

Reasons and analysis of Coca-Cola's greenwashing

Zishen Lin^{1, *}

¹University of Shanghai for science and technology, Shanghai, China

*Corresponding author: SBC-20-7085@sbc.usst.edu.cn

Abstract. As time goes on, businesses have a huge impact on the environment, with the overuse of available resources and the release of pollutants being global issues. People are also becoming more and more concerned about the environment, which means that some people will spend extra money to support environmentally friendly products to protect the environment and reduce pollution. This is where companies come in to advertise their products under the banner of being environmentally friendly. This paper discusses whether a series of actions by Coca-Cola, one of the world's biggest plastic polluters and in recent years, has also announced a number of sustainable visions during this period, by analysing the impact of Coca-Cola on human health and the environmental impact of the plastic bottles and water pollution produced by Coca-Cola, and taking into account the sustainable development strategies implemented by Coca-Cola in recent years and the results of their implementation, it is concluded that Coca-Cola's sustainable strategy is greenwashing.

Keywords: Coca-Cola, greenwashing, water contamination, plastic pollution.

1. Introduction

Coca-Cola is a long-established multinational company that has been loved by people around the world since 1886, but underneath its rapid growth and active corporate social responsibility is one of the world's biggest plastic polluters, and not only does its increasing plastic production year after year have a huge impact on the global environment, but water pollution from its factories also has a deep impact on local people [1,2]. In addition, many of its products are controversial in that they claim to be healthy beverages that can even be quoted by healthy people. Even though many environmental groups have sued Coca-Cola for their actions, they have not been taken seriously.

The main objective of this paper is to examine whether the sustainable development strategies implemented by Coca-Cola in recent years are greenwashing. The paper begins with an introduction to Coca-Cola and the global pollution situation, then analyses whether Coca-Cola is greenwashing and its impact on individuals, the environment and society through health, plastic pollution and water pollution, and concludes that what Coca-Cola is doing is greenwashing.

2. Industry and company status

2.1 Introduction to Coca-Cola

The largest beverage corporation in the world, Coca-Cola was founded in 1886 and has its headquarters in Atlanta, Georgia, occupying for two of the top three beverages in the world. Its products are available in over 200 countries worldwide. As a major company known around the world, Coca-Cola has a responsibility to people's health and the environment. Coca-Cola has 200 brands worldwide and thanks to the excellent marketing of The Coca-Cola Company, its products are available in over 200 countries worldwide [3, 4]. While being the largest beverage company in the world they also face many obstacles with their products being unhealthy and implementing a sustainability strategy that is considered greenwashing.

2.2 The current state of environmental pollution in the world

Plastic pollution has become one of the most pressing issues of the 21st century, and plastic waste is almost everywhere. The situation has been very serious and action needs to be taken as soon as

possible. Plastic waste is even making its way into the sea, where 8g million pieces of plastic waste pollute our waters every day and destroy the habitats of hundreds of species. Today there are approximately 5.25 trillion pieces of plastic waste in the ocean, weighing a total of 269,000 tonnes. Additionally, studies show that the worldwide plastic usage is increasing at an 8% yearly pace, with annual consumption of plastic reaching over 700 million tonnes in 2030 [5]. Plastic bottles are hard to degrade and also can keep in the soil and water bodies for a long time, polluting the land and marine environment. It is estimated that more than 8 million tonnes of plastic are discarded in the oceans each year and it is predictions that by 2050 there will be more plastic in the ocean than fish in the ocean [6]. Plastic is already inevitably present in our daily lives and is becoming a serious social and environmental problem. As the population grows, if left unchecked, plastics will become more and more numerous and will have a greater impact on the environment.

2.3 The Coca-Cola Company Sustainability Status

Coca-Cola's sustainability strategy is divided into 7 components, ESG resource Sustainable Packaging, Water Stewardship, In Our Product, Sustainable Agriculture, Climate Action, Product Quality & Safety [4]. Despite its ongoing sustainability activities, Coca-Cola still receives a lot of criticism from three sources, firstly the unhealthiness of Coca-Cola as a beverage, which contains a lot of sugar leading to obesity and other health problems, and then the carbon footprint of Coca-Cola, with 1L of Coca-Cola creating 346g of carbon dioxide emissions. Finally, there is the issue of plastic bottles, with Coca-Cola being one of the world's largest producers of plastic waste.

In the 136 years since its inception, Coca-Cola has made 34 sustainable contributions and has claimed to collect and recycle 100% of its packaging by 2030, meaning that Coca-Cola will recycle every bottle of beverage packaging they sell. But this policy conflicts with Coca-Cola's behaviour, considering that it is not only the largest beverage firm, but also the world's biggest plastic producer, having been named the world's worst plastic polluter for three years running. It consumes almost 200,000 plastic bottles each minute and generates 2.9 million tonnes of plastic garbage annually [7]. In 2021, Coca-Cola produced 25 billion plastic bottles, more than the previous year. This is why many people criticise Coca-Cola for being greenwashing [2].

3. Why Coca-Cola is greenwashing

3.1 Definition of Greenwashing

Greenwashing is the practice of companies masquerading as environmental friends, attempting to hide their aim of increasing profits while ostensibly claiming environmental responsibility, in order to preserve and expand their markets and influence. Greenwashing is a form of marketing in which companies deceive consumers into believing that their products are environmentally friendly. Unlike green marketing, which is a marketing strategy that responds to the demands of the sustainable development strategy of the times and focuses on protecting the ecological and environmental protection of the earth, companies take environmental protection as the guiding ideology of their business and take consumers' green consumption as the centre and starting point [8, 9]. However, greenwashing is a false or exaggerated propaganda that misleads consumers. According to a survey in 2015 by Nielsen' Global Corporate Sustainability Report that 66% of global consumers are prepared to pay more for items that are more environmentally friendly products, and among millennials, this percentage reaches 72% [10]. Therefore, in order to gain more consumers, companies will package themselves with many seemingly sustainable strategies. Greenwashing will not only mislead consumers, but will also slow down the development of sustainable development activities, leading to damage to the reputation of companies that are actually doing environmental protection, lowering the status of environmentally friendly products in the minds of consumers and causing them to stop paying for environmentally friendly products.

3.2 Coca-Cola's health, water pollution, plastic pollution issues

3.2.1 Health issues

Coca-Cola has been criticised for its health problems. According to expert tests, four main components of Coca-Cola have been found to affect health, the first being caffeine, which according to the list of carcinogens published by IARC, the International Agency for Research on Cancer (IARC) is Group III carcinogen, i.e. a carcinogen which cannot yet be classified, and may lead to caffeine dependence in the event of long-term intake. Caffeine dependence includes addiction and a range of physical and psychological adverse reactions. The second harmful ingredient is carbon dioxide, which is the main ingredient that makes Coca-Cola so enjoyable to drink. Carbon dioxide can always inhibit the bacteria in the drink, but it can also inhibit the beneficial bacteria in the body from working, at the same time. Drinking large amounts of Coca-Cola can easily lead to bloating and even damage to the digestive system. The third harmful ingredient is phosphoric acid, which is a medium to strong acid that affects the acid-base balance of the body and can affect the bones and lead to osteoporosis. Finally, there is the issue of sugar. Coca-Cola gets all its sweetness from sugar, with 10.6 grams of sugar for every 100 ml of Coca-Cola, and 140 calories in a 350 ml bottle. Too much sugar in the drink is absorbed by the body to produce calories, and long-term consumption can lead to obesity and diabetes [11, 12].

3.2.2 Water contamination and waste issues

Coca-Cola's water pollution has two main aspects, the first is water pollution caused by plastic bottles flowing into the water (sea or river etc.) the second is pollution caused by the production process. With 1.9 billion people consuming Coca-Cola products every day, bottling plants need 300,000,000,000L of water per year to produce carbonated drinks to meet consumer demand, and each litre of Coca-Cola requires three litres of water to produce, but 36% of the world's population live in areas where water is scarce, such as India [13]. Coca-Cola built a bottle production plant in Kerala, on the Indian coast, but the excessive use of water in this plant caused a serious water shortage in the area. 65 wells were drilled in an area of 17 hectares, extracting an average of 3,785,410L of groundwater per day, posing a great threat to the livelihood of the villagers and causing damage to the local soil and water environment, which has not been repaired. The Coca-Cola plant was one of the most agriculturally developed areas in India until it was located in the region, but since then agricultural production has deteriorated year on year due to water pollution and abuse. In addition, local villagers have accused Coca-Cola of polluting local water sources by using chemicals in the attack on Coke bottles and discharging them without treatment [14]. Groundwater contamination is not the only problem, as high levels of cadmium, lead and chromium contamination have been detected in sludge from the Coca-Cola factory site. Not only in India, but also in China, the Gansu Cofco Coca-Cola corporation has been accused of fabricating sewage monitoring data to conceal the fact that it was exceeding the requirement, the corporation modified its automatic monitoring system for chemical oxygen demand (COD), causing the COD level to drop by roughly 20 times. In addition to damaging aquatic life and river ecosystems, COD that is over the threshold can also poison humans through the food chain [15].

3.2.3 Plastic pollution issues

Thanks to Coca-Cola's huge global fan base, with revenues of US\$33 billion in 2020 and sales of 1.6 billion bottles per day worldwide [3]. Such a volume of Coke sales generates a huge amount of plastic bottle pollution. Plastic bottles have an impact because there are so many of them, whether they are found on beaches, rivers or other places such as parks, Coca-Cola plastic bottles are found. Coca-Cola has become the world's biggest polluter of plastic while promoting its corporate positioning as a sustainable and environmentally friendly company. Coca-Cola uses roughly 200,000 plastic bottles every minute and creates over 290 million tonnes of plastic annually, or nearly one-fifth of all PET bottle manufacturing worldwide and more than the next three biggest polluters in the world, Nestle, Pepsi and Mondelēz, combined [5]. Break Free From Plastic reports that plastic

produces 108 million tonnes of carbon emissions each year, with Coca-Cola emitting 14.9 million tonnes. 13,834 brands of Coca-Cola plastic were recorded in 51 countries in 2020. The large number of Coca-Cola plastic bottles has a huge impact on the global environment, both on land and in the oceans [16, 17].

3.4 The impact of Coca-Cola's greenwashing behaviour

3.4.1 The impact on individuals

Firstly, for the average individual consumer, greenwashing increases the cost of purchasing the product, as they have to first identify whether the product is one in which greenwashing exists, and the company's additional promotional costs for the product are ultimately borne by the consumer. Secondly, greenwashing discourages consumers from supporting genuinely environmentally friendly products and can lead to a loss of trust in the environmental contribution of other products and therefore to a loss of interest in green products. Finally, greenwashing is not only ineffective but also harmful to consumers' health [18].

3.4.2 The impact on environment

Plastic pollution is a global problem that continues to affect the human condition. Plastic waste typically lingers in nature for 200-500 years and is hard to breakdown, which leads to long-lasting, serious ecological issues. It would take a long time to dispose of plastic waste in landfill, and plastic bottles, etc. being buried in the soil can cause affect the uptake of water and nutrients, resulting in lower crop yields. If animals eat the plastic debris in the soil, it can cause disease, and it can travel down the food chain, eventually harming humans. In recent years, more and more waste plastic has been found in the oceans, and 22 kilograms of plastic were found in the belly of a pregnant sperm whale carcass off the coast of Sardinia, in a stark illustration of the dire impact of plastic on the global environment [19]. Based on an examination of sea salt made in China, the researcher discovered hundreds of microscopic plastic particles each kilogram of salt, which means that consumers would eat around 1,000 plastic particles per year based on the current recommended nutrient levels. Plastic particles are easily absorbed by plankton, shellfish and other marine life and retained in the food chain, ultimately harming humans, and nanoscale plastic fragments can even enter the inside of cells and cause tissue damage [20].

3.4.3 The impact on society and the enterprise itself

For society, greenwashing affects people's attitude towards environmentally friendly products and creates a bad social climate, which is not conducive to the implementation of more environmentally friendly policies by the government or the development of truly environmentally friendly enterprises. Greenwashing has also had a negative impact on society in terms of plastic pollution and water pollution, for example, if people believe companies that use greenwashing to promote themselves as being good for the environment, then plastic pollution and water pollution will become more and more serious. In the face of the global problem of plastic pollution, plastic producing petrochemical plants often dump plastic waste in developing countries, affecting people of colour and low-income countries and societies, and increasing environmental spending in already economically underdeveloped regions, to the detriment of global development [17,19]. For the company itself, while this practice may increase sales in the short term, it is a very foolish move in the long term, as it not only damages the reputation the company has built up over the years, but also exposes it to a large number of lawsuits from environmental groups, like the one Earth Island filed against Coca-Cola, where such public interest groups filed a lawsuit on behalf of consumers to mitigate against illegal practices. If successful, it would effectively prevent Coca-Cola from continuing its greenwashing and serve as a wake-up call to other companies [21].

4. Conclusion

It makes sense to explore the sustainability strategies of large companies like Coca-Cola, as these industry leaders can serve as role models and lead the industry in the right direction. The impact of Coca-Cola's continued failure to reduce its use of plastic is enormous. Coca-Cola has often said that it is avoiding pollution, yet it has nonetheless been using harmful single-use plastic packaging. In other words, Coca-Cola has been working on projects that are cosmetic, and the environmental campaigns and promises it has made are like a form of external public relations. The fact that Coca-Cola produces and uses more plastic year on year and the implementation of Coca-Cola's sustainability strategy is proof enough that it is a greenwashing company. In an era where environmental protection is becoming increasingly important, the plastic pollution and water pollution that Coca-Cola brings with it have different levels of impact on individuals, the environment and society. For individuals, it can reduce enthusiasm for environmentally friendly products, which can be detrimental to the development of environmentally friendly brands. For society the bad culture of greenwashing is not only detrimental to the sale of environmentally friendly products, but also to the sustainable development of society. For the environment, if plastic continues to be used without restraint, it is ultimately human beings who will suffer the consequences.

References

- [1] Hess E. The Coca-Cola Company. SSRN Electronic Journal, 2019.
- [2] Elmore B J. Citizen Coke: The Making of Coca-Cola Capitalism. Blackstone Audio, 2014.
- [3] Chua J Y, Kee D M H, Alhamlan H A, et al. Challenges and Solutions: A Case Study of Coca-Cola Company. *Journal of The Community Development in Asia*, 2020, 3(2): 43–54.
- [4] The Coca-Cola Company. The Coca-Cola Company. 2017. <https://www.coca-colacompany.com/sustainability>.
- [5] MacLeod M, Arp H P H, Tekman M B, et al. The global threat from plastic pollution. *Science*, 2021, 373(6550): 61–65.
- [6] Machuca I. Plastic Pollution. *The Future of Marine Life in a Changing Ocean*, 2020: 115–147.
- [7] Sattarkhanova A. The Four Case Studies on The Effects of Corporate Social Responsibility on Water Pollution: Do Conflicts Affect A Company's CSR Policy?. *International Journal of Engineering Applied Sciences and Technology*, 2021, 5(9): 30-43
- [8] Knight T. Deterring the Green Revolution: Greenwash and the Threat of Green Entry. *Strategic Behavior and the Environment*, 2017, 6(3): 181–203.
- [9] Zhang D. Environmental regulation and firm product quality improvement: How does the greenwashing response?. *International Review of Financial Analysis*, 2022, 80: 102058.
- [10] Nielsen. Consumer-Goods' Brands That Demonstrate Commitment to Sustainability Outperform Those That Don't. Nielsen.com. 2015. <https://www.nielsen.com/eu/en/press-releases/2015/consumer-goods-brands-that-demonstrate-commitment-to-sustainability-outperform/>.
- [11] Diers-Lawson A, Birkholt M, Bruce H L. Killer Coca-Cola vs Pouring on the pounds: Comparing the brand damage potential between negative health messaging and counterbranding strategies, 2015.
- [12] Lavie C J, Laddu D, Arena R, et al. Healthy Weight and Obesity Prevention. *Journal of the American College of Cardiology*, 2018, 72(13): 1506–1531.
- [13] Eriksen M, Lebreton L C M, Carson H S, et al. Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea. *H.G. Dam. PLoS ONE*, 2014, 9(12): e111913.
- [14] Berglund H. Civil society and political protest in India—The case of Coca-Cola in Kerala. *India Review*, 2017, 16(3): 324–343.
- [15] Burnett M, Welford R. Case study: Coca-Cola and water in India: episode 2. *Corporate Social Responsibility and Environmental Management*, 2007, 14(5): 298–304.
- [16] Break Free From Plastic. Break Free From Plastic. 2019. <https://www.breakfreefromplastic.org/>.

- [17] Hakuzimana J. Break Free From Plastics: Environmental Perspectives And Evidence From Rwanda. *Environment & Ecosystem Science*, 2021, 5(1): 27–36.
- [18] Susiari N, Ekonomi F, Bisnis D. Greenwashing: Konsekuensinya Pada Konsumen (Studi Kasus Pada Coca-Cola Dengan Kemasanplantbottle) Gede Suparna (2) (1). 2016, 5(8): 5200–5236.
- [19] K S. Negative Impacts of Plastic Pollution A Major Threat To Our Environment. *Oceanography & Fisheries Open access Journal*, 2018, 8(2).
- [20] Willis K A, Serra-Gonçalves C, Richardson K, et al. Cleaner seas: reducing marine pollution. *Reviews in Fish Biology and Fisheries*, 2021: 1–16.
- [21] Earth Island Institute. www.earthisland.org. <https://www.earthisland.org/>,2021