UNCTAD STUDY GUIDE

Agenda Item

1. Harnessing the Blockchain for Sustainable Development
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Letter from the Chairboard

Esteemed delegates of the United Nations Conference on Trade and Development,

We are Mehmet Polat and Ada Su Tuna, and as the Committee Directors of the United Nations Conference on Trade and Development committee, we are more than honored to welcome you all to the 4th edition of HaydarpasaMUN.

Mehmet graduated from Haydarpasa High School in 2020 and he is currently studying in Bahçeşehir University in the department of Economics. He started his MUN journey in 2016 by joining HaydarpasaMUN club. He has been in the Secretariat of HaydarpasaMUN 2019.

Ada is an IB student and an 11th grader in Istanbul Prof. Dr. Mümtaz Turhan High School and she has been attending the MUNs since 2018. She is currently the Deputy Secretary General of SOBILMUN.

The United Nations Conference on Trade and Development committee is based on achieving 17 Sustainable Development Goals by 2030. Our committee will mainly focus on Harnessing the Blockchain for Sustainable Development and Environmental Sustainability in the Fashion Industry. It is more than obvious that agenda items are more than challenging, however, with the right research, all delegates may execute their duties respectfully.

We especially thank our honorable academic assistants Hena Gökkaya and Zeynep Şayin during the preparation period. Without them, it won't be possible to fetch up this study guide.

We tried to serve you everything you will need in order to get ready for the debates so please read the guide carefully. If you have any further questions or points, please do not hesitate to share them with us via our email addresses, mehmetpolat0018@gmail.com and adastuna04@gmail.com

We trust the distinguished delegates of our committee in their preparation and their ability to deal with the agenda. We are looking forward to meeting you all and having a great time.

Best regards,

Mehmet Polat & Ada Su Tuna

UNCTAD

The UN Trade and Development Committee supports developing countries to access the benefits of a globalized economy more fairly and effectively. And we help equip them to deal with the potential drawbacks of greater economic integration. To do this, it provides analysis, facilitates consensus-building, and offers technical assistance. This helps them to use trade, investment, finance, and technology as vehicles for inclusive and sustainable development.

Working at the national, regional, and global levels, our efforts help countries to:

- Comprehend options to address macro-level development challenges
- Achieve beneficial integration into the international trading system
- Diversify economies to make them less dependent on commodities
- Limit their exposure to financial volatility and debt
- Attract investment and make it more development-friendly
- Increase access to digital technologies
- Promote entrepreneurship and innovation
- Help local firms move up value chains
- Speed up the flow of goods across borders
- Protect consumers from abuse
- Curb regulations that stifle competition
- Adapt to climate change and use natural resources more effectively

Together with other UN departments and agencies, it measures progress by the Sustainable Development Goals, as set out in Agenda 2030.

It also supports the implementation of Financing for Development, as mandated by the global community in the 2015 Addis Ababa Agenda, together with four other major institutional stakeholders: the World Bank, the International Monetary Fund, the

World Trade Organization, and the United Nations Development Programme.

ITEM I : Harnessing the Blockchain for Sustainable Development

Understanding the Concept of Blockchain

After the release of "Bitcoin: A Peer-to-Peer Electronic Cash System" by Satoshi Nakamoto, the world welcomed a new technology called the blockchain. As Marco Iansiti describes (2011), a blockchain is a digital database containing information (such as records of financial transactions) that can be simultaneously used and shared within a large decentralized, publicly accessible network. The

first blockchain-related information (except a 9-page pdf which was published by Sathoshi Nakamoto) is from a Twitter user named "Halfin" on 11 January 2009. In mentioned date, the first Bitcoin[1] transfer was made. So, it strengthens the allegations about "Halfin" being the "anonymous" Sathoshi Nakamoto. On the other hand, blockchain technology (specially Bitcoin) provides a decentralized finance system that cannot be regulated by the government or any authority. In that sense, blockchain technology itself has numerous benefits in achieving UN Social Development Goals, establishing decentralized finance systems and many more.

In order to understand the concept of blockchain, we have to consider the facts that why it exists. It's no coincidence that blockchain technology was released during the 2009 mortgage crisis. Blockchain technology and Bitcoin criticize unlimited money supply. Sathoshi Nakamoto (2009) discusses that unlimited money supply will deepen the economic crisis and inflation is a "hidden tax". Same author supports since Bitcoin has limited supply (21 million); it cannot be affected by inflation.

In economics, there are two kinds of money types: Soft Money and Hard Money. Soft money stands for unlimited supplied and only can be printed by central banks such as but not limited to: FED, ECB, BoE. Hard money stands for limited supplied money, meaning there is a limited amount, so that it is not affected by inflation, such as but not limited to: Gold, Platinum, Silver, Bitcoin. Before the release of Bitcoin, hard money mostly included commodities which are found in nature. So that even if central banks wanted, they cannot produce more gold that it already had in the world.

So How Does It Works

For nearly two decades, all websites, applications, passwords, usernames and all other variables are stored in enormous databases which makes it *centralized*. Meaning that it can be regulated or changed by some authority. This authority might be the government itself or it can be a company.

In basic terms, blockchain technology (like its name) comes from a chain of blocks. Each block contains three variables: Data, Hash, Hash of the previous block. The first block is a little bit special because it cannot contain the previous hash. The previous hash input of the first block is 0 meaning it is the "Genesis Block". So, if you transfer some bitcoin, the blockchain system automatically checks the previous blocks. If there is any mistake, the transaction will be invalid. Meaning it is nearly impossible to hack the blockchain system.

[1] First cryptocurrency which was published with "Bitcoin: A Peer-to-Peer Electronic Cash System" pdf

In other terms if you transfer some bitcoin between two wallets, it requires *bitcoin miners* to confirm the transaction. Bitcoin mining is similar to a notary system who checks whether the transaction is legit or not. In the blockchain system, transaction needs a transaction fee to confirm a transaction. Transaction fee is basically energy required to transfer a certain amount of bitcoin. The transaction fee is determined by hash rate. All the transaction fees are distributed to bitcoin miners. In every 210.000 block (approximately 4 years), the mining reward of bitcoin will halve itself. In order to get the same reward in (US Dollar terms), bitcoin has to double its value against USD.

Blockchain provides us anonymity and transparency. Meaning anyone may check your bitcoin wallet and see all the transactions you made, but they cannot know whose wallet it is. For example, if we check the "661420ebf2cb64b5b0e59bbb6ce06c2d227bba7c51b472122d91043910cd5dac" hash, we can see which wallet it is coming from and which is the target wallet. But we cannot know who received or who sent. The anonymity and transparency will assist companies in supply chain and IOT based applications.

History of Blockchain

The Bitcoin technology first released in 2009 but before that, there was numerous research regarding the blockchain data system. In 1991, Stuart Haber and W Scott Stornetta came up with the idea of blockchain for the first time. Later on, Stefan Konst published his theory of cryptographic secured chains, plus ideas for implementation. After that, Satoshi Nakamoto published his article "Bitcoin: A Peer-to-Peer Electronic Cash System". Even though Stuart Haber and W Scott Stornetta mentioned blockchain technology, the theory was not about digital money.

Bitcoin value against the US Dollar is relatively volatile and blockchain technology is extremely complicated compared to other commodities and investment instruments. In the first halving era, bitcoin was mostly used in illegal activities which created a backlash through bitcoin and cryptocurrencies. In 2013 March, Bitcoin reached 100$ for the first time and reached 1000$ in 2013 November. After that drastic increase in price, bitcoin was started to draw attention from investors

and mostly from forex traders.

Bitcoin price against the US Dollar is generally described with cycles. One whole cycle includes one *bull run* and one *bear market*. In economic terms "Bullish" stands for increase in volume and price, "Bearish" stands for decrease in price and volume. Before 2020-2021 bull run, the total market cap of all cryptocurrencies cannot provide a stable market structure. Even though, current total market cap (2022) is nearly 1.2 trillion US dollars, most of trading authorities still counting cryptocurrency market as 7-Risk (highest) investment instrument. For example, in the 2017 bull run the volume of trade is not capable for stable market structure, in the bear market we faced with 83% loss. The high volatility diminishes the trust of investors either long or short term.

On the other hand, since the blockchain system of bitcoin is fully open source, software developers are eager to shift their profession to the blockchain research system. One being Vitalik Buterin who is Founder of Ethereum and ERC20 blockchain. Unlike Bitcoin, Ethereum provides smart contracts. Smart contracts are first used in 1997 by Nick Szabo. The idea of smart contract is quite similar to contracts in real world. But the big difference is that smart contracts provide trust of the blockchain. Meaning it cannot be changed or edited.

Usage of Blockchain

Despite the fact that blockchain technology is quite new, there are numerous sectors that started to adapt. For example, many big companies started to hold cryptocurrencies in their investment

portfolio. Some companies are accepting bitcoin as payment method. Besides that, blockchain technology is much more than De-Fi[2]. In that sense, blockchain technology can be used in tracking supply chains and in IOT technology.

Establishing Blockchain-based Supply Chains to Achieve SDGs

In order to provide transparency in any and all supply chains, companies should be transparent in raw materials, storage and distribution. But in any sectors, companies might prefer to hide their supply chains[3] due to unpleasant condition of storage or transportation. With blockchain technology (thanks to its decentralized storage systems and nearly unhackable block technology), consumers might reach the *final products'* raw material, storage, transportation status with just one click. Thus, development of blockchain may help constructing transparent supply chains backed with better quality products.

But constructing blockchain-backed supply chains might be challenging. For instance, nearly 63% of the world population is using the internet[4]. But there is only 68 million blockchain wallet owners in the world which is approximately 0.71% of the whole population[5]. It is more than obvious that companies would not prefer to construct pricey blockchain-based supply chains which will appeal to 0.71% of the world. Since blockchain technology is quite complicated to understand and challenging to build projects, the blockchain-based supply chains require time to be integrated into big companies.

Other than that, blockchain-based supply chains may provide fair trade among raw material producers. Since any and all users of the blockchain are able to see whole transactions, raw material producers can see each other's prices and re-sign their deals. In the future, it might boost the wellbeing of the raw material producers, especially farmers. According to Zipporah Musau (2018), only 4% of African youth population are able to enter graduate or postgraduate education however in Latin America it is 36%[6]. The main problem with lack of education in Africa is because of insufficient

[2] Decentralized Finance

[3] Maitri Thakur, Guro Møen Tveit, Geir Vevle, Tufan Yurt, A framework for traceability of hides for improved supply chain coordination, Computers and Electronics in Agriculture (2020)

[4] *Digital around the world - datareportal – global digital insights*. DataReportal. (n.d.). Retrieved May 22, 2022, from https://datareportal.com/global-digital-overview#:~:text=A%20total%20of%205%20billion,12%20months%20to%20April%202022.

[5] *45 blockchain statistics that will make you think*. Fortunly. (n.d.). Retrieved May 22, 2022, from https://fortunly.com/statistics/blockchain-statistics/

[6] United Nations. (n.d.). *Africa grapples with huge disparities in Education | Africa Renewal*. United Nations. Retrieved May 25, 2022, from https://www.un.org/africarenewal/magazine/december-2017-march-2018/africa-grapples-huge-disparities-education#:~:text=Africa's%20current%20primary%20school%20enrolment,UNESCO)%2C%20which%20is%20tasked%20with

economic structure of household members. Considering that most of the African continents' income relies on raw material production and farming, blockchain based supply chains will improve its economic well-being.

Complex Structure of Internet of Things (IOT) and its Usage in Achieving SDGs

From the beginning of human nature, human ancestors tried to facilitate their daily life. Invention of spear for protection and hunting, wheel for transportation, telegraph for communication and much more. After the invention of steam-powered machines, electricity and the internet, engineers focused on automation systems such as Artificial Intelligence and IOT. As Gillis (2022) defines, internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction[7]. With that being said, IOT systems may help us to achieve United Nations SDGs by increasing the productivity, decreasing the workload and total cost. In order to exemplify, farmers might use IOT in order to water their plants automatically when the moisture level decreases in the soil. It will decrease the workload of farmers and increase the quality of the products. In that sense, IOT systems can help us in order to achieve United Nations Sustainable Development Goals.

In order to understand the complex structure of IOT devices, it is beneficial to learn its history.

The very first IOT device was a smart *toaster* which was invented in 1990. One year later, Cambridge University students used a web camera in order to check if there is any coffee in the coffee pot. The web camera will send the coffee pot picture to a local computer every 3 minutes so everyone will know if there is any coffee or not. This basic structure led to modern IOT devices that we and companies use globally. We can witness numerous IOT based projects which are built in blockchain technology. Pioneer IOT blockchain projects are such as but not limited to: Helium, IOTA.

[7] Gillis, A. S. (2022, March 4). *What is IOT (internet of things) and how does it work? - definition from techtarget.com*. IoT Agenda. Retrieved May 26, 2022, from https://www.techtarget.com/iotagenda/definition/Internet-of-Things-IoT#:~:text=The%20internet%20of%20things%2C%20or,human%2Dto%2Dcomputer%20interaction.

Why to Use Blockchain In IOT

One of the main problem in IOT technology is safety. In case of a cyber-attack, fully automated IOT systems might fail to execute their tasks and may be permanently damaged. In that sense, blockchain developers are working on blockchain backed IOT servers. With the help of blockchain technology, IOT devices can communicate with each other in a faster and safer way. Other than that, blockchain systems provide fully transparent and fully anonymous usage. Like it is mentioned before, every component of blockchain is fully public but it is nonsense if you do not know what you are looking for. Random letters and random numbers won't mean anything for you if you are not checking your own wallet. On the other hand, blockchain system offers real time tracking option. Meaning you can always check your transactions status. Furthermore, in IOT systems, blockchain is used as server side of the IOT applications which is decentralized. This advantage protects systems against DDoS[8] attacks. DDoS attacks forces the system to execute an outrageous number of tasks in short time period which will cause total failure. Since several DDoS attacks has been executed in multiple blockchains, supporting the idea of "Blockchain systems are totally immune to DDoS attacks" might be incorrect. But arguably decentralized blockchain systems are safer than centralized physical servers.

Drawbacks and Critics

Every new technology or invention faces numerous critics. So blockchain does too. Since blockchain itself has a complex structure due to its sophisticated code and math background, society struggles to understand the main concept of it. It is no surprise that in the first halving era, bitcoin investors are mainly software developers or cryptographs. But with time, it is obvious that everyone knows what bitcoin is. In that sense, blockchain technology faces numerous drawbacks and critics.

Speculative Market Structure

In bear and bull markets, it is obvious that bitcoin has volatile price actions. For example, after the 2017 bull run, bitcoin dropped approximately 85%. Furthermore, in 2021 May, Elon Musk announced that Tesla won't be accepting Bitcoin as a payment method. After that announcement, Bitcoin dropped nearly 50%. Those types of speculations decrease the trust of investors in blockchain. Investors itself might not be the main drawback for achieving SDGs but it is obvious that decrease in the public trust leads to decreased money flow in blockchain by governments or private sector.

[8] abbreviation for distributed denial of service: an occasion when a computer network or website is intentionally prevented from working correctly, by a very large number of users sending data at the same time:

Other than that, (thanks to transparency of blockchain) everyone can see the total amount of bitcoin in every wallet. The top 0.01% of bitcoin holders are holding approximately 41% of the total amount[9]. In economic terms, if we want a healthy market structure, it is better for the commodity to be distributed than gathered. Gathering enormous quantities of a commodity causes less volume in the market and leads to fear.

What If They Just Disappear?

As Binance Academy (2022) defines, A rug pull in the crypto industry is when a development team suddenly abandons a project and sells or removes all its liquidity. The name comes from the phrase to pull the rug out from under (someone), meaning to withdraw support unexpectedly. Meaning that your investment in that specific currency is now worth 0$. There were numerous *scam projects* that baited their investors and stole billions of dollars. It is more than obvious that blockchain based scam projects are more likely to fall into than any other projects. In order to achieve SDGs, governments should act urgently in order to regulate the scam projects.

Its Not Possible to Force Every Component of the Economy to Use Blockchain

Most of the conservative investors support the idea of "Blockchain is too complex for society. Therefore, using blockchain based supply chains or IOT is not possible for the short term". Considering the popularity of the internet compared to 1983 (official birthday of the internet) to 2022 (now) is more than obvious. In the 1990s most of the journalists were arguing about how complex the internet is and it will die eventually. Considering the fact that the internet is necessary in the modern era, it is possible that blockchain based IOT projects and supply chains might be essential.

ITEM II : Environmental Sustainability on Fashion Industry

Environmental Sustainability on Fashion Industry

As the environmental issues caused by mass production started to increase, the idea of protecting the planet and the resources has started to spread. The term environmental sustainability is used to describe the situation and it is defined as responsibly interacting with the planet to maintain natural resources and avoid jeopardizing the ability for future generations to meet their needs. The idea

[9] Explorer, B., & List, B. (2022). Top 100 Richest Bitcoin Addresses and Bitcoin distribution. Retrieved 28 May 2022, from https://bitinfocharts.com/top-100-richest-bitcoin-addresses.html

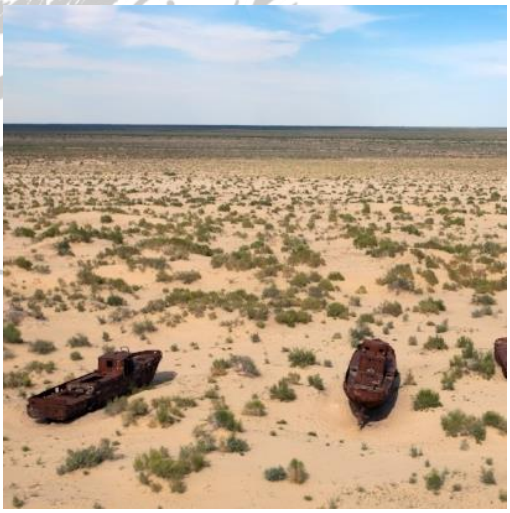
argues that the resources should be protected in order to pass on to the further generations and it aims to reduce the harm to the environment.

A variety of industries started to adapt the idea to their policies during the process of production and marketing, to both reduce the negative impact on the environment and attract the customers' attention. Fashion industry is one of the most common industries that uses the idea for plenty of reasons. Many different brands of fast fashion and luxury fashion try to implement the idea by announcing new projects each season. There are other organizations as well that support the idea.

The impact of Fashion Industry on the Environment

Being a $2.5 trillion-dollar industry, the fashion industry has an underestimated impact on international development. It is an essential part of the global economy and employs over 75 million people worldwide. It is also the world's third-largest manufacturing sector after the automobile and technology industries. However, it is one of the industries that exploit the natural resources of the states the most and the second largest polluter in the world just after the oil industry.

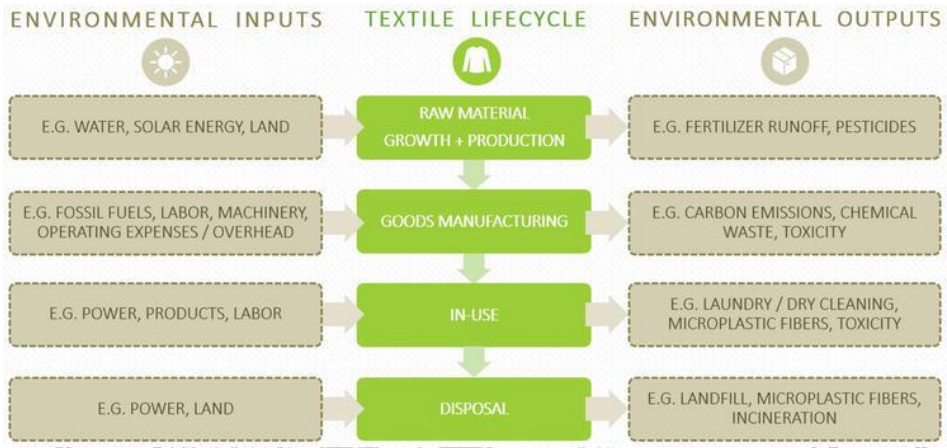
According to the UNECE's report (2018), the Fashion Industry is the second highest user of water worldwide, producing 20 percent of global water waste. One of the major source of water contamination is the use of fertilizers for cotton production, which heavily pollutes runoff waters and evaporation waters. Up to 20,000 liters of water are needed to produce just 1kg of cotton. The production of one cotton shirt requires 2700 Litres – the amount a person drinks in 2.5 years. This generates tremendous pressure on this precious resource, already scarce, and has dramatic ecological consequences such as the desertification of the Aral Sea, where cotton production has entirely drained the water. 10 percent of the global carbon emissions are emitted by the apparel industry and cotton farming is responsible for 24 percent of insecticides and 11 percent of pesticides despite using only 3 percent of the world's arable land.



In most of the countries in which garments are produced, untreated toxic wastewaters from textile factories are dumped directly into the rivers. Wastewater contains toxic substances such as lead, mercury, and arsenic, among others. These are extremely harmful to the aquatic life and the health of millions of people living by those river banks. The contamination also reaches the sea and eventually spreads around the globe. In Bangladesh, 22.000 toxic waste is dumped into rivers by tanneries. 200.000 tons of dyes are lost to effluents every year as well.

The microfiber problem is one of the issues that is caused by the fashion industry. Every time a synthetic garment (polyester, nylon, etc) is washed, about 700.000 individual microfibers are released

into the water, making their way into the oceans. It has been proven that the small aquatic organisms ingest those microfibers. These are then eaten by small fish which are later eaten by bigger fish, introducing plastic in the food chain and it affects human beings directly. It could lead to health effects including reproductive problems, cancer, and DNA damage.



(input and the output of the fashion industry on the environment)

According to The World Bank, at this pace, the fashion industry's greenhouse gas emissions will surge more than 50 % by 2030. If demographic and lifestyle patterns continue as they are now, global consumption of apparel will rise from 62 million metric tons in 2019 to 102 million tons in 10 years.

Understanding the term Sustainability

Sustainability is the ability to maintain or support a process continuously over time. It is defined as meeting our own needs without compromising the ability of future generations to meet their own needs. It is possible to categorize and evaluate sustainability under three dimensions; environmental, economic and social sustainability.

1. Environmental Sustainability

The concept of "environmental sustainability" adds greater emphasis on the life support systems, such as the atmosphere or soil, that must be maintained for economic production or human life to even occur. In contrast, social sustainability focuses on the human effects of economic systems, and the category includes attempts to eradicate poverty and hunger, as well as to combat inequality. It

focuses on maintaining ecological integrity,balance while keeping the usage of natural resources under control so that don't lose the ability to replenish themselves.

2. Economic Sustainability

Economic sustainability aims for a world where anyone and everyone can have access to enough resources that they require in order to survive. The concept of "economic sustainability" focuses on conserving the natural resources that provide physical inputs for economic production, including both renewable and exhaustible inputs. A business model for sustainability helps describing, analyzing, managing and communicating (i) a company's sustainable value proposition to its customers, and all other stakeholders, (ii) how it creates and delivers this value, (iii) and how it captures economic value while maintaining or regenerating natural, social, and economic capital beyond its organizational boundaries.

3. Social Sustainability

It focuses on keeping people,their families and communities healthy and secure.
Key concepts to illustrate the meaning of sustainability include: Choices matter (in other words: "It is not possible to sustain everything, everywhere, forever."); sustainability is a normative concept (this means sustainability is connected to "what we see as desirable"); sustainability is a fuzzy or vague concept; scale matters, in both space and time; place matters; systems thinking is an organizing concept; limits exist (see planetary boundaries); sustainability is interconnected with other essential concepts (namely resilience, adaptive capacity, and vulnerability); change is an essential consideration and challenge for sustainability.

History of Fashion Sustainability in Fashion Industry

Sustainable fashion was first introduced into contemporary culture by the hippies, who prefer locally-grown, handmade, and pesticide-free products. Second-hand clothing was also worn by hippies, rejecting the mass production culture that dominated America from the 1950s. The hippie fashion movement was a counterculture to social norms, such as mass consumerism, materialism, and capitalism.

The World Fair Trade Organization (WFTO) was created with the purpose of enabling economically marginalized producers and farmers alike to improve their livelihoods and communities. The association of 401 organizations worldwide is also committed to fight poverty, climate change, gender inequality and injustice.

The Clean Clothes Campaign (CCC) was founded in the Netherlands, the largest alliance of its kind in the industry. The CCC is driven by their mission that everyone working in the global fashion and sportswear industry should be able to enjoy, exercise, defend, and improve their human rights at work and in the community.

In 1997, The Global Reporting Initiative (GRI), an international non-profit organization was founded. Their mission is to empower organizations to be transparent, and make decisions that create social, environmental, and economic benefits for everyone. Their GRI Standards serve as guidelines that define the principles for sustainability reporting, leading to more uniform and efficient reports.

The term "slow fashion" was coined by Kate Fletcher, who is a professor of Sustainability, Design, and Fashion at the University of the Arts London's Centre for Sustainable Fashion. Fletcher and several authors before her saw a need for a slower pace in the fashion industry, inspired by ideologies of the slow food phenomenon.

Dame Ellen MacArthur launched the Ellen MacArthur Foundation, which has popularized the idea of a circular economy, in addition to partnering with several fashion retail giants to accelerate the transition of our traditional linear/throwaway economy to a circular one.

The EcoChic Fashion Show was organized to conclude the United Nations Conference on Trade and Development (UNCTAD), calling for ethical action by producers and consumers against the rapid loss of the world's species as part of the UN 2010 International Year of Biodiversity. The show celebrated sustainable fashion designs from renowned designers such as Diane Von Furstenburg, Bora Aksu, Thakoon etc, highlighting the possibility of avoiding environmentally damaging processes in fashion production.

The Detox My Fashion campaign by Greenpeace, was launched to challenge major clothing giants to take responsibility for pollution caused by their supply chains, as well as to secure commitment from them to eliminate discharges or hazardous chemicals by 2020. The campaign paid off. In a report by Greenpeace in 2018, all 80 companies that participated in the campaign achieved significant progress and are well on their way in the detox process

The Ethical Fashion Forum launches SOURCE, a one-stop-shop database that promotes sustainable firms, tools, and services for the fashion and textile industries. The platform is regularly updated, so businesses and manufacturers can be assured that the services obtained are sustainable according to the latest standards of ethical and sustainable practice.

Ultimately, human ingenuity and perseverance spurred some astounding breakthroughs towards a cleaner, brighter future. These milestones aren't mere silver linings, but are major steps towards solving

humanity's greatest challenges and holistically improving our quality of life. Sustainability isn't just about the environment; it transcends social, economical, and cultural levels.

2020 was a year of revelation and awakening within the fashion industry, with many taking initiative, finding communities, and setting the stage for significant change despite a challenging year. Last year confirms our resilience and reminds us that we can bring positive changes in the world despite our circumstances. It is high time that sustainability becomes more than just a marketing tool, but encompasses an integral part of society and the economy.

Understanding Fast Fashion and Luxury Fashion

Up until the mid-twentieth century, the fashion industry ran on four seasons a year: fall, winter, spring, and summer. Designers would work many months ahead to plan for each season and predict the styles they believed customers would want. This method, although more methodical than fashion today, took away agency from the wearers. Before fashion became accessible to the masses, it was prescribed to high society, and there were rules to be followed. It wasn't until the 1960s that a well-timed marketing campaign for paper clothes proved consumers were ready for the fast fashion trend. This resulted in the fashion industry quickening its pace and lowering costs. The fashion industry became a part of mass production and this created the term fast fashion.

Fast fashion is a design, manufacturing, and marketing method focused on rapidly producing high volumes of clothing. Fast fashion garment production leverages trend replication and low-quality materials (like synthetic fabrics) in order to bring inexpensive styles to the end consumer. Faster changing trends means that producers are under pressure to manufacture clothes more and more rapidly. Factories are expected to produce new lines with only a couple of month's notice, meaning that their workload - and therefore the amount of employment they can offer to workers - is unpredictable and insecure.

Luxury fashion, on the other hand, is characterized by a high level of quality, exclusivity and high price tags. It is a given that luxury brands will be of high quality, but that can also be achieved by premium brands, which provide high quality and seek to sell to everyone who can afford it. Luxury brands do not seek to serve the masses, nor do they want their products to be readily available, even at high prices. Scarcity is key when it comes to luxury marketing, and this is what makes it aspirational in the first place.

a) Sustainability: Fast & Luxury Fashion

When it comes to sustainability and considering the different concepts of the fashion industry, it is possible to observe that the definition of fast fashion and the term sustainability contradicts with each other. Fash fashion evolves around the idea of fast production and rapid waste, whereas

sustainability aims exactly opposite of that. Fast fashion is based upon producing new goods each season while sustainability argues continuity.

However, even though the terms contradict, the fast fashion brands adapt the term in their projects. Many initiatives of these brands aim to reduce the impact on the environment by recycling and reusing. Some brands also share a report that is called 'Sustainability Report' with the aim of attracting attention and providing reliability. It is a report that represents data and strategies used during the process of production in different industries and it is generally shared annually. Even though the detailed reports have been increasing in the last few years, the report is shared by the company itself, which also causes uncertainty. The reports are shared through the websites of the companies and are not controlled by authorities, which means that the consumers can not always be sure about the values given in the reports. That leads to the term greenwashing.

Greenwashing is a term that can be explained as when a company purports to be environmentally conscious for marketing purposes but actually isn't making any notable sustainability efforts. It can also refer to when companies deflect attention away from the environmental harm they cause or when they cast themselves as allies in the fight for climate justice when, in reality, they are not. A recent analysis of advertising related to the COP26 climate summit found rampant greenwashing by companies on social media platforms.

Unlike fast fashion, luxury fashion is particularly vulnerable to consumer scrutiny because luxury consumption may be considered less essential to daily life. It is based upon the ideology of a unique piece being worn by further generations, which is a closer aspect compared to fast fashion.

On the other hand, luxury fashion firms have been criticized for damaging biodiversity levels in the environment, generating significant waste and pollution from manufacturing, destroying unsold stock as a marketing tactic, engagingin animal abuse when testing new materials and the exploitation of employees,especially factory workers in developing countries. Luxury fashion has also been shamed for shunning the circular economy where production is based on planned reconstruction and regeneration and the use of recycled and reused materials. However, once the domain of only the wealthy, luxury goods and services are now accessible to younger consumers and all social classes, a process described as the democratization of luxury.

Sustainability Projects & Campaigns

As mentioned above, many fashion brands try to adapt sustainability to their production process and they come up with a variety of projects. These projects can be categorized in two types, front-end and back-end approach.

Front-end approaches are the sustainable initiatives at the beginning stages of the textile product life cycle, such as in the raw material sourcing and design and development processes. So, for example, a front-end sustainable initiative could be the decision to use "low environmental impact" textile fibers as the raw materials for the textile goods being produced. A front-end sustainable initiative

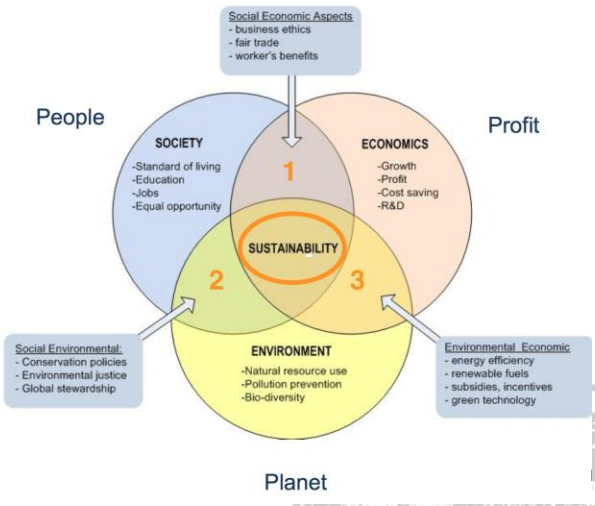
could also be manifested in the design and development process, for example, by utilizing digital tools to minimize the need for physical prototype samples or by training designers to adopt an eco-conscious mindset into their creations. With cotton, albeit a natural cellulosic fiber, bearing a hefty water footprint in the harvesting process, and with petrochemical-based synthetic fibers such as polyester and nylon bearing a hefty carbon footprint in the manufacturing process, regenerated cellulosic fibers can prove advantageous. They have the benefit of being biodegradable and derived from natural renewable resources.

Back-end approaches are the sustainability initiatives which aim to minimize the environmental impact of the product and processes at the end of the textile product life cycle. A prime example of this is exemplified in the now widespread initiatives of post-consumer textile recycling. The reason recycled textiles have become so prevalent as a strategy to minimize environmental impact is not only because of the exponential supply of textile waste driven by intensified clothing consumption but more strategically because research has shown that the fiber production stage (extraction and processing) of the textile product life cycle has the greatest environmental impact in terms of water and carbon footprint.

Over the past decade, there have been many encouraging advancements which have expanded back-end approach sustainability initiatives such as textile recycling. However, there remain limitations in the current textile recycling technologies. For example, due to the need for comprehensive shredding in breaking down post-consumer textile waste, the tensile strength of recycled cotton yarns is less than that of virgin cotton. Furthermore, as recycled yarns are composed of a mixture of fibers which may have undergone different dyeing and finishing processes in their last life, even after cleaning and bleaching processes, they may not be able to achieve the same hand-feel and color vibrancy possible with virgin fibers, therefore limiting its design versatility. These are some examples of limitations which could be preventing a greater adoption of textile recycling in the industry.

Like many other industries, all of the sustainable projects are aimed to be implemented with a business model called Triple-Bottom Line. It is a concept that can be broken down into three P's, which is People, Profit and Planet. This concept aims to maximize the profit while increasing the welfare of people and reduce the harm as much as possible to the environment. The theory also says that if a company focuses on finances only and does not examine how it interacts socially, it is not able to see the whole picture and therefore cannot account for the full cost of doing business. In the implementation process, there are five stages for a company to reach success that can be aligned as; Pre-Compliance,

Compliance, Beyond Compliance, Integrated Strategy, Purpose and Passion. However, many fashion retailers struggle with the steps because of the financial gains.



There are also campaigns that are formed by different NGOs (non-governmental organizations). These campaigns, spearheaded by sustainability-driven coalitions, are mobilizing companies across the fashion industry, collectively toward adopting sustainable materials and practices throughout their design, development, and supply chains, and have already garnered formal commitments from key players in the fashion industry which represent a sizable portion of the market. The "2020 Circular Fashion System Commitment," was one of the initiatives that was introduced by the Global Fashion Agenda. The four outlined immediate action points were:

1) Implementing design strategies for cyclability
2) Increasing the volume of used garments and footwear collected
3) Increasing the volume of used garments and footwear resold
4) Increasing the share of garments and footwear made from recycled post-consumer textile fibers.

The "Sustainable Clothing Action Plan (SCAP) 2020 Commitment," introduced by the Waste and Resources Action Programme (WRAP) was set as well, which focused upon a 15% reduction in carbon, water, and waste in the clothing industry by :

1) Reinventing how clothes are designed and produced
2) Rethinking how we value clothing by extending life of clothes
3) Redefining what is possible through reuse and recycling

As mentioned above, the IGOs (intergovernmental organizations) also take steps about the implementation of sustainability in the fashion industry. The most important of them can be counted as the United Nations Alliance for Sustainable Fashion is an initiative of United Nations agencies and allied organizations designed to contribute to the Sustainable Development Goals through coordinated action in the fashion sector. Specifically, the Alliance works to support coordination between UN bodies working in fashion and promoting projects and policies that ensure that the fashion value chain contributes to the achievement of the Sustainable Development Goals' targets. Fashion, as understood by the Alliance, includes clothing, leather and footwear, made from textiles and related goods. The scope of the Alliance's work extends from the production of raw materials and the manufacturing of

garments, accessories and footwear, to their distribution, consumption, and disposal. The alliance is an umbrella group composed of several UN and partner agencies, including UNEP, the International Labor Organization and the World Bank Group. It has been helping the fashion sector to contribute to the Sustainable Development Goals, humanity's blueprint for a better future, since March 2019. For instance, in Kenya, UNEP collaborated with the International Trade Center to provide policy recommendations for a more circular textile sector. Kenyan small- and medium-sized enterprises are now benefiting from technical support to innovate their business models and measure their product environmental footprint.

UNECE also launched 'The Sustainability Pledge' for measurable and verifiable sustainability in the garment and footwear sector. This launch is a Call to Action or 'The Sustainability Pledge', inviting governments, garment and footwear manufacturers and industry stakeholders to pledge to apply this toolkit of measures and take a positive step towards improving the environmental and ethical credentials of the sector.

Usage of the SDGs on the Fashion Industry

In 2015, all United Nations Member States came together to create a "universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030." The 2030 Agenda for Sustainable Development includes 17 Sustainable Development Goals (SDGs) which, together, create a holistic guide to achieving the UN's goals. Many industries including the fashion industry must integrate efforts to protect the environment and the people working throughout supply chains in order to truly be a sustainable industry.

Goals 1-4: No Poverty, Zero Hunger, Good Health and Well-being and Quality Education

These goals aim to end poverty in all its forms everywhere and end hunger, achieve food security and improved nutrition and promote sustainable agriculture, ensure healthy lives and promote well-being for all at all times and inclusive and equitable quality education and promote lifelong learning opportunities for all. Fashion brands must partner with those in their supply chain to improve their quality of life instead of exploiting them for cheap labor. Fair wages, documented hours, and maker well-being programs are essential in evening the playing field between brands and the women who make their clothes.

Goal 5: Gender Equality

Female empowerment is a trendy discussion topic within the fashion industry right now. From the UN council to conglomerate CEOs, everyone wants to be a part of the "right side of history." Unfortunately, the data suggests that many aren't practicing what they preach. The New York Times'

2018 article “Fashion’s Woman Problem” reported that 85% of graduating fashion design majors were women. Yet, senior management continues to be overwhelmingly controlled by men.

Goals 6 & 7: Clean Water and Sanitation and Affordable and Clean Energy

The aim of these goals are to ensure availability and sustainable management of water and sanitation for all, access to affordable, reliable, sustainable and modern energy for all, provide availability and sustainable management of water and sanitation for all and have access to affordable, reliable, sustainable and modern energy for all. Currently, the fashion industry fails to manage the usage of water, and therefore is not capable of managing with the aim.

Goals 8 & 10: Decent Work and Economic Growth and Reduced Inequalities

The aims of these goals are to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all and reduce inequality within and among countries. In many industries, but especially in fashion, the wealth disparity between the women making clothing and the corporations selling said clothing is shocking. Companies must bridge the gap and provide garment workers a fair wage.

Goal 9: Industry, Innovation and Infrastructure

This aim focuses upon building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation. Like most modern industries, technology is rapidly progressing within fashion. Human labor continues to be replaced by automation and demand for increased efficiency. In order to combat widespread job loss the industry must commit to training up women from the factory floor to more skilled positions within companies. The fashion industry needs to utilize technology in a way which can grow alongside workers rather than surpassing them. Technological progress is inevitable, but job loss doesn’t have to be.

Goals 11 & 15: Sustainable Cities and Communities and Life on Land

This goal aims to take cities and human settlements inclusive, safe, resilient and sustainable and protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. The environmental consequences the fashion industry has is a handicap throughout the achievement of the goal.

Goal 12: Responsible Consumption and Production

This goal aims to ensure sustainable consumption and production patterns. Both brands producing fashion and customers consuming fashion must acknowledge their roles in causing environmental and human harm. Fashion must take a step back from the oversupply of clothing.

Goal 13: Climate Action

Aiming to take urgent action to combat climate change and its impacts, the sustainability initiatives of companies and organizations follow the goal. However, the fashion industry, like many other carbon-heavy industries, has a detrimental impact on our environment. While imperative for consumers to take proper care of their clothing after purchase, it remains vital for the industry at large to make it easier for individuals to participate in sustainable fashion.

Goal 14: Life Below Water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development. The water waste and the microfiber problem can be given an example to the neglection of this aim in the fashion industry.

Goal 16: Peace, Justice and Strong Institutions

This aim works upon promoting peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable and inclusive institutions at all levels. Being an employer for 75 million worldwide, the fashion industry is open to climate injustice, labor violations, and gender inequality.

Goal 17: Partnerships for the Goals

The goal works upon strengthening the means of implementation and revitalizing the global partnership for sustainable development. In order to take strong steps on sustainability, the fashion industry should collaborate with other organizations and industries as well.

Conclusion

Overall, the fashion industry is one of the industries that causes the most harm to the environment during the process of production. With the term sustainability starting to arise, the fashion brands started to adapt the term to their production. The initiatives were supported by other NGOs and IGOs as well. Even with all this experimentation and supposed “innovation” in the fashion industry over the past 25 years have failed to lessen its planetary impact. There is no source found about evaluating a certain impact of the initiatives on the environment due to a variety of reasons.

Greenwashing is one of the reasons why the impact can not be measured because of the unreliability problem. How far the companies follow the steps provided by the IGOs is another issue.

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