Chapter V

Sustainable business practices for decarbonization and inclusion

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The contribution of creative industries to sustainable development aligns with three axes: economic, social, and environmental. While previous chapters discussed the creative economy's role in economic growth and trade, this chapter focuses on the social and environmental dimensions across different subsectors. The chapter examines inclusion in the creative economy, highlighting the role of disadvantaged communities in the sector and initiatives promoting inclusivity. Additionally, it addresses how creative industries can convey messages of inclusivity to drive social change. The chapter also reviews the environmental impact of creative industries, particularly greenhouse gas emissions, and explores how businesses are reducing these emissions through sustainable design, innovative materials, greener supply chains, and energy efficiency. Finally, the chapter presents how governments and business initiatives worldwide are promoting inclusivity and addressing environmental challenges, emphasizing the need for better data, sustainable operations, improved education and working conditions, best practices for funding, and promoting sustainable consumption.

A. The creative economy and inclusion

1. The importance of inclusion for the creative economy

Employment opportunities for women and youth are numerous in creative industries. The development of specific creative industries like traditional crafts supports the inclusion of local communities, thus fostering women's and youth's empowerment. Creative industries' contribution to social cohesion and well-being can also have an indirect economic impact. For example, cultural offers and activities can raise the attractiveness of urban and rural areas (European Parliamentary Research Service, 2019).

Creative industries can also influence thinking and promote behavioural change around sustainability and sustainable development thanks to their prominent role in modern culture and their audience. Examples include documentaries such as "Before the Flood", "Cowspiracy", and "Chasing Coral" or exhibitions like "Big Weather"[29] in the National Gallery of Victoria in Australia, focusing on Aboriginal and Torres Strait Islander peoples' cultural knowledge and understanding of weather systems. Another example is Playing for the Planet[30], an initiative facilitated with the support of the United Nations

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[29] See https://www.ngv.vic.gov.au/exhibition/big-weather/
[30] See Home - Playing for the Planet (playing4theplanet.org)

Environment Programme (UNEP) and led by the games industry. The initiative petitions for member organisations to add "green activations" (new features and messaging which highlight environmental themes such as conservation and restoration) to their videogames to influence the gaming community, create a new decarbonization standard for the video games sector, and explore new areas of action.

However, creative industries present specific issues that impact the sector's social sustainability. Firstly, creative workers tend to be self-employed more often, working part-time or combining multiple jobs while exhibiting a higher educational background than the workforce's average. In addition, many professions in the sector, such as artists, writers, creators, or musicians, have on-call, short-term or fixed-term contracts, agency work or false self-employment (European Parliamentary Research Service, 2019). Such precarious arrangements penalise, in particular, vulnerable women by not providing the necessary social security protection (maternity leave, for example). In addition to high job insecurity, a substantial share of the revenues from creative activities is absorbed by intermediaries or platforms. For example, research shows that only 10 per cent of revenues in the publishing industry goes to creators. The remaining 90 per cent is distributed equally among publishers, distributors, and retailers (European Parliamentary Research Service, 2019).

2. Inclusive business practices

Inclusivity remains a core aspiration of the 2030 Agenda for Sustainable Development. The balanced participation of disadvantaged groups – achieved, among others, through enhanced opportunities and access to resources – is an essential element for the well-being of the whole population. Inclusion is generally measured with a multidimensional approach, with individuals possibly intersecting more than one dimension. These dimensions include age, sex, disability, race, religion, ethnicity,

migration status, socioeconomic status, place of residence, sexual orientation and gender identity (UNDESA, 2016).

According to available data, women's representation in the creative industries varies by country. For example, in the United Kingdom, the creative industries workforce has a more significant proportion of men than women overall, with 63 per cent being male compared to 37 per cent being female. For the whole United Kingdom economy, the proportion of female workers is 47 per cent (Creative Industries Policy and Evidence Centre, 2020). In the Netherlands, studies report a share of 48.9 per cent of men and 51.1 per cent of women (Been et al., 2023). According to ILO data in Arts, entertainment and recreation, the average share of women in the creative industries fluctuates from 80.5 per cent in the Dominican Republic to 6.5 per cent in India, alongside a global average of around 38 per cent (ILO, 2024). The difference might be due to the presence of gender stereotypes in specific careers, cultural norms, gender-based violence and harassment, financial constraints, access to education and training, or gender equality policies (World Bank, 2023b).

There is evidence of vertical occupational segregation by gender, with fewer women working in senior positions, including as managers. For example, PR professionals see more significant proportions of women than Advertising and PR Directors, which see higher proportions of men.

Social imbalances are also evident when looking at the distribution of creative employment in urban and rural areas. A study conducted by ADB about India's economy finds that the concentration of creative jobs is significantly higher in urban areas, with a substantial 67.1 per cent of all creative workers residing there. In contrast, rural areas have a much lower proportion of creative workers at only 29.6 per cent. Moreover, while the creative workforce makes up 8 per cent of India's overall employment, it constitutes approximately 17 per cent of total urban employment but

just 4.1 per cent of total rural employment (Asian Development Bank, 2022b).

Self-employment is a common form of contractual arrangement in creative industries. The United Kingdom Labour Force Survey analysis highlighted the high level of self-employment in the creative industries, which is more than twice the level (on average) of that found in the overall economy: 31 per cent of people working in the creative industries work on a self-employed basis, compared to 15 per cent across the economy as a whole. However, the survey showed that most people working as self-employed have chosen to do so rather than having no other option (Australia Council for the Arts, 2022). The levels of self-employment vary widely across the creative industry sub-sectors. In museums, libraries and galleries, the workforce is almost all employees (97 per cent), with only 3 per cent being self-employed. By contrast, in some parts of the sector, such as music, performing and visual arts, 71 per cent are self-employed, with less than a third (29 per cent) working as employees.

Self-employment is often used as a response to the project-based nature of many creative industries. Such short-term arrangements hinder disadvantaged individuals' access to these industries. In such situations, hiring is often based on trust and social and cultural matching to reduce risks and search costs. Pregnancy and maternity leave dissociate women from this mechanism, reducing their opportunities. Weak connections also impact migrant workers, hindering their access to critical creative networks. All these obstacles lead disadvantaged individuals to have lower-paid jobs (Been et al., 2023).

An example of an organisation that aims to increase diversity in the creative industries and help represent minority groups is the United Kingdom-based company Creative Access.[31] Through partnerships with creative companies, Creative Access provides early career job opportunities and internships to people from underrepresented groups in the United Kingdom, such as Black, Asian, and minority ethnic backgrounds.

As already stated, the **advertising sector** bears the opportunity to drive social and cultural change thanks to its pervasiveness and contact with consumers. For this reason, campaigns must be built with diversity and inclusion in mind, avoiding discrimination and stereotyping. Initiatives aimed at increasing awareness of diversity and inclusion in this sector include the UNICEF Playbook on promoting diversity and inclusion in advertising (UNICEF, 2021) and the UNstereotype Alliance[32], a platform built by UN Women to use the force of the advertising industry to drive positive change.

Despite the increase in women working in **architecture** since the beginning of the 21st century, they still represent a minority in the sector. For example, in Australia, women passed from around 20 per cent of the architect workforce in 2001 to 31 per cent in 2016 (Parlour, 2016). Actions to support a more diverse and equal architecture include collecting and monitoring gender-disaggregated data and allocating resources for capacity building and training.

Studies show that, in countries like South Africa, the **craft sector** could be an essential and relatively more accessible labour market entry point for women - especially in rural areas - but at the same time, it can trap people into low-skill, low-wage jobs (Hadisi and Snowball, 2022).

Diversity in **design** represents one element that can open essential business opportunities for companies within untapped markets by reaching wider audiences and serving them better. An example of inclusive design comes from Singaporean designer Lim Jin Ying, who designed feeding toys for visually impaired children (Channel News Asia, 2022).

Fashion is also making active progress towards more diverse and inclusive

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[31] See https://creativeaccess.org.uk/
[32] See https://www.unstereotypealliance.org/en

practices. In a recent survey, 51 per cent of fashion businesses declared they have a diversity and inclusion (D&I) strategy (British Fashion Council, 2022). Despite the efforts, however, women are underrepresented in Boards and Executive Committees. Larger businesses are more likely to integrate a diversity and inclusion strategy into their overall strategy, and public companies tend to be more active in diversity and inclusion, too, probably due to public scrutiny. Among the United Nations initiatives focused on increasing diversity and inclusion in fashion, the ITC Ethical Fashion Initiative was created to strengthen social enterprises in emerging economies and connect them to international brands in fashion, among other sectors. The initiative supports fashion brands from developing countries by fostering cultural exchanges with different brands, providing an accelerator programme for emerging African and Central Asian designers, raising awareness of equality in target countries, and building partnerships in the textile sector.

The lack of women in leading high-profile positions also affects the **film industry**. In 2019, female artists and producers received just 33 per cent of awards in the primary film categories across 60 major global film festivals. Less than 24 per cent of these awards were granted for achievements in the best director and screenplay categories (*The Guardian*, 2022). In addition, the film industry in Hollywood lacked gender parity both on and off the screen, according to research conducted by the Green Davis Institute (UN Women, 2019). This trend is also present in movies, where female characters represent less than one-third of all speaking characters. Research conducted by Nikkei Asia analysed 1200 Bollywood movies over the past 20 years and found that there is still an underrepresentation of women in leading positions: women represented 25 per cent of leading roles in 2022, although there

is an improvement compared to 10 per cent in 2000 (Nikkei Asia, 2023). Women in Film and Television International (WIFTI) is an initiative to achieve a more balanced film industry.[33] WIFTI, an international network of industry professionals in film and media, plays an active role in promoting and celebrating the representation of women within the film and TV industry by organising workshops, lectures, and networking events, among others.

For racial equality, initiatives include scholarship programs to create pathways for black students and listening sessions and surveys for the black community. For example, in the film industry, Netflix has a sub-brand called Strong Black Lead (SBL) that focuses on black talent and encourages the industry to acknowledge and celebrate the black community's contribution to Hollywood and increase the participation of more black creatives. SBL explores content through a black lens and celebrates contributions to the culture on and off the screen (*LA Times*, 2018).

A study by the Dutch authors' society Buma/Stemra (Buma/Stemra, 2023) that focuses on the **music industry** shows that more women than men graduate from music schools and conservatoires in the Netherlands. Still, their share as members of professional organisations for performing artists and music creators is significantly lower than the share of men. When asked for possible reasons of this gender gap, women pointed to environmental factors such as the lack of female role models, gender stereotyping and discrimination, and in general the lower accessibility of the sector to women. Looking at innovative policies in the music industry to increase inclusivity, creative industry firms are carrying on various initiatives.

Recognising the scarcity of African music on the internet and the lack of visibility of African artists, Awa Girard founded Deedo,

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[33] See https://www.wifti.net/

a music streaming platform dedicated to Pan-African music. Established in 2017, it now features more than 12 million tracks. Deedo has made its services accessible in six African nations, France, and the United Kingdom. Deedo aims to expand its reach to 27 countries, including 19 countries across West and Central Africa. The platform has also initiated "One Song, One Soul", a program that donates 5 per cent of each subscription to the nonprofit organisation chosen by the user, thereby fostering social engagement (UNESCO, 2022b).

Another example is Mdundo, a music platform dedicated to promoting African music. Founded in Kenya, the service has since expanded to several African countries and is now most prominent in Nigeria and Tanzania. Mdundo collaborates with approximately 150,000 African musicians, collecting rights and providing them with a platform where users can download and stream the music legally.

Efforts to increase inclusivity in **performing arts** focus, among others, on increasing the participation of disadvantaged individuals. Examples include Un-Label - a project co-funded by the Creative Europe Programme of the European Union – focused on forming an inclusive team of artists with and without disabilities to find new ways of performing arts, as well as the festival Sin Límites[34] – an International Festival of Inclusive Performing Arts taking place in Uruguay – focused on the inclusion of artists with and without disabilities in performing arts (Un-Label, 2024). The 2022 edition of the festival included workshops on inclusive art education, talks on communication and creation of inclusive content, and talks on labour rights and inclusion, among others.

Recent surveys on the **publishing** industry in the United Kingdom show that more than 50 per cent of leadership roles in publishing are occupied by women and that the primary workforce is aged between 25 and

44 (International Publishers Association, 2020). The United States of America shows an even more accentuated tendency, with around three-quarters of people working in publishing being women. Including a wide range of voices and perspectives is fundamental in a sector with the power to influence a large audience like publishing. Diversity in the workforce could support the capacity of the publishing industry to include as many experiences as possible in its products, helping the audience to discover different perspectives and increasing their cultural understanding. For example, the Accessible Books Consortium, a public-private partnership led by the World Intellectual Property Organization (WIPO), promotes accessible publishing[35] by providing guidelines and capacity building in developing countries.

The **software and video game development** industry employs a low proportion of women. According to the 2021 biannual Developer Satisfaction Survey released by the International Game Developers Association (IGDA), women comprised only 30 per cent of the responding game industry workforce (International Game Developers Association, 2021). This figure highlights that women tend to be underrepresented in creative industries associated with rapidly advancing technologies while being overrepresented in other, traditionally more precarious fields. However, recent initiatives highlight efforts to combat this low figure.

For example, the Women in Games Education Ambassador Programme initiated in 2020 works to support and empower women in the games sector through academic training, opportunities, and other initiatives (Women in Games, 2024). Distributed by the same organisation, Women in Games, *The Guide: Building a Fair Playing Field* provides guidelines and various tools for good gender equality

34 See https://festivalsinlimites.com.uy/
35 Accessible publishing refers to the practice of producing works that are "born accessible" so they can be used directly by both sighted and print-disabled readers. Accessible formats include braille, audio or large print.

and diversity practices (Women in Games, 2023). IGDA also presents event diversity guidelines recommending certain levels of minority group representation regarding the speakers or hosts of community affairs (International Game Developers Association, 2024). In a similar vein, diversity goals are also being explored in the esports segment of this sector, as in 2019, several video games associations, including the Interactive Games and Entertainment Association (IGEA) and Entertainment Software Association (ESA), jointly assembled the Principles of Esports Engagement, detailing four ethical and inclusive standards to direct and develop the esports industry (Interactive Games and Entertainment Association, 2019). Regarding the representation of lesbian, gay, bisexual, transgender, queer and intersex (LGBTQI) people, a recent survey highlighted that despite 17 per cent of active gamers identifying as LGBTQI, games that include LGBTQI characters or storylines are only 2 per cent of the total (GLAAD, 2024).

Diversity and inclusion are also gaining pace in the **visual arts** realm by providing visibility and a stronger voice to artists from marginalised communities. The passage from words to action happens through the opening of specific spaces for artists from marginalised communities through initiatives such as the Queercircle project,[36] an LGBTQI-led charity providing spaces for expression to socially relevant causes, or Africa Supernova, a temporary exhibition at the Kunsthal KAdE showcasing 145 artworks by 135 contemporary artists from 33 African countries and the African diaspora (Kunsthal KAdE, 2023). Such initiatives encourage intercultural dialogue by providing an equitable representation of artists from different backgrounds and increasing their visibility, thereby accessing new professional opportunities and increasing their livelihoods.

B. The creative economy and environmental sustainability

1. The environmental impact of the creative economy

Environmental sustainability entails different elements: decarbonization, halting and reversing biodiversity loss, protection of ecosystems, and reduction of toxic waste and pollution. To reduce their environmental impact, firms in the creative economy need to pay attention to the entirety of their value chains, from the design and production to the distribution, consumption and dismission of their products.

When looking at greenhouse gas emissions (GHG) in particular, these can be theoretically divided into "Scopes" as proposed by the Greenhouse Gas Protocol (GHG Protocol), which was jointly convened in 1998 by the World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI):

- Scope 1: direct GHG from sources owned or controlled by the firm (buildings, vehicle fleet, etc.)
- Scope 2: indirect GHG generated by the generation of energy purchased by the company (the emissions arising from the generation of electricity used for its stores)
- Scope 3: all other indirect GHG emissions, both upstream and downstream, in their value chain (emissions from the extraction of materials used, emissions from the audience of an event or the emissions from the cultivation of cotton) (Creative Industries Policy and Evidence Centre, 2022).

To understand emissions associated with creative industries, a US$ 62 million film produces on average 2,840 tonnes of CO2e (Creative Industries Policy and Evidence Centre, 2022), while the Spotify streaming service emitted around 390,000 tons of CO2e in 2022 (Spotify, 2022).

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[36] See https://queercircle.org/

Overall, the GHG emissions of creative arts and entertainment services are similar to those of other service industries, such as telecommunications, which emits around 8 tonnes of CO_2 per US$ million Gross Value Added (Creative Industries Policy and Evidence Centre, 2022).

Emissions from producing and consuming creative goods and services depend significantly on countries' energy mix and consumer devices. Figure 43 shows estimates from the International Energy Agency (International Energy Agency, 2020) about the percentage of streaming energy use from devices compared to data transmission and data centres. Most CO_2 emissions come from the device itself (due to more electricity consumption in TVs than smartphones). Therefore, choosing energy-efficient devices matters.

While digitalization reduces the environmental impact of some creative activities – such as printing and distributing newspapers and books – the environmental impact of digitalized creative activities can be more complex to estimate. The reason is that it is influenced by the number of customers using the product and of those working to contribute to its production, such as data managers, digital developers and so on (International Labour Organization, 2023a).

The following sections review environmental sustainability considerations in selected creative industries.

The **advertising industry's** environmental impact comes from the production process (e.g., shooting) and the printed material. Indirect emissions are generated from the demand that advertising creates for products. The campaign group Purpose Disruptors has introduced the concept of "advertised emissions", defined as GHG emissions resulting from increased sales generated by advertising (Purpose Disruptors, 2022). Purpose Disruptors has calculated the scale of advertised emissions as being as much as 208 million tonnes

Figure 43
Energy usage during streaming by data centres, data transmission and devices based on average viewing habits.

- Devices
- Data transmission
- Data centres

5%

23%

72%
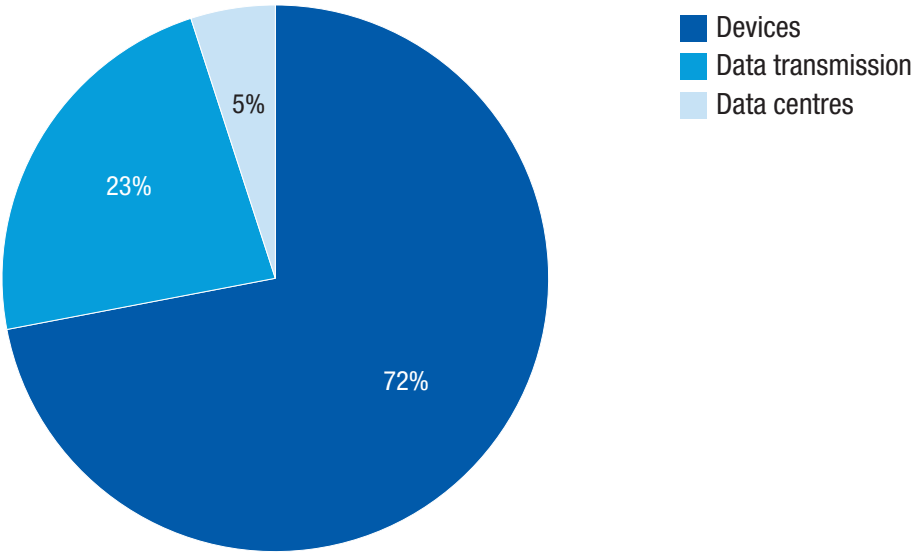
Source: UNCTAD, based on International Energy Agency

of carbon dioxide emissions equivalent (CO2e) in the United Kingdom of Great Britain and Northern Ireland (Purpose Disruptors, 2022) or "an extra 28 per cent to the annual carbon footprint of every single person in the country" (Creative Industries Policy and Evidence Centre, 2022).

Due to the nature of the work – typically based in an office and computer-based – most of the emissions connected to **architecture** are at the Scope 3 level. The 2022 Global Status Report for Buildings and Construction finds that the sector accounted for over 34 per cent of energy demand and 37 per cent of energy and process-related CO2 emissions in 2021 (United Nations Environment Programme, 2022a).

Due to their overall size, **crafts** have a relatively small carbon footprint, mostly connected to the value chains of material used, the toxicity of materials used in the production process (e.g., glazes) or the fossil fuels used to power the kilns (Creative Industries Policy and Evidence Centre, 2022). Sustainable sourcing of materials used in crafts such as clay and precious stones is a vital strategy to reduce social and environmental externalities related to these activities and to select more natural dyes and alternative fuels for kilns.

On the other hand, **design**, due to its transversal nature – used in advertising electronic goods and vehicles – has the potential to contribute significantly to a more sustainable creative sector. Design can help find cost-effective and durable solutions, minimise waste, upcycle discarded materials, lower pollution, create healthy environments, reduce the consumption of non-renewable resources, and better manage water and energy. Approaches like Design for Environment (DfE) aim to include environmental considerations in designing and manufacturing goods and services. Considering the entire life cycle of a product, from the extraction of the necessary materials until the end of life, design can help reduce the economic, environmental, and social impact. The Flipflopi Project is an example of tackling marine ecosystem health by combining traditional indigenous knowledge and modern innovation. Based in Kenya, Flipflopi constructs traditional sailing and motorised vessels and artisanal furniture from plastic waste, while at the same time providing local quality jobs and advocating for better policies on single-use plastic in the region.

Box 6
The environmental impact of the fashion industry

The whole fashion industry is usually not considered creative. Although there is a general agreement that fashion design is a creative activity, mass-manufacturing apparel and textiles is not. UNCTAD considers design services and producing certain accessories (e.g., scarves and bags) part of the creative economy but not the whole apparel and textile industry. However, because of the role of design in fashion and the strong links between them, it is worthwhile to look at the fashion industry's sustainability.

The fashion industry has been in the public eye regarding sustainability. From greenwashing to fast fashion (in 2014, people bought 60 per cent more garments than in 2000 but kept them half as long (McKinsey & Company, 2016)), challenges in the sector have been abundant. The fashion industry is responsible for around 10 per cent of annual global carbon emissions, more than all international flights and maritime shipping combined. It is estimated that around 96 per cent of the total emissions are in Scope 3, generated by the fashion industry's supply chain and in

their products' use and disposal (Reuters, 2023a). At this pace, the fashion industry's greenhouse gas emissions will surge by more than 50 per cent by 2030 (World Bank, 2023). For example, the company Shein alone generates 6.3 million tons of carbon dioxide annually (Time, 2023), which is similar to the emissions of Timor Leste in 2020 (6.01 MtCO2e) (Climate Watch, 2024). Every year, the fashion industry uses around 93 billion cubic meters of water — enough to meet the consumption needs of five million people. In addition, around 20 per cent of wastewater worldwide comes from fabric dyeing and treatment. Finally, 87 per cent of total fibre inputs are incinerated or disposed of in a landfill (World Bank, 2023).

On top of the emissions connected to the production phase, emissions connected to the industry's business practices are increasingly ending up in the spotlight. Carbon Trust & ORDRE (Vogue India, 2020) collected and analysed data related to the emissions stemming from the business travel of designers and buyers attending fashion weeks and collections for a year. They found that in 12 months, a total of 241,000 tonnes of carbon emissions were created from air travel, accommodation, intercity travel and the transportation of collections by 11,000 individual retail buyers and 5,000 designers. This figure exceeds Dominica's total greenhouse gas emissions in 2020 (approximately 231,000 tonnes) (World Bank, 2023a).

The textile industry in developed countries must pay particular attention to the exports of used textiles and their fate in the countries of destination. In 2019, the export of used textiles from the European Union has reached almost 1.7 million tonnes, while their value per kilogram has steadily decreased during the last 20 years. Asia imported 41 per cent of the used textiles, while Africa imported 46 per cent (European Topic Centre on Circular Economy and Resource Use, 2023). While the imports of used textiles in Africa seems to be meant mainly for local reuse, what is not fit for reuse mostly ends up in open landfills and informal waste streams. Kenya provides an example of how established processes and measures could be able to ensure importation of quality second-hand clothes, ultimately resulting in low levels of clothing waste. In fact, based on findings from Mitumba Association – an association representing traders in second-hand clothing in Kenya – the prioritisation of quality items and high level of compliance with government regulations allow to have only 1 to 2 per cent of second-hand imported clothing items ending up as actual waste, which is then incinerated or dumped in specific dumpsites (Mitumba Consortium Association of Kenya, 2023).

The United Nations Framework Convention on Climate Change (UNFCCC) Fashion Industry Charter for Climate Action aims to drive the fashion industry to net-zero greenhouse gas emissions no later than 2050 (United Nations Framework Convention on Climate Change, 2023). This is a significant challenge that will not only require reshaping production and consumption systems but also necessitate new forms and skills of employment and related capacity building of the workforce involved in the sector. Auxiliary to this issue is the overall problem of poverty eradication, just transition, fair recruitment and fair pay. Many individuals in the fashion industry lack job security and are not paid properly. Migrant workers in vulnerable situations could also be involved in such industries. A just transition would ensure environmental sustainability, decent work, social inclusion, and poverty eradication. It would entail fair income, security in the workplace and social protection for families. The fashion industry must factor in all these elements to attain the goals set forth by the Paris Agreement commitments and the relevant SDGs.

Source: UNCTAD.

Most of the **film and television industry** emissions are concentrated on transportation – especially air travel –, on-set energy consumption, waste from the production process, and catering supplies. Data shows an average footprint of over 33 metric tonnes per shooting day. Thus, films can generate from 391 metric tonnes up to 1,081 metric tonnes, depending on their length. Nearly 24 per cent of that carbon footprint is generated from air travel and utilities (Sustainable Production Alliance, 2021). Similarly, it is estimated that the Nigerian film industry releases approximately 125,000 tonnes of carbon dioxide per year, equivalent to the carbon footprint of roughly 24,000 households in Nigeria (Wilson-Omuso et al., 2022).

Emissions related to the **music** sector mostly emerge from vinyl manufacturing, music streaming, live touring, venues and festivals. According to research from the campaign group Powerful Thinking, in 2018, the United Kingdom festival industry generated 25,000 tonnes of CO2 (excluding audience travel), created 26,000 tonnes of waste and used 7 million litres of diesel (Creative Industries Policy and Evidence Centre, 2022). Scope 3 emissions are the most relevant source of emissions, as they encompass audience travel. Streaming services are in a similar situation. For example, 98.9 per cent of Spotify's GHG emissions in 2022 are coming from Scope 3 – further broken down into end use (26.5 per cent), marketing (26 per cent), goods and services (21.5 per cent), business travel (11 per cent) and cloud use (6.7 per cent) (Spotify, 2022). According to studies in 2019, the total carbon dioxide emissions from online music and video streaming in Japan amounted to approximately 922,000 tonnes. The study expects CO_2 emissions to reach 1545 thousand tonnes by 2025 with the increased number of users (Tabata and Wang, 2021).

The environmental impact of **performing arts** is primarily due to the theatre premises and travelling of companies and audiences, as well as the material used for the sets

and the catering. According to a study conducted in 2008 in the United Kingdom, the theatre industry's carbon footprint is more than 50,000 tonnes a year (Greater London Authority, 2008). Mitigating the environmental impact of the performing arts industry on the environment calls for a combination of sustainable practices and technological advancements ranging from energy-efficient lighting systems to eco-friendly vehicles for transportation needs – as well as changes in behaviour.

The **publishing sector's** impact is mainly connected to printing, involving inks, solvents, volatile organic compounds (VOCs), and air pollutants (HAPs) (Aydemir and Özsoy, 2020). In addition, the process consumes wood pulp, water (depending on the mill, it can take up to 13 litres of water to produce a single sheet of paper (Oxford University Press Blog, 2022), metals for foil stamping and fossil fuels. Globally, the pulp and paper sector was responsible for just under 2 per cent of all emissions from industrial activities in 2022 (International Energy Agency, 2024).

In the **video games** industry, the environmental impact arises from the manufacturing of consoles (some of which use materials such as gold or tin (*The Verge*, 2019), categorised by the European Union as conflict materials (European Commission, 2021) and other necessary devices, which use extracted material at risk of coming from conflict zones, and the vast supply of energy used to play, part of the Scope 3 emissions. An example of the energy usage required to power this sub-sector can be found in the studio footprint of London software designer Space Ape. According to their calculations, approximately 50 per cent (or 376.8 tonnes) of their carbon emissions are produced by the cloud servers used to operate their games (Space Ape, 2020).

Finally, looking at **visual arts**, Scope 3 makes most of the emissions. In 2019, Tate Gallery published a report stating that their total carbon footprint for 2018/2019 was 260,000 tonnes of CO_2e, with visitor travel accounting for 92 per cent. Other

emission sources included electricity, procurement, gas, staff travel, food and retail (Tate Modern and Julie's Bicycle, 2019).

2. Business practices for environmental sustainability and decarbonization

Decarbonization and environmental sustainability in the creative industries requires more sustainable consumption and production patterns, in line with SDG 12. Such change implies reducing waste, promoting circular economy practices, and using sustainable procurement policies. Pivoting to more sustainable consumption patterns is central to achieving positive change. In particular, reducing consumption, choosing products with lower environmental impacts and reducing the carbon footprint of daily activities are behavioural changes required.

Circular economy has been defined as an economic model in which products are designed in a way that enables reusing, remanufacturing, recycling and recovering (4-R), minimizing waste and reducing emissions (United Nations Environment Programme, 2019). This is a critical approach to leveraging more sustainable creative industries by focusing on shorter distribution channels, local talent, and locally available raw materials, thereby optimising the life cycle of products (Asian Development Bank, 2022a).

The most Immediate action to reduce the environmental Impact of the **advertising** industry is to minimise business travel (usually around 60 per cent of an agency's Scope 1 emissions) and office energy use (the remaining 40 per cent). In particular, events involving long-distance travel are a significant source of emissions (Ad Net Zero Limited, 2020). Formulating an internal Climate Action Plan – extended to suppliers and clients – with proper reporting mechanisms can go a long way towards reducing the impact of a business on the environment.

It is essential to note that advertising can benefit green products and causes by raising awareness, stimulating behavioural changes, and promoting responsible consumption.

Architecture's contribution to sustainability requires practices focused on mitigation and adaptation to climate change, repurposing old buildings and fostering the shift to more climate-conscious energy and water use design. The buildings and construction sector accounted for 34 per cent of energy demand and 37 per cent of energy and process-related CO_2 emissions at the global level in 2021 (United Nations Environment Programme, 2022b). For this reason, architecture's mitigation efforts must focus on their possible contribution to reducing CO_2 emissions of buildings, including sustainable design of the entire life cycle of buildings, including the production, construction, use, and end-of-service stages (Birgisdottir and Rasmussen, 2016).

For example, sustainable design of buildings should look at their placement and how they interact with the environment to naturally cool or heat the building. An example is the Rajkumari Ratnavati Girls' School in Jaisalmer, India. Built in a town exposed to severe heat up to almost 50 °C degrees, the school has been designed using traditional techniques and natural cooling mechanisms, being able to avoid the use of air conditioning. In the production phase, sustainability in architecture focuses on the use of sustainable materials to reduce carbon emissions, as well as on the repurposing of already available buildings. Adopting locally sourced, alternative, recyclable or recycled materials; fostering 3D printing; and using green fuels for manufacturing these materials can substantially reduce emissions. In the use phase, associations like Architects Climate Action Network (ACAN) are looking into practices such as retrofitting, insulation, energy efficiency, solar and heat pump strategies, circular economy methodologies and natural materials (Architects Climate Action Network, 2023). Architecture also has the potential to mitigate climate

change and help communities adapt to it. For example, in the Plaza Estacional project, taking place in Caracas, Venezuela and aimed at reducing flooding risk in informal areas, vegetation has been used by the architects to stabilise the ground and absorb rainfall (AGA Studio, 2010).

Actions that workers in the **crafts** can take to reduce their carbon footprint include growing or producing their material sustainably (Crafts Council, 2023), recycling dust and scraps from the production process, focusing on ethical materials, reducing the use of toxic chemicals for surface decoration, using recycled materials (Crafts Council, 2021), and switching to cleaner energy for tools like the kiln (Crafts Council, 2020). Among artists successfully embracing sustainability in crafts, Ghanaian sculptor El Anatsui used aluminium bottle caps to create large-scale wall sculptures. In contrast, Zimbabwean painter Virginia Chihota uses plant-based inks and pigments to paint her art pieces (MoMAA, 2023).

Similarly, sustainability in **design** focuses on material-based research for products to extend the product's lifespan, minimising its impact on natural resources and achieving a full circularity, reducing waste, emissions and energy used. Practices include using sustainable materials (non-toxic, local, recycled or with lower environmental impact than traditional ones), increased energy efficiency and renewable energy use, and the design of products for reuse and recycling. Sustainable design also extends to product packaging, keeping in mind an efficient use of resources. A successful example of sustainable design can be found in the work of Kere Architecture – founded by Francis Kéré, an internationally renowned Burkinabé architect and Pritzker Architecture Prize laureate. Kéré used leftover construction materials to create chairs for the Lycée Schorge Secondary School in Koudougou, Burkina Faso, using rebars from the roof structure for the chair's legs and the hardwood used for the concrete form for the seat and backrest (Kéré Architecture, 2016).

There are many efforts for sustainability in the **fashion** industry. Sustainable practices include zero-waste design, use of sustainable materials, reduced waste, more sustainable energy usage and transport, certifications for sustainable practices, and investment in research and development for new dying and waste management processes. The biggest obstacles for the fashion industry lay in the complexity of global value chains, especially traceability and transparency. Initiatives like the Fashion Industry Charter for Climate Action create the space for producers to collaborate and set commitments based on science-based targets, jointly with transparent reporting. As of 2023, 99 companies are members of the alliance (United Nations Framework Convention on Climate Change, 2023). Among the initiatives focused on increasing sustainability in fashion, the ITC Ethical Fashion Initiative's ESG Due Diligence and Corporate Sustainability reporting approach has been built to evaluate the Environmental, Social and Governance risks throughout a fashion brand's supply chain (International Trade Centre, 2023).

Meanwhile, **film production companies and broadcasters** have made progress regarding sustainability. In the United Kingdom, a tool called Albert has been created to calculate the GHG emissions related to production. The platform also includes a toolkit to increase sustainability in the sector, looks at suppliers and production tools, and provides sustainability certification (albert, 2024). The movie 1917 was the first large-scale movie from the United Kingdom to be certified (albert, 2020).

Different initiatives are taking place in the **music sector**. For live events, for example, the rock band Coldplay worked to measure and reduce the impact of their current global tour, to reduce their CO2 emissions by 50 per cent compared to their previous tour in 2016-2017 (World Economic Forum, 2021). The strategy includes powering their concerts with fully renewable energy, minimising charter flights, using sustainable aviation fuel (SAF), using

local equipment, building a sustainable stage, maximising water efficiency, and encouraging fans to use low-carbon transport. The show produced 47 per cent less CO2 emissions compared to their last stadium tour (Coldplay, 2023). Other live music event organisers promote sustainable consumption by introducing new event policies and systems, more structured venue planning, and encouraging a cultural shift. For instance, the Wonderfruit 2022 Impact Report (about the annual art, culture, music, and nature festival in Thailand called Wonderfruit) reveals that the festival banned single-use cups of all kinds and actively offset the carbon footprint of their attendees' emissions by developing a carbon calculator for festival travellers as well as donating to environmental preservation foundations (Wonderfruit, 2023).

Among other initiatives, in November 2023, three music companies announced the creation of the Music Industry Climate Collective (MICC) to address the music sector's environmental impact. The MICC's first initiative will establish science-based guidance to measure Scope 3 emissions.

Looking at **performing arts**, the initiative Theatre Green Book provides standards to increase sustainability in three main areas: making productions sustainably; making theatre buildings more efficient; and improving the sustainability of operations like catering and front-of-house activities (activities that happen at the part of a performance venue that is open to the public) (Theatre Green Book, 2024). Similarly, the Opéra de Lyon in France demonstrates performance arts' steps towards recognising and deploying more green operations. The opera developed an assessment and decision-making tool (EDEOS), comparing the environmental impacts of decors depending on the building and material choices. It also participates in "Collectif de 17h25", a research project aimed at standardising structural set components in a collective effort to reduce the carbon footprint of the theatre industry (Opéra de Lyon, 2020).

Efforts in the **publishing** industry focus on using certified sustainable paper—sourced responsibly with no deforestation risks—to reduce waste caused by unsaleable stocks and invest in the digital transition (Oxford University Press Blog, 2022).

Like other creative sectors that rely on digital mediums and encompass prolonged energy usage, the **video games** industry requires constant optimisation, especially on consumption. As it is increasingly necessary for the industry to find effective ways to balance technological advances, environmental sustainability, and customer satisfaction, different initiatives and tools are being introduced to reduce the industry's negative environmental impacts. For example, in 2019, significant studios, launched the Playing for the Planet initiative. To drive decarbonization efforts in the gaming sector, the Alliance promotes a transparent reporting methodology for its members and provides them with resources to decarbonise their activities. One of these resources includes the Green Games Guide, where the games industry lifecycle is analysed, and advice on energy use, waste reduction and management, and business operations is provided (Playing for the Planet, 2024).

Compared to more prominent culture industries like entertainment, the contribution of **museums and art institutions** to fight environmental degradation and climate change is relatively modest. Yet some initiatives, such as Gallery Climate Coalition, offer guidelines for arts institutions to increase sustainability (Gallery Climate Coalition, 2024). The initiative has over 800 industry members committed to reducing carbon emissions by over half by 2030 (*The New York Times*, 2022). Another initiative called ART 2030 was established in Copenhagen in 2017 (Art-2030, 2024). Partnering with artists and arts institutions, it aims to advance the United Nation's 2030 Agenda for Sustainable Development. It inspires behavioural change by encouraging museums to have exhibitions for a more extended

period or use works from their existing collections instead of constantly mounting resource-intensive exhibitions. ART 2030 supporters include, among others, Iranian visual artist Shirin Neshat, Vietnamese contemporary artist Danh Võ, the Indian Raqs Media Collective and Brazilian visual artist Ernesto Neto. Other initiatives include the Bizot Group's guidelines for museums to increase their sustainability regarding environmental conditions and transport and the International Committee for Museums and Collections of Modern Art (CIMAM) sustainability toolkit.

C. Way forward

Governments worldwide increasingly incorporate sustainability and inclusivity initiatives within their policies targeting the creative economy. These efforts are tailored to address environmental challenges, promote inclusivity, and leverage technological advancements to foster economic growth and social welfare

through the creative economy. 12 of the 36 countries participating in the UNCTAD survey on the creative economy reported having specific sustainability initiatives for creative industries. Twelve other countries incentivise enterprises to adopt sustainable business practices through more general policy frameworks, such as national energy, environment and industrialisation strategies. The examples in Box 7 showcase a diverse range of strategies and commitments towards integrating sustainability and inclusivity into creative industries, often combined with a more general national policy framework for sustainability.

Sustainable creative industries are built on an interwoven fabric of business initiatives and policy actions. The two actors need to work in concert to guarantee that sustainability becomes a pillar in the future of creative industries. The following policy areas and measures could help to push creative industries toward decarbonization and more sustainable business practices.

Box 7
Examples of government-led sustainability initiatives in the creative economy

The government has launched several initiatives in **Argentina** emphasising cultural sustainability and climate change. The program called Argentine Cultural Industries Market (*Mercado de Industrias Culturales Argentinas* or MICA) aims to strengthen the cultural sector's economic and social impact. Furthermore, Argentina has published a comprehensive report on culture and climate change, outlining strategies to integrate cultural practices into broader environmental sustainability efforts (Ministry of Environment and Sustainable Development of Argentina and Ministry of Culture of Argentina, 2023). Additionally, initiatives such as the Cultural Accessibility Program underscore the country's commitment to inclusivity, prioritising the inclusion of individuals with disabilities and ensuring their access to and participation in cultural experiences (Argentine Cultural Industries Market, 2023).

China has focused on the intersection of digital economy and inclusivity, particularly for vulnerable groups such as disabled people. Through the 13th Five-Year Plan and subsequent initiatives, China aims to integrate disabled people into the cultural and creative industries, offering support for cultural entrepreneurship and employment. The success of e-commerce platforms, for people with disabilities, highlights the significant economic contributions and employment opportunities created within this framework.

Costa Rica has pioneered the concept of "Ecofilming Pioneers," promoting environmental best practices in filmmaking, especially in public areas and national parks. This initiative reflects a broader commitment to sustainability across all sectors, including the creative industries. Companies involved in exporting and receiving support from the Film Commission undergo sustainability diagnostics, ensuring that environmental considerations are integral to their operations.

Several programs and regulations articulate the government's sustainable creative economy development strategy in **Indonesia**. These initiatives range from the Ministry of Tourism and Creative Economy's Strategic Plan to the Indonesia Village Tourism Award, encouraging renewable energy use and sustainability in village tourism. Villages will be evaluated based on their attractivity in terms of nature, arts and culture, as well as how they leverage local wisdom and handicraft in fashion or culinary tradition. The Indonesia Creation Appreciation Program (Apresiasi Kreasi Indonesia or AKI), the Indonesian Creative Districts/Cities Program, and the Incubation Programme for Local Craftspersons and Local Fashion Designers further underscore the commitment to sustainable development through capacity building, inclusivity, and environmental stewardship in the creative economy.

Mauritius has introduced a mobile app, Mau Heritage[a], to enhance the experience of national and world heritage sites, incorporating digital technology to promote sustainable cultural heritage. This initiative is part of a broader effort to integrate technology and sustainability in preserving and promoting the country's cultural assets.

In **Oman**, the "Innovation in Craft Industries" competition exemplifies the nation's approach to sustainability in the creative industries. By encouraging using natural materials and advanced techniques, Oman aims to preserve traditional crafts while fostering innovation and sustainability. This initiative reflects a commitment to a sustainable creative economy that balances heritage preservation with modernisation.

Peru has implemented several policies and strategies to guide the sustainable development of the country's cultural and creative industries. The Strategic National Development Plan aims to improve this sector by recognising geographical and cultural diversity in the context of climate change. The National Competitiveness and Productivity Policy provides a path to achieve medium and long-term economic growth through establishing innovation and market efficiency related to creativity, productivity, export, technology, and intellectual property protection. In addition, the National Policy on Reading, Books, and Libraries sets goals to increase the country's reading habits, ensure public access to reading spaces and materials, and support actors in the book value chain through sustainable production and circulation.

Slovenia supports sustainable, green, creative, and smart development through specific measures in the creative and cultural sectors. These initiatives promote technological and non-technological innovations, digital transformation, social and sustainable design, and the circular economy, aiming to minimise environmental impact and promote sustainable growth.

South Africa recognises the critical role of cultural and creative industries in sustainable development, economic expansion, and social cohesion. Through government funding and support, initiatives like the DSAC Mzansi's Golden Economy programme aim to upscale the creative economy sustainably by funding sustainable touring ventures and creative enterprises (Department of Sports, Arts and Culture of South Africa, 2023).

Sri Lanka's creative economy has several supportive systems and global relationships focusing on sustainability. The Academy of Design houses the Circular Design Lab initiative that guides the sustainability-consciousness of Sri Lanka's design talent while also working with international partners and experts to provide supplementary educational opportunities.

In **Trinidad and Tobago**, sustainable business practices within the creative economy are supported by The Trinidad and Tobago Creative Industries Company Limited (CreativeTT) and its subsidiaries focusing on music, film and fashion. Additionally, fair employment practices are promoted through legislation, highlighting the country's commitment to inclusivity and sustainability.

The **United Kingdom** has established a Creative Industries Sector Vision to address environmental challenges and achieve net zero targets. Initiatives like the Creative Climate Charter and tailored advice from the Department for Energy Security and Net Zero demonstrate the country's commitment to sustainable practices and skills development within the creative industries.

Source: 2024 UNCTAD survey on the creative economy.
[a] See https://nhfcms.govmu.org.

Better data are paramount to increasing sustainability and inclusion in creative industries, enabling policymakers and businesses to make informed decisions. Improved data on the impact and dependencies on the nature of business – with particular attention on the gender dimension – are essential for adequate progress towards more sustainable business practices. Data will help companies increase the sustainability of their operations, improving their environmental and social impact across the entire value chain.

In terms of **decarbonization and environmental sustainability**, companies need to focus on increasing the sustainability of their operations - which includes Scope 1, 2, and 3 - by looking, among other elements, at their product life cycle. The best practices highlighted in this chapter – from recycled and sustainable materials to energy use and waste reduction, including promoting sustainable consumption patterns among consumers – are necessary stepping stones if companies want to reduce their environmental impact.

Social impact will necessitate a more inclusive creative sector, where the public and private sectors play a crucial role. Increasing inclusivity in creative industries demands a holistic approach, considering how exclusion emerges in an individual's lifetime.

As a stepping stone into the creative sector, policymakers should guarantee **equal access** to creative and cultural experiences and education for all individuals, starting with early childhood education. Arts subjects, including music, visual arts, and drama, are fundamental to early education, fostering creativity and innovation (European Institute of Innovation and Technology, 2022). Pupils from disadvantaged socioeconomic backgrounds tend to experience disparities in creative teaching for creativity and have fewer opportunities for out-of-classroom education (Creative Industries Policy and Evidence Centre, 2021). The shortage of resources for art education has been highlighted in developing countries like Nigeria: shortage of qualified art teachers, inadequate teaching facilities and funding, and low consideration for artistic career paths undermine the growth of creative industries (Okonkwo, 2014). Supporting the increase of an art-skilled workforce, improving facilities and curricula, and raising

awareness of art careers are fundamental for the growth of the creative sector. Supportive policies should also extend to higher levels of education, providing support for marginalised individuals to access higher art education. Notable examples include Market Photo Workshop in South Africa, a photography school focused on providing better access to and training in photography to South Africans from marginalised communities.

It is the role of both the public and private sectors to guarantee **job quality and safety** by working together to deliver decent working conditions. Low salaries, job security, and poor workplace practices represent barriers for disadvantaged individuals. Workers in creative occupations in the United Kingdom perceive a higher level of insecurity in their jobs compared to other sectors, as only 58 per cent of workers feel that their job is secure, against an average of 77 per cent in all industries (Creative Industries Policy and Evidence Centre, 2021). The high rate of self-employment also presents issues for disadvantaged individuals, providing less support such as childcare or paid absence from work. For this reason, there is a need for new frameworks that can guarantee fair remuneration for freelancers and funds to alleviate short-term cash-flow needs (International Labour Organization, 2022). Policies should also guarantee decent working hours for all creative industry workers, safe working environments, and social security, maternity and sick leave benefits. An example of efforts to promote safe work environments is the Joint Operational Committee for Live Events, established by the South African Promoters Association. It ensures that significant events comply with safety regulations (International Labour Organization, 2022).

Companies must also focus on informing and promoting **sustainable consumption practices among customers**. The creative industries play a significant role in achieving SDG 12, which ensures sustainable consumption and production patterns.

Responsible consumption involves making informed choices, reducing waste, and supporting ethical and sustainable practices. Despite young consumers seeming to be more likely to choose brands based on moral values, businesses must do more to engage with consumers on sustainable consumption. For this reason, they must inform consumers of the social, economic, and environmental impacts of their choices while providing sustainable goods and services to all (UNCTAD, 2023e). In line with the United Nations Guidelines for Consumer Protection, countries should also provide consumer education, awareness-raising initiatives on sustainability, and monitor green claims to avoid greenwashing. At the same time, businesses are responsible for promoting sustainable consumption by designing, producing and distributing goods and services. In line with this aim, advocacy materials and guidelines about sustainable consumption and data are increasing, allowing consumers to consume more sustainably.

Funding from public and private entities to foster further growth and sustainability in creative industries represents essential support for the industry. For example, the Czech Ministry of Finance, in collaboration with the Ministry of Culture, Arts Council Norway, and the Icelandic Centre for Research, announced an open call via the European Economic Area (EEA) Grants 2014-21 to offer funding of approximately EUR 3 million for projects with a focus on the fundamental aspects of cultural and creative industries and the creative economy. The condition for financing is that proposals must demonstrate a commitment to fostering sustainable and inclusive economic growth (OECD, 2022b). Another example comes from the Nigerian film industry, which has been attracting more and more local and foreign investment. These include, among others, the partnership among China's Huahua Media, FilmOne and South Africa's Empire Entertainment to set up a one million US$ fund for a series of movies produced by the Nigerian film industry (International Labour Organization, 2022).

Box 8
Guidelines for responsible consumption of creative goods and services

The Ethical Consumer, the United Kingdom's major alternative consumer organisation, provides ratings and details on various industries and companies' environmental reporting, carbon management, product sustainability, and the status of other eco-friendly practices[a].

Regarding the fashion industry, the Fashion Revolution's "Buyer's Guide"[b] offers sustainable fashion tips for consumers, who are encouraged to purchase timeless, durable fashion items that can withstand multiple seasons, reducing the need for frequent replacements. Another possibility is to consider second-hand shopping and explore thrift stores, consignment shops, and online platforms to extend the lifespan of clothing and reduce textile waste.

While the digitalization of many creative and cultural industries has ultimately reduced physical material waste, there are still greenhouse gas emissions produced by online activities. Initiatives like the Swiss Centre for Digital Responsibility suggest methods consumers can use to reduce their data and energy consumption in the digital environment. These include turning on power-saving settings and cutting back on video streaming quality. Alternatively, consumers can download content for offline use to mitigate the need for continuous streaming of music, films, or other audio-visual work. This conserves data and allows users to enjoy content without an internet connection.[c]

Source: UNCTAD.
[a] See https://www.ethicalconsumer.org/
[b] See https://www.fashionrevolution.org/resources/how-tos/
[c] See https://digitalresponsibility.ch/