Gold supports artisanal or small-scale miners to improve their ESG practices and provides access international markets. It includes assistance on technical, organisational, social, and environmental practices, support in establishing supply chains with downstream members, the collection of a premium of USD 1 per gram from downstream members which will then be reinvested in social and environmental projects on the ground. Furthermore, the Initative engages in dialogues with producing countries' governments to promote the formalisation of the ASGM sector and enhance the number of mining operations compliant with the requirements of international markets. The collaboration supports establishing legal frameworks, regulations, and policies that ensure responsible mining practices and environmental sustainability, (Swiss Better Gold Association n.d.).

United Nations (UN Global Compact, UN Guiding Principles, ILO Standards)

Moving from certifications to guidelines, the UN is among the significant institutions offering advice on responsible business operations for the watch and jewellery industry. The UN Global Compact (UNGC) provides a principle-based

framework for businesses, stating ten principles in the areas of human rights, labour, the environment, and anticorruption (UNGC n.d.). 67% of the investigated watches and jewellery brands in this paper are either members of the UNGC network or based their responsible corporate policies and practices on the organisation's guidelines. Brands that are part of the UNGC network are required to submit an annual report that outlines the implementation activities of the principles. Besides that, the UN Human Rights Office has developed guiding principles on business and human rights (UNGPs) which serve as a reference document for the human rights policy of 52% of the reviewed brands. The guidelines can help companies prevent, address and remedy human rights abuses committed in business operations (UN Human Rights Office 2011). Likewise, the ILO, also governed by the UN, has set international labour standards to advance social and economic justice. 62 % of the brands included in this report's rating stated that they based their policies on the ILO's standards. They cover a wide range of issues, including employment, occupational safety and health, social protection, and freedom of association (ILO n.d.).

DISCUSSION OF RATING RESULTS

About the rating

The scope of the 2023 WWF Watch and Jewellery Rating has been expanded in comparison to the previous one from 2018 to encompass a broader selection of brands. While the 2018 version focussed on 15 of the most prominent Swiss watch and jewellery brands, the 2023 rating covers 21 consumer-facing watch and jewellery brands with high international recognition – including the most influential industry players.

The 2023 WWF Watch and Jewellery Rating aims to advance the vision of a more sustainable industry. Building upon the 2018 rating, the 2023 rating examines the industry's developments and actively seeks to motivate companies to promote advancements in sustainability. The primary objectives of the rating are to pinpoint areas that require enhancement, to highlight best practices and to show the overall progress of the industry.

The evaluation criteria and methodology were adopted from the previous rating and based on scientific, regulatory, and industry-specific developments, were expanded, updated, and modified to bring them in line with current standards. Thematically, additional aspects were also taken into consideration: In the 2023 rating, companies are expected to set targets and implement stewardship approaches for their entire supply chain that specifically address biodiversity, water, circularity, and human rights. Human rights and environmental issues are often inextricably linked – the degradation of land, deforestation, biodiversity loss or the contamination of water harm the health of local communities and workers, and often lead to human rights violations,

including the right to food or access to clean drinking water. An integrative understanding of environmental and human rights risks must be applied in this context (García et al. 2022). Therefore, the rating was expanded to include assessment criteria for the corresponding issues. To ensure the impartiality of the rating, WWF assigned adelphi, a consultancy specialised in climate, environment, and development, to conduct the rating. The data utilised for this report were collected between March and June 2023. The final rating draws on information from two primary sources. Firstly, it incorporates publicly available data gathered from the brand's websites, sustainability reports, press releases, articles, and industry reports. It is worth mentioning that, for brands belonging to bigger groups, the assessment also considers information available at the group level, which subsequently impacts the brands. Secondly, the rating includes the responses provided by the brands through a comprehensive questionnaire specifically designed for this report. The questionnaire offered all assessed brands the opportunity to verify and complete the collected and publicly available data. It encompassed 19 criteria, each containing one to three questions about brand performance in the field. Out of the 21 brands that were rated, 14 brands submitted additional responses through the questionnaire. Only the six rated brands of the Richemont Group (A. Lange & Söhne, Jaeger-LeCoultre, Panerai, Vacheron Constantin, IWC, Cartier), as well as the independent brand Patek Philippe decided against submitting a response and were therefore rated using publicly available information only.

WWF carefully assigned appropriate weights to different criteria, employing a standardised and formalised approach to ensure no undue bias towards any specific topic or thematical area. The weighting is reflected in the aggregate evaluation of the nine thematic categories presented in this report (materiality analysis and sustainability strategy; climate action; biodiversity stewardship; water stewardship; human rights management; circularity; traceability and transparency; monitoring, reporting and disclosure; stakeholder engagement) and the rating of the overall performance of all brands.

Results of the nine weighted rating categories

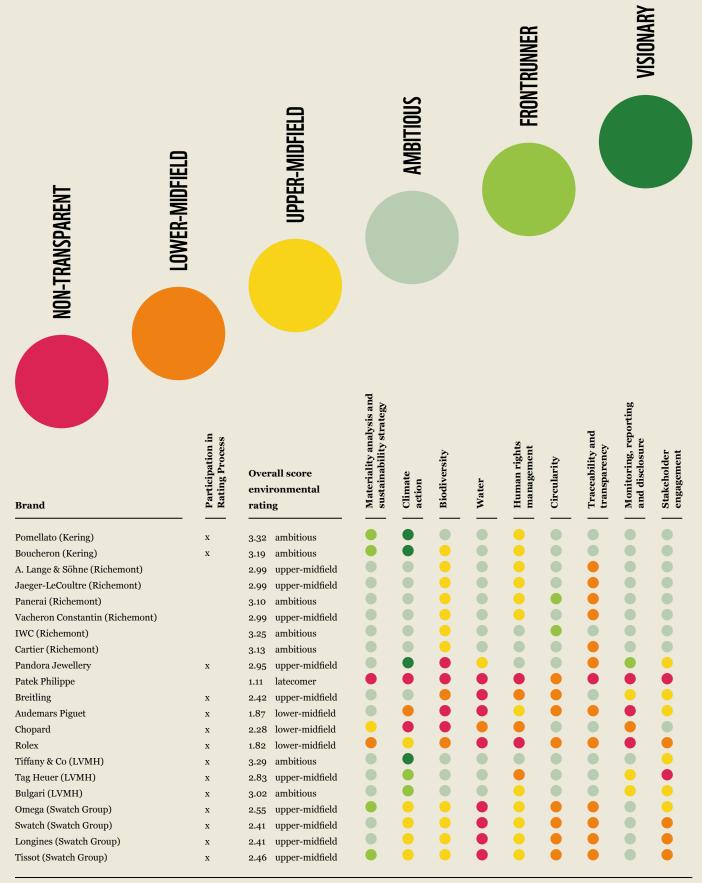


Figure 6: Results of the nine weighted rating categories

Materiality analysis and sustainability strategy

Brand

- Pomellato (Kering)
- Boucheron (Kering)
- Omega (Swatch Group)
- Tissot (Swatch Group)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- IWC (Richemont)
- Cartier (Richemont)
- Pandora Jewellery
- Breitling
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Audemars Piguet
- Tiffany & Co (LVMH)
- Tag Heuer (LVMH)
- Bulgari (LVMH)
- Chopard
- Rolex
- Patek Philippe

This section evaluates whether brands adopt a well-defined sustainability strategy that is based on a comprehensive materiality assessment. It considers several aspects, including governance structures, policies, and the depth of the materiality assessment.

Discussion: The findings reveal that a majority of brands score well in terms of their environmental sustainability strategies and materiality analyses. The leading performers in this category are Pomellato and Boucheron (both: Kering) as well as Omega and Tissot (both: Swatch Group). Their success can be attributed to their environmental-impact-data-driven double materiality assessments as well as their corporate strategies, where sustainability has become a top management concern. Notably, Pomellato and Boucheron (both: Kering) exhibit a clear alignment between their corporate strategies and their 'EP&L' account, a methodology which they use to quantify the environmental impact of their entire operations. Conversely, lower performing brands do not base their materiality analysis on scientific data and provide rather generic sustainability strategies. The lowestperforming brands lack the systematic integration of sustainability into their corporate decision-making processes. To attain the highest possible score, businesses should fully integrate sustainability into their decision-making processes, make sustainability a top management priority, and run scientific materiality analysis endorsed by reputable external institutions, such as the SBTi or One Planet Thinking.

Climate action

Brand

- Pomellato (Kering)
- Boucheron (Kering)
- Pandora Jewellery
- Tiffany & Co (LVMH)
- Tag Heuer (LVMH)
- Bulgari (LVMH)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- IWC (Richemont)
- Cartier (Richemont)
- Breitling
- Rolex
- Omega (Swatch Group)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)
- Audemars Piguet
- Chopard
- Patek Philippe

This section of the rating delves into the actions undertaken by brands to measure, reduce, and mitigate GHG emission. Particular attention is paid to the nature of science-based climate targets and progress made in lowering carbon emissions in recent years.

Discussion: The highest-performing brands in this category share a notable characteristic: They have set ambitious, science-based climate targets validated by the SBTi and implement rigorous emission reduction strategies that encompass their entire value chain and are backed by relevant certification schemes. While some brands have published SBTi-approved short-term and long-term targets, only Tiffany & Co. (LVMH) has set net zero targets for 2040. Many other brands like Breitling as well as the Swatch Group brands (Omega, Swatch, Longines and Tissot) have set targets that are not (yet) externally validated. Other (independent) brands like Audemars Piguet, Rolex, Patek Philippe and Chopard lack in comprehensibility of their targets. In implementing emission reduction strategies, Pomellato and Boucheron (both: Kering) and Pandora Jewellery performed best. The measures they take cover their entire business activities, are backed up by relevant certification systems, and are reported in quantitative form. Brands such as Audemars Piguet, Chopard, Omega, Patek Philippe as well as the Swatch Group brands Longines, Swatch and Tissot have so far shown little to no effort to reduce their carbon emissions.

Biodiversity stewardship

Brand

- Tiffany & Co (LVMH)
- Tag Heuer (LVMH)
- Bulgari (LVMH)
- Pomellato (Kering)
- Boucheron (Kering)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- IWC (Richemont)
- Cartier (Richemont)
- Omega (Swatch Group)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)
- Breitling
- Rolex
- Chopard
- Pandora Jewellery
- Patek Philippe
- Audemars Piguet

This part of the rating evaluates how brands assess the impact of their operations on biodiversity and report on biodiversity risks. It also considers whether measures to protect, restore and regenerate biodiversity along their value chain are being implemented. It is essential that measures are not simply implemented in isolation without any connection to their business activities, but are based on an analysis of a brand's relationship to biodiversity impacts.

Discussion: On average, this category emerged as one of the lowest-performing areas in the rating. Only four brands, namely Pomellato (Kering) and the LVMH brands Tiffany & Co., TAG Heuer and Bulgari, managed to achieve the "ambitious" score. This is attributed to the adoption of a comprehensive approach to measuring biodiversity risks, with the data made publicly available. The brands demonstrate strong commitment to mitigating biodiversity risks and have diligently implemented measures in recent years, showcasing an impact-driven approach to biodiversity risk management. The remaining brands, which rank in the "upper midfield" range, measure biodiversity risks but show only considerable efforts in addressing the identified biodiversity risks, albeit mostly to a limited extent and predominantly focused on their own sites. The independent brands Pandora Jewellery, Patek Philippe, Audemars Piguet, and Chopard display no or minimal evidence of efforts to address biodiversity risks at present. Businesses can elevate their ratings by implementing robust and scientifically grounded biodiversity protection and regeneration projects that address risks along the entire supply chain. Setting ambitious targets and transparently reporting their progress will further enhance their performance in this crucial area of biodiversity conservation.

Water stewardship

Brand

- Pomellato (Kering)
- Boucheron (Kering)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- IWC (Richemont)
- Cartier (Richemont)
- Tiffany & Co (LVMH)
- Tag Heuer (LVMH)
- Bulgari (LVMH)
- Pandora Jewellery
- Chopard
- Omega (Swatch Group)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)
- Patek Philippe
- Breitling
- Audemars Piguet
- Rolex

This segment assesses whether brands carry out water risk analyses and implement measures to mitigate physical, regulatory, and reputational water risks across their value chain. The effectiveness and scientific relevance of the measures taken over the past five years are carefully evaluated.

Discussion: In this category, the majority of brands score in the "upper midfield", indicating their notable efforts in identifying and addressing water risks along their supply chains. These brands demonstrate a commitment to improving their performance in dealing with water stress. They have started to set voluntary water risks reduction targets and report on their progress working towards them. Brands like Swatch (Swatch Group) and Breitling display only minimal efforts in engaging with upstream business relationships to address water risk exposure. They have implemented only a few measures at their primary business sites. A considerable number of brands receive the lowest possible grade as they either neglect water risks along their value chain or address them in an inadequate manner. To make progress, brands can enhance their approach by adopting robust and scientifically current efforts, verified through reliable certifications, which span the entire value chain. Furthermore, companies should transparently report their progress in quantitative terms over the year.

Human rights management

Brand

- Cartier (Richemont)
- Pandora Jewellery
- Tiffany & Co (LVMH)
- IWC (Richemont)
- Pomellato (Kering)
- Boucheron (Kering)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- Bulgari (LVMH)
- Omega (Swatch Group)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)
- Audemars Piguet
- Breitling
- Chopard
- Tag Heuer (LVMH)
- Rolex
- Patek Philippe

Circularity

Brand

- Panerai (Richemont)
- IWC (Richemont)
- Pomellato (Kering)
- Boucheron (Kering)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Vacheron Constantin (Richemont)
- Cartier (Richemont)
- Pandora Jewellery
- Chopard
- Tiffany & Co (LVMH)
- Tag Heuer (LVMH)
- Bulgari (LVMH)
- Patek Philippe
- Breitling
- Audemars Piguet
- Rolex
- Omega (Swatch Group)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)

This section examines the depth of brands' human rights policy statements, human rights risks assessments, and human rights due diligence processes to identify, assess and address the human rights risks of their operations, suppliers and business partners. Key criteria include whether human rights are managed across the entire value chain with reference to international policy frameworks.

Discussion: The results indicate that human rights management represents a critical area where a majority of brands still have considerable room for improvement. Notably, the Kering Group brands Pomellato and Boucheron take a leading stance due to their robust human rights framework aligned with the RJC Code of Practices and Chain of Custody standards. They conduct comprehensive human rights risk analyses which cover a broader spectrum of their operational activities and adhere to the UNGPs. Among the brands assessed Pandora Jewellery implemented the strongest grievance mechanism. It is externally managed, available for internal and external stakeholders, and aligned with UNGPs criteria for grievance mechanisms. Pandora Jewellery initiated an extensive internal program to promote the grievance service and aims to address incidents rightfully. Chopard, Rolex, Patek Philippe and the two LVMWH brands (TAG Heuer and Bulgari) achieved lower scores due to a combination of weak human rights risks analyses, policy statements and grievance mechanisms. Patek Philippe, Rolex, Chopard, Breitling and TAG Heuer (LVMH) achieved lower scores due to a combination of weak human rights risks analyses, policy statements and grievance mechanisms. To improve, brands must measure and manage human rights more comprehensively along their entire supply chain with reference to international policy frameworks and certifications."

This section analyses the application of specific strategies aimed at enhancing circularity, such as improved repairability, longer product life and the increased utilisation of secondary materials.

Discussion: Panerai and IWC (both: Richemont) emerge as the frontrunner brands in this category, mainly owing to their clearly defined circular economy targets based on relevant environmental data, such as life cycle analysis. These goals are designed to improve material reuse and increase the use of secondary materials, particularly for critical raw materials. Moreover, they position themselves as pioneers by actively conceiving new initiatives to promote even higher levels of circularity. Brands rated as "ambitious" in this segment like Pomellato and Boucheron (both: Kering), have already shown efforts to improve circularity. However, they have not based these on environmental impact data, which makes their commitment appear less comprehensive. Brands in the "lower midfield", such as Patek Philippe and Breitling, only provide general descriptions of a circular economy strategy without showing any specific commitment. To enhance their engagement with circularity and achieve higher scores, these brands can make further progress by implementing a robust strategy for recycling and the use of secondary input materials as well as comprehensive processes to extend the lifespan of their products.

Traceability and transparency

Brand

- Pomellato (Kering)
- Boucheron (Kering)
- IWC (Richemont)
- Breitling
- Chopard
- Tiffany & Co (LVMH)
- Tag Heuer (LVMH)
- Bulgari (LVMH)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- Cartier (Richemont)
- Pandora Jewellery
- Audemars Piguet
- Rolex
- Omega (Swatch Group)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)
- Patek Philippe

This section of the assessment examines the extent to which brands can trace their critical raw materials to their origin, particularly precious metals, such as gold and gemstones. It evaluates whether brands actively engage with their suppliers or third parties to ensure responsible sourcing practices.

Discussion: Traceability and transparency are crucial sustainability aspects of the watch and jewellery sector, yet brands face challenges in making further advancements in this area. Brands rated as ambitious in this category are Pomellato and Boucheron (both: Kering), IWC (Richemont), Breitling, Chopard as well as the LVMH group brands Tiffany & Co., TAG Heuer and Bulgari. What sets them apart from other rated brands is that they have established traceability beyond their tier 1 suppliers for at least some key raw materials (e.g. gold). This is mostly achieved by adopting more demanding certification standards or working with initiatives such as RJC Chain of Custody or Fairmined. In contrast, all other brands have only adhered to lower engagement or certification not guaranteeing traceability to the origin. Patek Philippe, in particular, has shown no engagement with any relevant certifications or initiatives. Despite these advancements, there remain many opportunities for enhancement within this category for all brands as no brand was rated as "visionary" or "frontrunner". To make significant progress, brands need to ensure traceable supply chains for all raw materials sourced and improved transparency.

Monitoring, reporting, and disclosure

Brand

- Pandora Jewellery
- Pomellato (Kering)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- IWC (Richemont)
- Cartier (Richemont)
- Tiffany & Co (LVMH)
- Boucheron (Kering)
- Omega (Swatch Group)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)
- Breitling
- Tag Heuer (LVMH)
- Bulgari (LVMH)
- Chopard
- Rolex
- Patek Philippe
- Audemars Piguet

The analysis for this section focuses on the monitoring, reporting and disclosure of relevant environmental and human rights performance figures. In this regard, the application of reporting standards and presence of external audits plays a significant role.

Discussion: The brands' overall performance regarding monitoring, reporting and disclosure was better for environmental sustainability performance indicators than for human rights. Most of the brands regularly release sustainability reports, adhering to the GRI standard and being validated by an independent auditor. Pandora jewellery emerges as the only "frontrunner" in this category due to its increased efforts regarding human rights compared to the other brands. The brand consistently evaluates the effectiveness of its policies and processes to mitigate the risks of forced labour and modern slavery across its operations. The majority of companies included in this sustainability rating received a score one notch lower than Pandora Jewellery. This discrepancy arises from their comparatively lesser efforts in continuously striving to improve their approach to human rights monitoring. Nevertheless, these companies do have monitoring mechanisms in place and regularly disclose their findings. To achieve "visionary" status, brands should proactively publish in-depth quantitative and qualitative data on their internal and external human rights and environmental performance. This information should be disseminated through various communication channels and should involve all relevant stakeholders to ensure a robust and accountable approach to monitoring.

Stakeholder engagement

Brand

- Cartier (Richemont)
- Pomellato (Kering)
- A. Lange & Söhne (Richemont)
- Jaeger-LeCoultre (Richemont)
- Panerai (Richemont)
- Vacheron Constantin (Richemont)
- IWC (Richemont)
- Boucheron (Kering)
- Chopard
- Pandora Jewellery
- Breitling
- Tiffany & Co (LVMH)
- Omega (Swatch Group)
- Audemars Piguet
- Bulgari (LVMH)
- Swatch (Swatch Group)
- Longines (Swatch Group)
- Tissot (Swatch Group)
- Rolex
- Tag Heuer (LVMH)
- Patek Philippe

This section assesses whether brands engage with key stakeholders on sustainability issues. It considers whether or not brands help their suppliers build capacity, raise awareness of sustainability issues with their customers, train their employees in sustainability-related areas and proactively support corporate initiatives.

Discussion: The overall performance of all brands within this category varies between the different stakeholder groups. Regarding supplier management, the two Kering Group brands Pomellato and Boucheron are ranked as the top performers. They offer structured supplier training and provide support to their suppliers in setting science-based environmental targets. The average performance regarding customer awareness and incentivisation among all of the brands is comparably low. Only Pomellato (Kering), Pandora Jewellery and Chopard launch occasional awareness campaigns targeting key customers. A significant number of brands score well regarding engagement with employees. Brands like A. Lange & Söhne (Richemont) or Omega (Swatch Group) belong to the leading group due to their comprehensive and regular training offered to key staff on job-related environmental topics. The majority of brands are part of several sustainability business initiatives and take a proactive role in some of them. Cartier (Richemont) takes a leading position here, due to its founding role in several alliances and strong presence in nearly most of the relevant initiatives. All brands can still improve in proactively engaging with stakeholders. Guiding all stakeholders through the sustainability transformation through collaboration, education and awareness campaigns and must become an imperative.

5 PUBLICATION BIBLIOGRAPHY

BCG (2020): The Secondhand Opportunity in Hard Luxury. With assistance of Bianchi, Flicker, Krueger, Schuler, Ricci, Seara, Willersdorf. Edited by BCG - Boston Consulting Group. Available online at https://www.bcg.com/publications/2020/secondhand-opportunity-hard-luxury, checked on 21.07.23.

BCG (2023): Luxury Preowned Watches, Your Time Has Come. With assistance of Dupreelle, Willersdorf, Llinas, Schuler, Brennan. Edited by BCG - Boston Consulting Group. Available online at https://www.bcg.com/publications/2023/luxury-watch-market-trends, checked on 20.07.23.

Block; Mollod (2021): Mining's Impact on Biodiversity: A Rising Risk? Edited by MSCI. Available online at https://www.msci.com/www/blog-posts/mining-s-impact-on-biodiversity/02547548673, checked on 07.08.23.

BOF; McKinsey (2021): The State of Fashion. Watches & Jewellery. With assistance of Imran Amed, Achim Berg, Alexander Thiel, Sabine Becker, Tyler Harris, Mario Ortelli et al. Edited by BOF - The Business of Fashion, McKinsey & Company. Available online at https://www.mckinsey.com/industries/retail/our-insights/state-of-fashion-watches-and-jewellery, checked on 7/18/2023.

Breitling (n.d.): SUPER CHRONOMAT AUTOMATIC 38 ORIGINS. Edited by Breitling. Available online at https://www.breitling.com/gb-en/watches/chronomat/super-chronomat-automatic-38/R17356531G1/#:~:text=The%20 Super%20Chronomat%2038%20Origins,in%20a%20 blockchain%2Dbacked%20NFT., checked on 21.07.23.

Buderath, Markus; Weiß, Daniel; van Ackern, Pia; Garcia, Bibiana (2021): Rohstoffe im Fokus. Menschenrechts- und Umweltrisiken integrativ betrachten. Edited by adelphi. Available online at https://adelphi.de/de/publikationen/rohstoffe-im-fokus, checked on 7/19/2023.

CDP (2022): Kering CDP Responses. Available online at https://www.cdp. net/en/responses?queries%5Bname%5D=Kering, checked on 20.07.23.

Danish Institute for Human Rights (2023): How do the pieces fit in the puzzle? Making sense of EU regulatory initiatives related to business and human rights. With assistance of Gabrielle Holly, Signe Andreasen Lysgaard, Cathrine Bloch Veiberg, Daniel Morris, Mathilde Dicalou, Leonard Feld, Fatmanur Caygın. Edited by Danish Institute for Human Rights.

Dehoust, Günter; Manhart, Andreas; Dolega, Peter; Vogt, Regine; Auberger, Andreas; Kämper, Claudia et al. (2020): Weiterentwicklung von Handlungsoptionen einer ökologischen Rohstoffpolitik. ÖkoRess II. Abschlussbericht. Edited by Umweltbundesamt (Texte, 79/2020). Available online at https://www.umweltbundesamt.de/publikationen/oekoress-ii, checked on 7/19/2023.

Deloitte (2022): Global Powers of Luxury Goods 2022. A new wave of enthusiasm in luxury. Available online at https://www.deloitte.com/global/en/Industries/consumer/analysis/gx-cb-global-powers-of-luxury-goods. html, checked on 7/18/2023.

EEB; Friends of the Earth Europe (2021): 'Green mining' is a myth. The case for cutting EU resource consumption. With assistance of Meadhbh Bolger, Diego Marin, Adrien Tofighi-Niaki, Louelle Seelmann. Edited by EEB - European Environmental Bureau, Friends of the Earth Europe. Brussels. Available online at https://eeb.org/wp-content/uploads/2021/10/Greenmining-report_EEB-FoEE-2021.pdf, checked on 7/19/2023.

European Commission (2023): Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on substantiation and communication of explicit environmental claims (Green Claims Directive). Edited by EUR-Lex. Available online at https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=COM%3A2023%3A0166%3AFIN, checked on 07.08.23.

Fairmined (n.d.): What is Fairmined. Edited by Fairmined. Available online at https://fairmined.org/what-is-fairmined/, checked on 18.07.23.

Fairtrade (n.d.): Fairtrade-Gold. So funktioniert der faire Handel mit Gold. Available online at https://www.fairtrade-deutschland.de/produkte/gold/hintergrund-fairtrade-gold, checked on 24.08.23.

García, Bibiana; Grüning, Carolin; Weiss, Daniel; Kriege, Katja (2022): Strengthening The "E" In HREDD. Why the environmental dimension of sustainable supply chains matters. Available online at https://adelphi.de/de/publikationen/strengthening-the-e-in-hredd, checked on 7/19/2023.

ID Geneve (n.d.): Corporate Website. Available online at https://www.idwatch.ch/, checked on 20.07.23. IEA (2022): Global Energy Review: ${\rm CO}_2$ Emissions in 2021. Global emissions rebound sharply to highest ever level. IEA - International Energy Agency. Available online at https://www.iea. org/reports/global-energy-review-co2-emissions-in-2021-2, checked on 7/19/2023.

ILO (n.d.): About the ILO. Edited by International Labour Organization. Available online at https://www.ilo.org/global/about-the-ilo/lang--en/index. htm, checked on 19.07.23.

IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services. With assistance of S. Díaz, J. Settele, E. S. Brondízio, H. T. Ngo, M. Guèze, J. Agard et al. Edited by IPBES - Intergovernmental Platform on Biodiversity and Ecosystem Services.

IPCC (2021): Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Edited by Cambridge University Press. Available online at https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf, checked on 28.08.23.

IPCC (2023): Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. With assistance of Core Writing Team, H. Lee and J. Romero (eds.). Edited by IPCC - Intergovernmental Panel on Climate Change. Available online at https://www.ipcc.ch/report/sixth-assessment-report-cycle/, checked on 7/19/2023.

IRMA (2018): IRMA Standard for Responsible Mining IRMA-STD-001. Available online at https://responsiblemining.net/wp-content/uploads/2018/07/IRMA_STANDARD_v.1.0_FINAL_2018-1.pdf, checked on 16.10.2023. Jungmichel, Norbert; Schampel, Christina; Weiss, Daniel (2017): Umweltatlas Lieferketten. Umweltwirkungen und Hot-Spots in der Lieferkette. Edited by adelphi/Systain Consulting. Available online at https://adelphi.de/de/publikationen/umweltatlas-lieferketten, checked on 7/19/2023.

Kering (n.d.a): Our EP&L. Edited by Kering. Available online at https://www.kering.com/en/sustainability/measuring-our-impact/our-ep-l/, checked on 20.07.23. Kering (n.d.b): Sustainability Methodology. Available online at https://www.kering.com/en/sustainability/measuring-our-impact/our-ep-l/methodology/, checked on 27.07.23.

Kering (2021): Vestiaire Collective announces a new €178m (US\$ 216m) financing round backed by Kering and Tiger Global Management to accelerate its growth in the second-hand market and drive change for a more sustainable fashion industry. Kering. Available online at https://www.kering.com/en/news/vestiaire-collective-announces-a-new-eur178m-us-216m-financing-round-backed-by-kering-and-tiger-global-management-to-accelerate-its-growth-in-the-second-hand-market-and-drive-change-for-a-more-sustainable-fashion-industry/, updated on 2021, checked on 20.07.23.

Kering (2022): Environmental Profit & Loss (EP&L) - 2021 Group Results. Available online at https://keringcorporate.dam.kering.com/m/5edba9133d46ob6/original/Kering-Environmental-Profit-and-Loss-Report-2021-EN-Only.pdf, checked on 20.07.23.

Kering (2023): Universal Regisgtration Document 2022. Available online at https://www.kering.com/api/download-file/?path=KERING_DEU_2022_US_ea8526ec48.pdf, checked on 17.08.23. Kimberley Process (n.d.): What is the Kimberley Process? Edited by Kimberley Process. Available online at https://www.kimberleyprocess.com/en/what-kp, checked on 18.07.23.

LVMH (2023): Universal Registration Document 2022. Edited by LVMH. Available online at https://r.lvmh-static.com/uploads/2023/03/deu-2022-va_vdef.pdf, checked on 20.07.23.

McKinsey (2021): In fine jewelry and watches, sustainability shines through. With assistance of Tyler Harris, Alexander Thiel. McKinsey & Company. Available online at https://www.mckinsey.com/industries/retail/our-insights/in-fine-jewelry-and-watches-sustainability-shines-through, checked on 19.07.23.

OECD (2016): OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Edited by OECD. Available online at https://www.oecd-ilibrary.org/docserver/9789264252479-en.pdf?expires=1689755624&id=id&accname=guest&checksum=9F306FCE5A0F01C53EBF7A607C064B02, checked on 19.07.23.

OECD (2018a): OECD Due Diligence Guidance for Responsible Business Conduct. Edited by OECD. Available online at http://mneguidelines.oecd. org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf, checked on 19.07.23.

OECD (2018b): OECD Due Diligence Guidance for Responsible Business Conduct. Available online at https://www.oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm, checked on 7/19/2023.

Pandora (2023): Transparency in Supply Chains Statement 2022. Available online at https://www.pandoragroup.com/transparency-in-supply-chains-statement, checked on 20.07.23.

PMIF (2022): Definition of recycled gold and reprocessed gold. version 1. Edited by PMIF - Precious Metals Impact Forum. Available online at https://pmimpactforum.com/projects/, checked on 7/19/2023.

PWC (n.d.): Kreislaufwirtschaft: Uhren- und Schmuckindustrie. Available online at https://www.pwc.ch/de/insights/nachhaltigkeit/kreislaufwirtschaft-uhren- und-schmuckindustrie.html#report, checked on 19.07.23.

RJC (n.d.): Standards. Edited by RJC - Responsible Jewellery Council. Available online at https://responsiblejewellery.com/, checked on 18.07.23.

RJC (2023): Roadmap to 2030 and beyond. Building trust in the jewellery and watch industry. Version 2. Edited by RJC - Responsible Jewellery Council. Available online at https://responsiblejewellery.com/wp-content/uploads/RJC-2030-Roadmap.pdf, checked on 7/19/2023.

SCBD (2020): Global Biodiversity Outlook 5. Edited by SCBD - Secretariat of the Convention on Biological Diversity. Available online at https://www.cbd.int/gbo5, checked on 7/19/2023.

Steele, Gary (2021): Green Business Is Good Business: Why Transparency Is Key For Corporate Sustainability. Edited by Forbes. Available online at https://www.forbes.com/sites/forbesbusinesscouncil/2021/02/11/greenbusiness-is-good-business-why-transparency-is-key-for-corporate-sustainability/?sh=3d04c01d4bb9, checked on 27.07.23.

Swiss Better Gold Association (n.d.): What is Swiss Better Gold. Edited by Swiss Better Gold Association. Available online at https://www.swissbettergoldassociation.ch/what-swiss-better-gold, checked on 19.07.23.

Tiffany & Co. (n.d.a): The Leader in Diamond Traceability. As a pioneer in responsible sourcing, we don't just adhere to industry standards—we lead by example. Available online at https://www.tiffany.com/engagement/diamond-provenance/, checked on 20.07.23.

Tiffany & Co. (n.d.b): Tiffany Leads Luxury Jewelers in Net-zero Target. Edited by Tiffany&Co. Available online at https://www.tiffany.com/sustainability/net-zero-target/#:~:text=This%20validation%20confirms%20that%20 the,climate%20change%20within%20the%20luxury, checked on 20.07.23.

Tiffany & Co. (2022): Sustainability Report 2021. Available online at https://media.tiffany.com/is/content/Tiffany/2021_Sustainability_Report, checked on 20.07.23.

UN (2023): The Sustainable Development Goals Report 2023. Special edition: Towards a Rescue Plan for People and Planet. Edited by UN - United Nations. Available online at https://unstats.un.org/sdgs/report/2023/, checked on 7/19/2023.

UN Human Rights Office (2011): Guiding Principles on Business and Human Rights. Implementing the United Nations "Protect, Respoect and Remedy" Framework. Edited by UN - United Nations Human Rights Office of the High Commissioner. Available online at https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf, checked on 18.07.23.

UNCCD (2022): The Global Land Outlook. second edition. UNCCD - United Nations Convention to Combat Desertification. Available online at https://www.unccd.int/sites/default/files/2022-04/UNCCD_GLO2_low-res_2.pdf, checked on 7/19/2023.

UNESCO WWAP (2023): The United Nations World Water Development Report 2023: partnerships and cooperation for water. Edited by UNESCO WWAP - World Water Assessment Programme. Available online at https://www.unesco.org/en/articles/imminent-risk-global-water-crisis-warns-unworld-water-development-report-2023, checked on 20.07.23.

UNGC (n.d.): The Ten Principles of the UN Global Compact. Edited by UNGC - United Nations Global Compact. Available online at https://unglobalcompact.org/what-is-gc/mission/principles, checked on 18.07.23.

Watch & Jewellery Initiative 2030 (2023): Collaborating towards 2030. Stakeholder Report. Available online at https://www.wjinitiative2030.org/stakeholder-report-2023-launch/, checked on 7/19/2023.

World Economic Forum (2020): Half of World's GDP Moderately or Highly Dependent on Nature, Says New Report. Available online at https://www.weforum.org/press/2020/01/half-of-world-s-gdp-moderately-or-highly-dependent-on-nature-says-new-report/, checked on 7/19/2023.

World Gold Council (2018): Artisanal and small-scale gold mining | World Gold Council. Available online at https://www.gold.org/about-gold/goldsupply/responsible-gold/artisanal-and-small-scale-gold-mining, updated on 9/7/2018, checked on 16/10/2023.

WWF (2018): A precious transition. Demanding more transparency and responsibility in the watch and jewellery sector. Environmental rating and industry report 2018. With assistance of Dario Grünenfelder. Edited by WWF Switzerland. Available online at https://www.wwf.ch/sites/default/files/doc-2018-12/2018_12_07_WWF%20Watch%20and%20Jewellery%20 Report%202018_final_e_0.pdf, checked on 7/19/2023.

WWF (2021): The impact of gold. Sustainability Aspects in the Gold Supply-Chains and Switzerland's Role as a Gold Hub. With assistance of Nino Schön-Blume, Peter Dolega, Matthias Buchert, Bernadette Bodenmüller, Mariella Meyer. Edited by WWF Switzerland. Available online at https://www.wwf.ch/sites/default/files/doc-2021-11/2021-11-WWF-The-Impact-of-Gold.pdf, checked on 7/19/2023.

WWF (2022a): Living Planet Report 2022. Building a nature positive society. With assistance of Rosamunde. Almond, Monique Grooten, Diego Juffe Bignoli, Tanya Petersen. Edited by WWF. Available online at https://livingplanet.panda.org/, checked on 8/2/2023.

WWF (2022b): A Biodiversity Guide for Business. With assistance of Rebekah Church, Walsh, Maria, Engel, Katalina, Mario Vaupel. Edited by WWF Germany. Available online at https://wwf.panda.org/wwf_news/?5709966/New-biodiversity-report-paves-the-way-for-nature-positive-business-models, checked on 8/4/2022.

WWF (2023): Extracted Forests. Unearthing the role of mining-related deforestation as a driver of global deforestation. With assistance of Moritz Kramer, Tobias Kind-Rieper, Raquel Munayer, Stefan Giljum, Rens Masselink, Pia van Ackern et al. Edited by WWF Deutschland. Available online at https://www.wwf.de/themen-projekte/waelder/mining/bergbauist-treiber-der-weltweiten-entwaldung, checked on 7/19/2023.



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