AALBORG UNIVERSITY
DEPARTMENT OF PLANNING

Shell: A document and Instagram analysis for Greenwashing

A Master's Thesis by:

Alexandra Gkotsi and Aino Pitkänen

Thesis Supervisor: Carla K. Smink

02/06/2023

AALBORG UNIVERSITY

STUDENT REPORT

Department of Planning
Environmental Management and Sustainability Science
Rendsburggade 14
DK-9000 Aalborg
https://www.en.plan.aau.dk

Title:
Shell: A Document and Instagram analysis for Greenwashing

Theme:
Master's Thesis

Project Period:
1st February 2023 - 2nd June 2023

Project Group:
-

Participant(s):

Alexandra Gkotsi
Aino Juulia Pitkänen

Supervisor(s):
Carla Kornelia Smink

Copies: 1

Page Numbers: 97

Date of Completion:
June 2, 2023

Synopsis:

This report's focus is on Shell, as a case study, to detect greenwashing claims during the last decade. This is done by analyzing the company's Sustainability reports 2013-2022 and Instagram posts for 2013-2023, based on the Nemes et al., 2022 framework for categorizing greenwashing claims and the environmental communication theory. From the analysis it is observed, that greenwashing exists in Shell's sustainability reports with 160 greenwashing claims in total, and in Instagram posts with 27 claims. In the 2022 report the lowest number of greenwashing claims (8) is recorded. The predominant greenwashing category is *selective disclosure*, followed by *no proof* and *vagueness*. In addition, the theory was used to provide recommendations to Shell on how to avoid greenwashing. In particular, it was suggested that the company should use more clear and concise language, as well as set up realistic short-term goals to increase the transparency of its reports. Furthermore, Shell should initiate mutual learning and collaboration with its partners to better communicate about its actions. Last, it was recommended to Shell to invite experts to conduct educative seminars for stakeholders in order to increase their environmental literacy and avoid greenwashing.

Preface

This project was written by 2 students in the 4th semester of the Master's program *Environmental Management and Sustainability Science*, in the time period from February 1st to June 2nd, 2023.

This last semester is dedicated to the students' Master's thesis, which focuses on greenwashing in sustainability reports and Instagram posts with Shell as a case study.

The purpose of the report was to create awareness on the topic of greenwashing, as well as provide ways to detect and avoid it.

The students want to thank the supervisor, Carla K. Smink for her invaluable guidance and help throughout the project period.

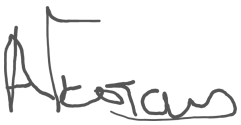
All of the recorded greenwashing claims are included in the appendix of this thesis project. The claims have been logged on with the page number and year of the document for the Sustainability reports and with the date (dd/mm/yyyy) of the Instagram posts.

Whenever a direct quote from the literature is used, then that is written in *italic*, combined with the page number of the reference. The same applies to figures taken directly from the literature.

The figures and pictures in this thesis are a product of the students' work, unless otherwise specified.

Aalborg University, June 2, 2023

Aino Juulia Pitkänen
apitka21@student.aau.dk



Alexandra Gkotsi
agkots21@student.aau.dk

List of Abbreviations

Abbreviation	Description
CCS	Carbon Capture and Storage
CDP	Carbon Disclosure Project
CDSB	Carbon Disclosure Standards Board
CEO	Chief Executive Officer
CMA	Competition and Markets Authority
CSDDD	Corporate Sustainability Due Diligence Directive
CSR	Corporate Social Responsibility
CSRD	Corporate Sustainability Reporting Directive
EC	European Commission
ESG	Environmental, Social, Governance
ESPR	Ecodesign for Sustainable Products Regulation
EU	European Union
GCD	Green Claims Directive
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
IFRS	International Financial Reporting Standards Foundation
IIRC	International Integrated Reporting Council
IR	Integrated Reporting
ISSB	International Sustainability Standards Board
NFRD	Non-financial Reporting Directive
NGO	Non Governmental Organization
OEF	Organisation Environmental Footprint
PEF	Product Environmental Footprint
SASB	Sustainability Accounting Standards Board
SEC	Securities and Exchange Commission
SME	Small and Medium Enterprise
SPDC	Shell Petroleum Development Company of Nigeria
TCFD	Task Force on Climate-related Financial Disclosures
UCPD	Unfair Commercial Practices Directive
UNEP	United Nations Environment Programme

Table 1. Abbreviations in alphabetical order

Contents

1 Introduction

The continuous rise of global temperature has been caused by the accumulation of greenhouse gas emissions, derived from humans' unsustainable energy use, lifestyle, and consumption and production patterns among others (IPCC, 2023). This has led to adverse impacts for both humans and nature (IPCC, 2023). In particular, a 2°C temperature increase compared to the pre-industrial level, will not only affect negatively human health but also will include a higher risk for catastrophic changes to the environment (European Commission, 2021).

In order to restrict the global average temperature to below 2°C, preferably 1.5°C, above pre-industrial levels, the Paris Agreement, a legally binding international protocol, was adopted in 2015 (UNFCCC, 2023). This climate change treaty requires countries to communicate their actions to reduce their greenhouse gas emissions with the ultimate goal to reach the climate targets determined in the Paris Agreement (UNFCCC, 2023). Its suggestion to countries is to design long-term strategies for low greenhouse gas emissions (UNFCCC, 2023). Since 2015, a growing number of companies have started to set their climate goals based on the global goal determined in the Paris Agreement (Bjørn et al., 2021).

Four major oil and gas companies (Chevron, BP, Shell and ExxonMobil) have contributed to 11% of global GHG emissions during 1965-2018 (Kenner & Heede, 2021). As the focus of this study, Shell is committed to the goal set by the Paris Agreement and therefore has pledged to achieve net zero emissions by 2050 (Royal Dutch Shell PLC, 2022, p.22). However, according to Li et al., 2022 oil companies' (Chevron, Shell, BP, ExxonMobil) pledges, actions, and investments are not aligned, and therefore these companies are prone to greenwashing. According to Delmas and Cuerel Burbano, 2011, this phenomenon refers to companies' positive communication about their poor environmental performance.

On that note, Shell has been accused of numerous scandals throughout the decades, with some of the scandals referring to greenwashing accusations either to its climate strategy set in its sustainability reports, or its social media presence (Client Earth, 2023a; Global Witness, 2023; Macchi & van Zeben, 2021).

Problem Analysis 2

In the first part of this chapter, the state-of-the-art topics related to the research question will be presented in a form of an unstructured literature review. The literature research is divided into three sections; Sustainability reporting, Greenwashing, and Environmental communication. In the second part of this chapter, the case company of this research will be presented, as well as a historical overview of incidents where the company has been accused of greenwashing by NGOs, the general public, and its stakeholders.

First of all, a general introduction to sustainability reporting will be presented, along with the current legislation, that defines sustainability reporting, including what and how is supposed to be reported on by large corporations. In addition to that, the most predominant sustainability reporting standards and the benefits and challenges of sustainability reporting, will also be presented. Furthermore, this part is focusing on mapping the importance of sustainability reporting and potential barriers that prevent organizations from reporting on sustainability. Then, the next section will introduce not only the definition of greenwashing and some introductory information but also the latest regulatory status, a few frameworks to detect greenwashing, as well as the connection between corporate social responsibility and greenwashing. Next, in the third section environmental communication, its necessity, and practices for good environmental communication will be elaborated upon.

Overall, the literature review aims to collect current knowledge around these topics, which will then help answer the research question together with the other methods presented in the upcoming chapters. An overview of the topics of the unstructured literature review can be seen in Figure 2.1.

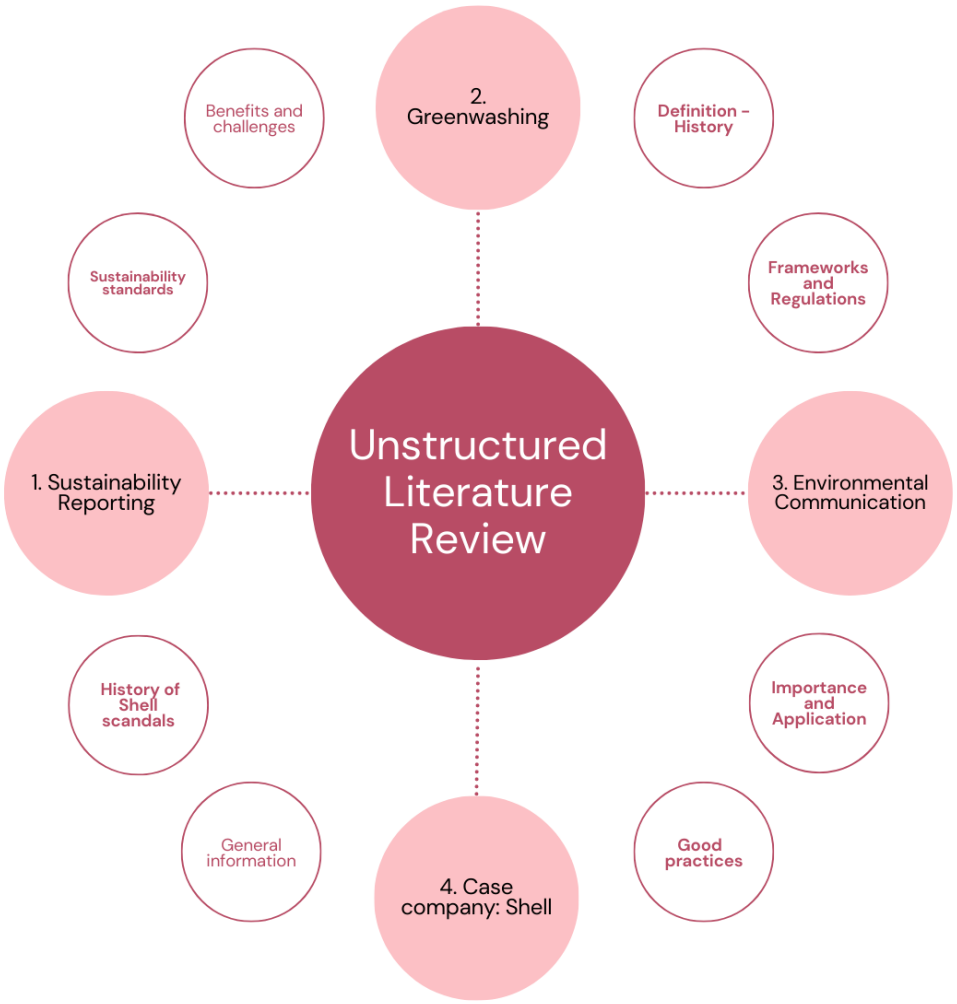


Figure 2.1. *An overview of the literature review topics.*

In the state-of-the-art section, published academic articles as well as documents, such as EU legislation and reports from numerous organizations, are analyzed. Sources for the unstructured literature review were obtained through the following databases: *Science direct* and *Google Scholar*. It is worth noting that while most of the literature articles were retrieved through the aforementioned databases, other literature has been found through citation lists of articles found through searches and through the databases' suggestions of similar content. Documents, such as EU directives, are also found through searching in *Google*.

The key search words that were used for the unstructured literature review are the following: *"Sustainability reporting", "Sustainability reporting standards", "Sustainability reporting" AND "Regulations", "Sustainability reporting" AND "Benefits" AND "Challenges", "Greenwashing", "Greenwashing AND CSR", "Environmental communication", "Environmental communication" AND "Sustainability reporting", "Environmental communication"*

AND "Greenwashing", "Environmental communication" AND "Good practices", "Shell", "Shell" AND "Scandals", "Shell" AND "Scandals" AND "Greenwashing".

All articles are chosen based on their relevance to this study and release date, ultimately aiming to choose articles, that are the most up-to-date unless purposefully choosing articles with an older date to show a historical analysis of the topic.

For the literature review, the area of delimitation selected is on the European level, since that is where the case company, Shell, is based. Therefore, most of the literature and documents that were analyzed, are applicable to the EU. However, since Shell is a large company operating on a worldwide scale, regulations from other continents, such as America, were also included in the research. The regulatory overview from other areas besides Europe does not affect the validity of the research. In contrast, the validity was increased, since, as Shell is considered a large organization, it showcased the differences between various regulatory systems and their expectations for companies when it comes to sustainability reporting.

2.1 Sustainability reporting

Corporate sustainability reporting, according to European Commission, 2023a, involves the reporting of social and environmental risks, that companies are facing, as well as the materiality assessment, or in other words the significance of the company's impacts on both people and the environment. In the past decade, the adoption of sustainability reporting by large companies has augmented exponentially (Herzig & Schaltegger, 2011; KPMG, 2023). In fact, in their study, KPMG, 2023 have noted that 96% of the 250 largest companies in the world (ranking based on their revenue) have disclosed information on either sustainability or information that involves the environmental, social, and governance aspects of the companies.

2.1.1 How companies make sense of sustainability

More and more companies are engaging in the publication of corporate sustainability reports, and there are various reasons behind that choice (Landrum, 2018; Landrum & Ohsowski, 2018). According to Landrum, 2018, the way companies are incorporating sustainability differs, and that depends on their perception of the meaning of sustainability, which then influences their actions. Some companies make minimal, incremental changes to their business models, while others take a more drastic and radical approach when it concerns their view of sustainability (Landrum, 2018; Landrum & Ohsowski, 2018). Taking that into consideration, Landrum and Ohsowski, 2018 concluded that most companies are focused on sustainability from a business point of view, meaning they prioritize the benefits sustainability offers to the business growth, rather than actually being committed to achieving sustainable development. In particular, companies have an erroneous understanding of sustainability, since their efforts are into reducing being unsustainable, rather than reaching sustainability (Landrum, 2018). While having in mind the companies' different standpoints on sustainability, Landrum, 2018 developed 5 stages of corporate sustainability based on that, as can be observed in Table 2.1

Stage 1	*Compliance (very weak sustainability)*	*Firms engage in activities which are externally enforced.*
Stage 2	*Business-Centered (weak sustainability)*	*Firms engage in egocentric internally focused activities that result in benefit to the firm.*
Stage 3	*Systemic (intermediate sustainability)*	*Firms work with others integrating the full realm of sustainability activities (environmental, economic and social) to address systemic change.*
Stage 4	*Regenerative (strong sustainability)*	*Firms understand sustainability science and seek to repair the damage of an industrial-era consumer society.*
Stage 5	*Coevolutionary (very strong sustainability)*	*Firms understand the place of humans, corporations and societies as existing in partnership with the natural world, giving as much as receiving.*

Table 2.1. Stages of corporate sustainability, as described in Landrum, 2018.

Based on their work, Landrum, 2018 described Stages 1, 2, and 3 as *"business-oriented"*, and Stages 4 and 5 as being *"ecology oriented"*.

2.1.2 Sustainability reporting frameworks/standards

Despite their outlook on sustainability, to conduct a sustainability report, companies can follow various sustainability reporting frameworks to convey information to their stakeholders. In Table 2.2, an overview of the leading sustainability frameworks can be seen. The most dominant sustainability reporting framework, according to KPMG, 2023, is the one developed by the Global Reporting Initiative (GRI). The latter is an international organization that helps other organizations communicate sustainability information in a transparent manner through their comprehensive standards (GRI, 2023a, 2023c). The GRI Standards are comprised of the Universal Standards, which can be applied to every company, and the Sector Standards, which are sector-specific (GRI, 2023b).

Another leading sustainability reporting framework that is also widely used is the Sustainability Accounting Standards Board or otherwise known as SASB, (SASB, 2023a). Their standards assist companies in disclosing sustainability information that is financially important, based on their industry (SASB, 2023a).

Main sustainability reporting frameworks
Global Reporting Initiative (GRI)
Sustainability Accounting Standards Board (SASB)
Task Force on Climate-related Financial Disclosures (TCFD)
Integrated Reporting (IR)
International Sustainability Standards Board (ISSB)
Carbon Disclosure Project (CDP)

Table 2.2. Some of the main sustainability reporting frameworks.

The plethora of corporate sustainability frameworks, some of which can be seen in Table 2.2, have confused companies on which frameworks and standards they should select, and overall the application process of the standards can appear complicated for companies to navigate (SASB, 2023a). On that note, in order to smooth the process and provide clarity to companies, some organizations, that have developed the sustainability reporting frameworks, have decided to merge (SASB, 2023a, 2023b). In particular, the Sustainability Accounting Standards Board (SASB), the Carbon Disclosure Standards Board (CDSB), and the Integrated Reporting Framework have all been consolidated with the International Financial Reporting Standards Foundation (IFRS), a non-profit organization that is aiming for comprehensive and high-quality sustainability reporting standards (IFRS, 2023; SASB, 2023a).

Besides that, other initiatives have been developed to simplify the sustainability disclosure process (SASB, 2023b). For example, in 2020, CDP, CDSB, GRI, the International Integrated Reporting Council (IIRC), and SASB joined forces to establish both financial and sustainability reporting standards. In their vision, they detailed how each framework and standard are complementary to each other, thus adapting to every company's need (SASB, 2023b).

2.1.3 Regulatory overview of sustainability reporting

There is a lot of EU legislation that regulates corporate sustainability reporting, however, the following are the only ones related directly to corporate sustainability:

1. *Corporate Sustainability Reporting Directive (CSRD) - 2022/2464/EC*
2. *Non-financial Reporting Directive (NFRD) - 2014/95/EU*
3. *Corporate Sustainability Due Diligence Directive (CSDDD) - 2022/0051(COD)*

Currently, the newest EU Directive that governs mandatory sustainability reporting in companies, is the Corporate Sustainability Reporting Directive (CSRD) (2022/2464/EC), which was adopted in January 2023 (European Commission, 2023b). According to European Commission, 2023b, this directive aims to reinforce the disclosure of sustainability-related information and is applicable to approximately 50.000 companies, both large and SMEs. As a result, the stakeholders will be better informed about the companies' actions regarding environmental and social issues, thus increasing the transparency inside the corporations (European Commission, 2023b). Besides mandatory disclosure about sustainability information, CSRD also obliges companies to have an external assurance of the information provided, meaning that companies have to be audited in order to validate the data (European Commission, 2023b). In addition to that, companies have to also report the sustainability data in a digital form (European Commission, 2023b). While large corporations are obligated to start reporting by the financial year 2024, SMEs can hold off the reporting until the financial year 2026.

Before the CSRD came into effect, the EU Commission was overseeing corporate sustainability reporting through the Non-financial Reporting Directive (NFRD) (2014/95/EU)

(European Commission, 2023c). Under the latter directive, which was applicable to fewer companies compared to the CSRD, large companies disclosed information regarding the environment, society, their employees, and human rights, among others (European Commission, 2023c). As seen in Figure 2.2, Baumüller and Sopp, 2022 have outlined the main differences between these two EU Directives. In their study, Baumüller and Sopp, 2022 included a historical analysis of the EU regulations regarding sustainability reporting, focusing mainly on the NFRD and the CSRD, and the challenges that have arisen after their adoption.

Notably, Baumüller and Grbenic, 2021 state that the CSRD superseding the NFRD progresses the EU corporate sustainability reporting. In addition to that, Baumüller and Grbenic, 2021 also mention that existing gaps in both CSRD and other sustainability reporting regulations are closed. The reason for that, as depicted in Figure 2.3, is that the Sustainable Finance Disclosure Regulation (SFDR) (2019/2088/EC) and the EU Taxonomy along with both CSRD and NFRD are interconnected (Baumüller & Grbenic, 2021).

Another EU directive concerning sustainability reporting is the Corporate Sustainability Due Diligence Directive (CSDDD) (2022/0051(COD)) (European Commission, 2022b). The latter proposal will regulate the negative impacts of the companies' actions on a broader scope, meaning across their value chain and if operating on a worldwide scale, outside the EU borders as well (European Commission, 2022a, 2022b). The purpose of this Directive is to promote accountability in companies and respect, regarding the effects of their operations on human rights and the environment (European Commission, 2022a, 2022b). To achieve that, the EU Commission suggested companies should first identify and prevent, and then mitigate and take accountability for all their negative externalities on both human rights and the environment (European Commission, 2022a, 2022b).

	NFI directive	CSR directive
Objective	Information to the extent necessary for an understanding of the undertaking's development, performance, position and impact of its activity	Information necessary to understand the undertaking's impacts on sustainability matters, and information necessary to understand how sustainability matters affect the undertaking's development, performance and position
Minimum content	Five sustainability matters covered ("environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters")	• Three sustainability matters covered ("environmental, social and governance factors") • Sector-specific, sector-agnostic information defined by EFRAG
Perspective taken	(Ultimately) outside-in	Outside-in and inside-out
Relevant time horizons for materiality considerations	Not specified	Short-, medium- and long-term
(Main) Target group of information	Providers of financial resources	Stakeholders (in a broad sense)
Options to omit information	• Safeguard clause • Comply or explain principle	• Safeguard clause
Links to financial reporting	• Optional reporting as part of the management commentary • Mandatory references to, and additional explanations of, other information included in the annual report	• Mandatory reporting as part of the management commentary • Mandatory references to, and additional explanations of, other information included in the management commentary and the annual report
External assurance	Non-mandatory	Mandatory (highlighting the process of materiality analysis)

Figure 2.2. *An overview of the differences between the EU NFRD and the current EU CSRD regulations (Baumüller & Sopp, 2022, p.21).*

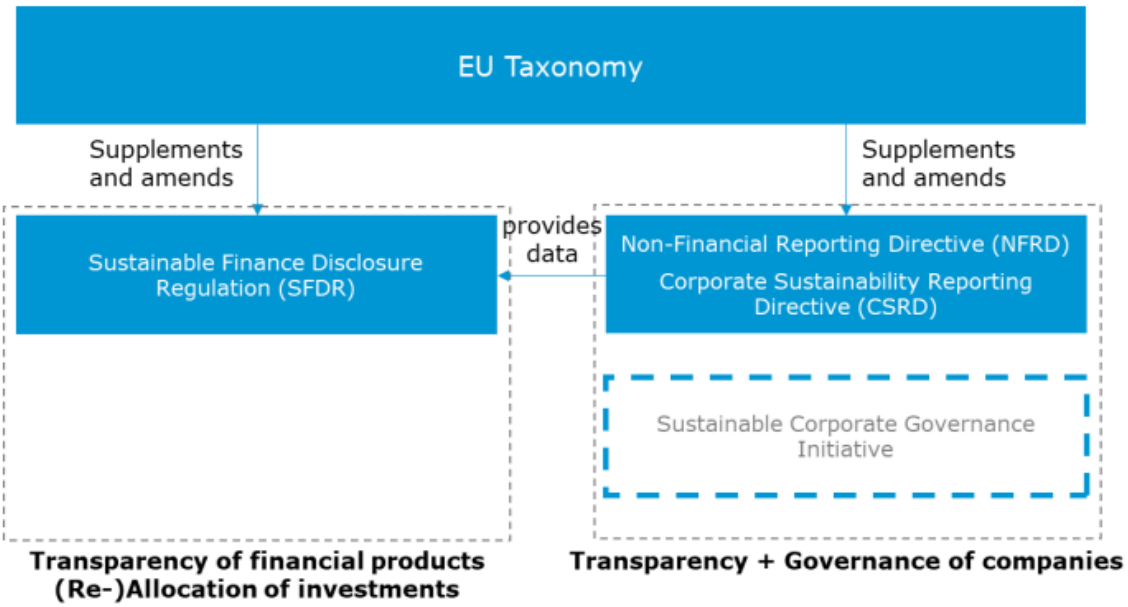


Figure 2.3. *An overview of EU regulations regarding sustainability reporting (Baumüller & Grbenic, 2021, p.372).*

Outside of the EU, the US SEC has also taken a step toward regulating corporate sustainability reporting. Through the proposed rule "The Enhancement and Standardization of Climate-Related Disclosures for Investors", the US SEC will require large corporations to disclose additional information about the impact of climate-related risks on the company (US Security and Exchange Commission, 2022). The proposal was adopted by the end of 2022, and thus large corporations will be obligated to report on climate issues starting the fiscal year 2023 (US Security and Exchange Commission, 2022). The reason for issuing this amendment is to harmonize the reporting of sustainability information and with that to assist investors in having a holistic understanding of a company and its actions, before investing (US Security and Exchange Commission, 2022).

2.1.4 Benefits and challenges of sustainability reporting

Corporate sustainability reporting can offer a lot of benefits to companies, that decide to adopt it. In particular, both Herzig and Schaltegger, 2011 and CDP, 2023 note that sustainability reporting is a means to establish and improve a company's reputation. As a matter of fact, disclosing information in regard to sustainability can repair and boost the brand image and value respectively, thus resulting in higher revenue (Herzig & Schaltegger, 2011).

Besides that, Herzig and Schaltegger, 2011 mention that sustainability reporting can lead to corporate legitimacy, meaning that the company, its plans, and its actions are accepted by the general public. Furthermore, it can also improve the company's relations with its stakeholders, since that shows commitment and accountability to the company's own actions regarding environmental and societal issues (Herzig & Schaltegger, 2011). Consequently, companies can better their position in comparison to their competitors, who have not implemented sustainability reporting, hence gaining a unique selling point (CDP, 2023; Herzig & Schaltegger, 2011). Similarly, companies can use sustainability reporting to their advantage, since it offers a way of tracking internal processes and systems, making it possible to conduct internal benchmarking to track their performance (CDP, 2023; Herzig & Schaltegger, 2011). Finally, according to CDP, 2023, since sustainability reporting is about to become mandatory in a few years for large corporations, companies should use it to their benefit in order to precede the regulations.

However, several barriers can also appear that prevent companies from implementing the disclosure of sustainability information. First of all, according to Herzig and Schaltegger, 2011, there has not been a consensus on the meaning of the terms *"Sustainable development"* and *"Corporate sustainability"*, since their definition differs based on the context. Similarly, Stolowy and Paugam, 2023 argue that there are numerous sustainability concepts that intersect, but also differ, such as *"Corporate Social Responsibility"*, *"Environment, Social, Governance"* and *"Integrated Reporting"* among others. As a result, these differences lead to difficulties in reporting information on these concepts (Herzig & Schaltegger, 2011; Stolowy & Paugam, 2023). In fact, companies struggle with operationalizing, measuring, and communicating goals and targets in corporate sustainability (Herzig & Schaltegger, 2011).

Another challenge in sustainability reporting is the plethora of existing sustainability reporting frameworks. In particular, Stolowy and Paugam, 2023 criticizes that these

frameworks, such as the GRI, SASB, or CDP, all hold the ultimate solution in corporate sustainability reporting. On that note, in their study, Afolabi et al., 2022 concur that these perceptions of superiority are restraining sustainability reporting from being harmonized, creating confusion for companies that are indecisive on what framework they should apply and how.

Furthermore, corporate sustainability reporting appears to be disconnected from the stakeholders' concerns (Bradford et al., 2017; Herzig & Schaltegger, 2011). Herzig and Schaltegger, 2011 detail that companies often report on the performance of the measurements, but lack disclosing information on materiality issues that concern the stakeholders, such as the impacts of the companies' activities (Herzig & Schaltegger, 2011). Bradford et al., 2017 note that the concerns of the general consumer appear to be most neglected.

Besides that, inconsistencies in the worldwide legislation are also a barrier to companies adopting sustainability reporting (Stolowy & Paugam, 2023). While in some countries it is mandatory, in others it appears to be voluntary (Stolowy & Paugam, 2023). In addition, inconsistencies also appear on an industry-level, since sustainability reporting is obligatory in some industries but voluntary in others (Stolowy & Paugam, 2023).

2.2 Greenwashing

The term greenwashing was first established in 1986 by Jay Westervelt, an environmentalist, who wrote an essay about the hospitality industry. In that essay, he detailed how labels on hotel rooms, that were encouraging the re-use of towels as an environmentally friendly solution, were considered to be false claims. He concluded, that the aim of these green claims was in most cases purely economic, and hotels did not take any initiative to decrease energy losses (Wolniak, 2015).

Taking into consideration the aforementioned statement, greenwashing is a phenomenon, which appears when companies have poor environmental performance, but they are communicating positively about their environmental performance (Delmas & Cuerel Burbano, 2011). On a similar note, Lyon and Maxwell, 2011 define greenwashing as *"selective disclosure of positive information about a company's environmental or social performance, without full disclosure of negative information on these dimensions"* (Lyon & Maxwell, 2011, p.6). Companies, that are involved in greenwashing practices, often use selective disclosure about their environmental performance, meaning that they choose not to disclose any negative information about their environmental performance, and reveal only positive information regarding the company's environmental performance (Vieira de Freitas Netto et al., 2020).

2.2.1 Characterization of greenwashing

Another definition of greenwashing is made by TerraChoice, a private environmental consultancy, which is part of UL Solutions, a company that provides third-party verification to products that are claiming to be sustainable (UL Solutions, 2023). TerraChoice defines greenwashing as *"the act of misleading consumers regarding the environmental practices of a company or the environmental performance and positive communication about*

environmental performance" (TerraChoice, 2010). Based on this definition, TerraChoice has developed a checklist to detect greenwashing, called *7 sins of greenwashing*. According to TerraChoice, 2010, in 2010, 95% of the claims on the researched products committed at least one of the seven sins.

The seven sins as defined by TerraChoice, 2010 are the following:

1. *Sin of the hidden trade-off: Making green claims based on a very narrow set of attributes*
2. *Sin of no proof: Making a claim that cannot be easily substantiated by third-party verification*
3. *Sin of vagueness: Making claims that are broad, poorly defined and easily misunderstood*
4. *Sin of irrelevance: Making environmental claims, that may be truthful but are irrelevant to the specific product*
5. *Sin of lesser of two evils: Making claims that may be true but distract consumers from a bigger environmental impact*
6. *Sin of fibbing: Making environmental claims that are simply false*
7. *Sin of worshiping false labels: Product has a label, that gives a false impression of a third-party endorsement*

Besides the 7 sins by TerraChoice, 2010, another tool to detect greenwashing is the Greenwashing Index, which is developed by EnviroMedia and University of Oregon School of Journalism and Communication, 2023. The greenwashing index aims to help detect greenwashing in advertising. The tool is targeted specifically to consumers, to educate them to understand an ad and distinguish greenwashing among ads that make claims or give other signs about sustainability or environmental friendliness. The greenwashing index gives an ad a score of the amount of greenwashing based on the answer to the following statements (EnviroMedia and University of Oregon School of Journalism and Communication, 2023):

1. *The ad is misleading with words*
2. *The ad is misleading with visual content or graphics*
3. *The ad is making a vague or unprovable claim*
4. *The ad is exaggerating the greenness of the product/company/service*
5. *The ad is leaving out important information and making the green claim sound better than it actually is*

(EnviroMedia and University of Oregon School of Journalism and Communication, 2023)

2.2.2 Companies that are greenwashing

According to Delmas and Cuerel Burbano, 2011, companies can be divided into green companies, which have good environmental performance, and brown companies, which in turn have poor environmental performance. In particular, good environmental performance is referred by Roome, 1992 as *Compliance-plus*, which involves not only upholding the law but also having additional approaches to environmental management systems. Whereas poor environmental performance represents *Noncompliance*, which refers to having no environmental measures and not conforming to regulatory requirements (Roome, 1992).

Companies that have a good environmental performance and communicate about it, are called *vocal green firms*, whereas positively performing companies, that do not communicate about their environmental performance, are called *silent green firms*. On the other hand, companies with poor environmental performance tend to either remain silent, being *silent brown firms* or represent their poor environmental performance in a positive light. When doing the latter, companies are considered to be greenwashing. Figure 2.4 presents these four types of companies.

There are two ways, in which a non-greenwashing company can become a greenwashing company. Companies can move from either vocal green firms or silent brown firms to greenwashing firms. In the same way, to avoid greenwashing, companies should either stop communicating about false environmental performance and move to silent brown firms, or in the better case actually improve their environmental performance and become vocal green firms (Delmas & Cuerel Burbano, 2011).

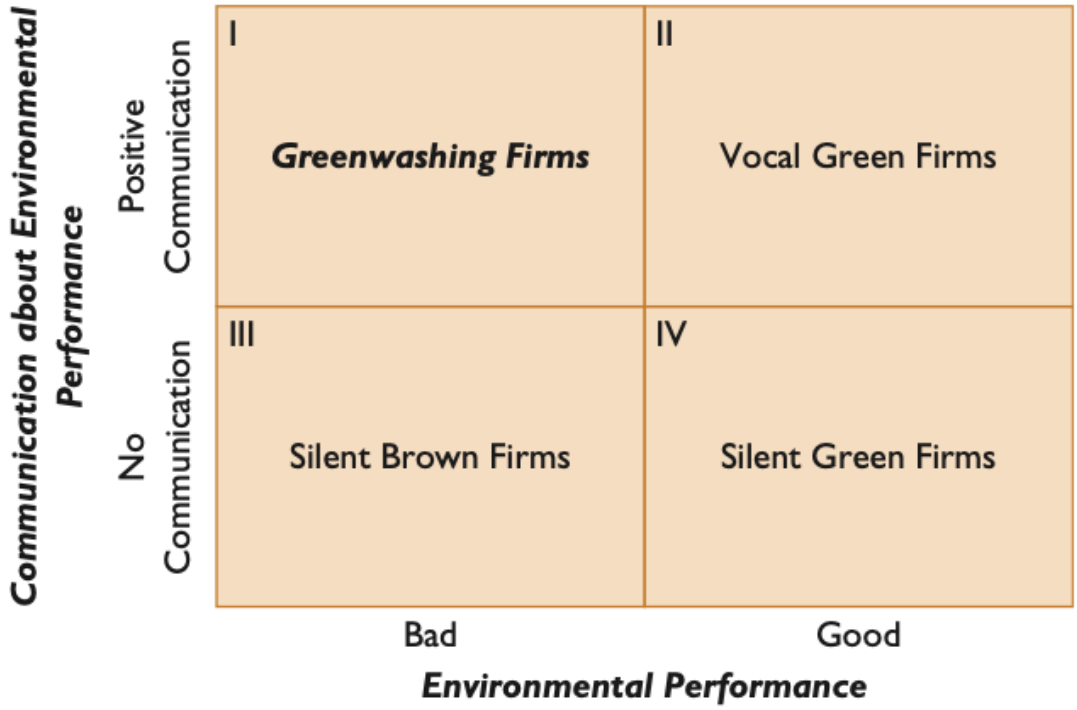


Figure 2.4. Types of companies based on environmental performance (Delmas & Cuerel Burbano, 2011, p. 67)

2.2.3 Corporate Social Responsibility and greenwashing

One contributing factor to the ever-increasing emergence of greenwashing is the augmented consumer awareness of the environment and sustainability (Wolniak, 2015). In corporate social responsibility (CSR), companies aim to attract stakeholders, and according to Wolniak, 2015, they could provide misinformation about their environmental performance, and therefore implement greenwashing practices. As CSR reports contain enormous amounts of information, it may be difficult for the general public to consider, whether the environmental claims are true or false (Wolniak, 2015). In the worst case, greenwashing

leads to misinterpretation of sustainable development and CSR as a concept (Wolniak, 2015). From a company perspective, greenwashing creates an added pressure for companies with poorer environmental performance or with fewer resources to use for environmental work, to engage in greenwashing. When these companies compete with other companies, that are already implementing greenwashing practices, it is more likely that a company also engages in greenwashing in order to stay competitive (Wolniak, 2015).

When it comes to different means to avoid greenwashing, Wolniak, 2015 suggests companies to follow these three steps. Firstly, to implement reverse greenwashing, which refers to a phenomenon, where social organizations track corporate activities and point out irregularities, which simplifies the detection of greenwashing (Wolniak, 2015). Secondly, having specialists educating consumers about CSR reporting helps companies to be more aware of greenwashing. Lastly, CSR reports should be verified by third-party agencies according to strict standards to test the reliability of the data used in the CSR reports (Wolniak, 2015).

2.2.4 Regulations to avoid greenwashing

Currently, there is an EU directive called Unfair Commercial Practices Directive, 2005/29/EC (UCPD). This directive is focused on commercial practices, such as providing consumers with untruthful information, or using aggressive marketing techniques in order to influence customers' choices (European Commission, 2019b). However, it does not address misleading environmental claims. Therefore, the European Commission suggests, that companies should use the Product Environmental Footprint (PEF) and the Organisation Environmental Footprint (OEF) methods to substantiate their environmental claims (European Commission, 2020). On a similar note, in the European Green Deal, it is mentioned, that companies should substantiate their green claims against a standards methodology (European Commission, 2019a).

However, there are some limitations to the use of the PEF method. For example, using global average secondary data can fail to represent variations in environmental impacts that occur on the local level (European Environmental Bureau, 2022). In addition, the whole life cycle of a product might not be represented in an LCA study, and social impacts are not included (European Environmental Bureau, 2022). These limitations and a growing market for sustainable products set a need for regulations against greenwashing (Arbinolo, 2023). Considering the above-mentioned limitations, the EU Commission, in March 2023, proposed the Green Claims Directive, COM/2023/166 (GCD). The new directive aims to decrease greenwashing by regulating the substantiation of companies' green claims. The aim is to bring clarity to green advertising and oblige companies to have readily available evidence for their green claims (Arbinolo, 2023). The new initiative is linked to other EU policies, such as the revision of EU consumer law to empower consumers for participation in the green transition, the farm-to-fork strategy, and Ecodesign focused on sustainable products (European Commission, 2023d), as well as the New Consumer Agenda (European Commission, 2023e). In addition, the GCD will complement the Ecodesign for Sustainable Products Regulation (ESPR), concerning voluntary claims, while the ESPR concerns obligations for mandatory information (Arbinolo, 2023).

The proposal of the new directive defines environmental claims as *"any message or*

representation, which is not mandatory under Union law or national law, including text, pictorial, graphic, or symbolic representation, in any form, including labels, brand names, company names, or product names, in the context of commercial communication, which states or implies that a product or trader has a positive or no impact on the environment or is less damaging to the environment than other products or traders, respectively, or has improved their impact over time" (European Commission, 2023e). According to European Commission, 2020, 53.3% of the studied environmental claims provide vague or misleading information about products' environmental characteristics, and 40% of the claims provide no evidence to support the claims. When it comes to green labels on products, only half of them provided enough verification, whereas the other half of the used labels were poorly or not at all verified. These false environmental claims decrease consumers' trust in environmental claims and consumers' awareness since information about products' actual environmental performance is not available (European Commission, 2023e).

Because of these challenges with false environmental claims and diminished consumer trust, the GCD focuses on four topics associated with greenwashing (European Commission, 2023e):

- Display of green labels that are not certified or established by authorities.
- Environmental claims, for which the trader cannot demonstrate relevant environmental performance.
- Environmental claims about the whole product, when the claim covers only a specific aspect of the product.
- Presenting mandatory requirements as a particular feature of the trader.

To tackle the problem of greenwashing, the key objectives of the proposal of the new directive are (European Commission, 2023e):

- Accelerate the EU's transition towards a clean, circular, and climate-neutral economy.
- Protect consumers and companies from greenwashing and enable them to make informed choices, that are based on credible environmental labels and claims.
- Enhance the legal certainty of green claims and increase the competitiveness of companies, that make efforts to improve their environmental performance.

By these objectives, the GCD covers voluntary environmental claims and environmental labels. The GCD does not aim to change existing sectoral regulations, but it aims to bring clarity and structure to sectors, where environmental claims are currently unregulated (European Commission, 2023e).

Outside the EU, there are also some regulations to avoid greenwashing in the UK. The Competition and Markets Authority (CMA) has made a guideline called *Green Claims Code* to help businesses comply with the existing legal regulations (Competition & Markets Authority, 2021).

The consumer protection law provides companies with a framework for making realistic environmental claims that help consumers make informed (Competition & Markets Authority, 2021). In addition to protecting consumers from misleading green claims, the consumer protection law provides protection for companies against unfair competition by

creating equal operating conditions for companies, that represent more green products or services, and can make truthful environmental claims (Competition & Markets Authority, 2021).

CMA provides guidance for companies to comply with the consumer protection law by setting out principles, that companies should follow when making environmental claims. The six principles are the following (Competition & Markets Authority, 2021):

- *Claims must be truthful and accurate*
- *Claims must be clear and unambiguous*
- *Claims must not omit or hide important relevant information*
- *Comparisons must be fair and meaningful*
- *Claims must consider the full life cycle of the product or service*
- *Claims must be substantiated*

On a similar note, in the US the Securities and Exchange Commission (SEC) has proposed changes in rules to prevent misleading claims by U.S. funds, specifically on their qualifications on environmental, social, and governance (ESG) related funds (U.S. Securities and Exchange Commission, 2022). SEC suggests changes in the Names Rule, where according to current rules at least 80% of a fund's assets must be in a class of investment (such as government bonds) (U.S. Securities and Exchange Commission, 2022). The new rule would require any investment company or fund, whose name suggests investments with particular characteristics, to have at least 80% of the assets in the fund include that characteristic. For example, if a company is called "Green Investments", then according to U.S. Securities and Exchange Commission, 2022, the company has to invest at least 80% of its assets in green projects or initiatives. This would lead to more transparency to funds, that are named after for example *ESG* or *sustainable* (U.S. Securities and Exchange Commission, 2022).

2.3 Environmental communication

Environmental communication has emerged in the communication discipline during the past 25 years (Fassbinder et al., 2012). Merging of communication and nature-human studies has broadened the environmental field, providing a new lens for looking at the nature-human relations (Fassbinder et al., 2012). According to Fassbinder et al., 2012, environmental communication contains two assumptions: the ways we communicate, shape our understandings of nature, which then define how we relate with nature. Communication, in this way, both reflects and produces human relations with nature (Fassbinder et al., 2012).

In his book *Environmental communication and the public sphere*, R. J. Cox, 2010 defines environmental communication as *"the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world; it is the symbolic medium that we use in constructing environmental problems and negotiating society's different responses to them"* (R. J. Cox, 2010, p. 20). According to Cox, environmental communication has two functions. Firstly, environmental communication is *pragmatic*, meaning that it has an active role in educating, alerting, persuading, and mobilizing humans, as well as solving environmental problems. Secondly, environmental

communication is *constitutive*, meaning that language and other symbols help shape our perception of nature and environmental problems (R. J. Cox, 2010). The book presents three principles of environmental communication:

1. Human communication is a form of symbolic action.
2. Communication is used to mediate humans' beliefs, attitudes, and behaviors relating to nature and environmental problems.
3. The public sphere emerges as a discursive space for communication about the environment.

(R. J. Cox, 2010)

By these principles, environmental communication emerges in humans' everyday life through conversations between citizens, environmental groups, the media, scientists, and the corporate world, who all seek to influence others about environmental issues (R. J. Cox, 2010).

2.3.1 Importance of environmental communication

According to McEwen, 2014, the role of environmental communication is to bring up global environmental problems. The communicators, i.e. the scientific community, have a role to 'speak for nature'. For instance, it could be advocating how a company's actions and operations are affecting the environment and may be exacerbating current worldwide problems, such as climate change. As environmental decision-making and evaluations require knowledge and awareness of the state of the environment and environmental issues, the role of environmental communicators is especially important in providing the facts and the data needed for decision-making (McEwen, 2014).

Lindenfeld et al., 2012 also recognizes the role of environmental communication in linking knowledge about sustainability issues to action and decision-making. Environmental communication creates the needed pathways for connecting knowledge to action. Sustainability science as a field of study requires connections across disciplinary and institutional boundaries, such as the inclusion and active participation of decision-makers, communities, and stakeholders (Lindenfeld et al., 2012). The success of sustainability science depends on integrating environmental communication since it is seen as a way to provide these connections between sustainability scientists and their stakeholders (Lindenfeld et al., 2012). Through stakeholder engagement, environmental communication aims to move from just informing stakeholders to more engaged approaches, such as communicating with them (Lindenfeld et al., 2012).

Interdisciplinary environmental communication emerges through for example connecting environmental science and economics (Lindenfeld et al., 2012). The strengths of environmental communication rely on the representation of nature and furthermore on the communication of technical and scientific information to the public, as well as to the public understanding of science (Lindenfeld et al., 2012). Environmental communication also helps in connecting the media and the scientific research and provides analytical tools to reveal the limits that sustainability science requires (Lindenfeld et al., 2012).

In addition to the communicating means, it is also important to focus on the communication content. By taking this into consideration, sustainability scientists can improve their partnerships with their stakeholders (Lindenfeld et al., 2012). Integrating environmental communication with sustainability science assists in addressing environmental problems and generating solutions through multidisciplinary research (Lindenfeld et al., 2012).

Good communication practices

The United Nations Environment Programme (UNEP) has published a guideline for effective sustainability communication for companies (United Nations Environment Programme and Futerra Sustainability Communications Ltd., 2005). According to that, sustainability communication is the strongest, when it is supported by policy decisions. Communication and public policy should be consistent and support each other. Another aspect is, that communication should be supported by infrastructure (United Nations Environment Programme and Futerra Sustainability Communications Ltd., 2005). For example, encouraging the public to recycle through communication needs a functioning recycling network and infrastructure to achieve the aimed results (United Nations Environment Programme and Futerra Sustainability Communications Ltd., 2005).

To communicate successfully about sustainability issues, it is important to take into consideration the fact, that human beings are not rational with their decisions (United Nations Environment Programme and Futerra Sustainability Communications Ltd., 2005). In environmental communication, factors, such as emotions, affect consumers' perception of a company. To reach their audience, companies should pay attention to being personal, inspirational, and practical with their sustainability communication, and target it to specific consumer groups (United Nations Environment Programme and Futerra Sustainability Communications Ltd., 2005). Targeting can be done by demographics such as age or gender. The most efficient communication channel is also dependent on the target audience (United Nations Environment Programme and Futerra Sustainability Communications Ltd., 2005). For example, sustainability reports, media, or social media have all different target audiences.

Policy-making has a role in encouraging citizens to adopt environmental behavior. However, instead of only top-down communication, when it comes to environmental issues, Burgess et al., 1998 encourages the participation of the public, an approach which is considered between top-down and bottom-up. The public should be proactively participating in the planning processes for example through discussions, since they possess local and cultural knowledge that can have value in the decision making (Burgess et al., 1998). Supporting United Nations Environment Programme and Futerra Sustainability Communications Ltd., 2005 suggestions, Burgess et al., 1998 recognizes the need for more focused and personalized environmental communication, instead of mass advertising. He mentions, that local social and cultural contexts affect the effectiveness of environmental communication. Sometimes public resistance to environmental communication can appear. In these cases, the government and businesses need to discipline citizens towards pro-environmental practices (Burgess et al., 1998). With good environmental communication, where information is presented in attractive and accessible ways, the public is more likely to

understand their rights and responsibilities as environmentally conscious citizens (Burgess et al., 1998). In addition, partnerships between different institutions and professionals are contributing towards raising understanding of environmental issues. Burgess et al., 1998 mentions different approaches when it comes to environmental communication. One strategy is to concentrate more on producing positive environmental narratives by working with local media and demonstrating what people can achieve on a local level (Burgess et al., 1998). The best way to achieve rational and balanced environmental communication is to educate journalists to gain a well-rounded understanding of environmental issues (Burgess et al., 1998).

Environmental communication and sustainability reporting in connection to greenwashing

Environmental communication is interconnected with brand image. Consumers' perception of a company is partly based on the provided information through environmental communication (Santos et al., 2023). Santos et al., 2023 claims that greenwashing can negatively affect the brand image. Communicating about the companies' environmental achievements realistically helps consumers to have a positive perception of the company, and therefore does not have adverse effects on the brand image (Santos et al., 2023). This emphasizes the role of good environmental communication in sustainability reporting. If consumers feel that a company tries to mislead them through its environmental communication, in the worst case this can lead to brand hate among consumers (Santos et al., 2023). However, changes in consumers' views of a company due to greenwashing are dependent on the personal characteristics of the consumer. It is worth noting that in some cases poor CSR reporting does not affect the corporate reputation (Santos et al., 2023).

Hohnen et al., 2007 defines CSR reporting as *"the way the company integrates economic, environmental, and social objectives while, at the same time, addressing stakeholder expectations and sustaining or enhancing shareholder value"* (Hohnen et al., 2007, p. 24). Through CSR reporting, companies aim to communicate with their stakeholders about the interconnected relationship between the company and society, meaning how society is affecting the company, and how the company's operations are shaping society (Hohnen et al., 2007). By doing this, companies aim to balance between being open and honest about the company's operations, and on the other hand, focusing on the brand image (Hohnen et al., 2007). Often, third-party verification is used to evaluate the CSR commitment of a company. According to Gutterman, 2020, there are differences between companies' engagement in CSR activities, depending on the company size, the development stage, the focus of its CSR commitments, and the financial and human resources available for investment in CSR activities. Even though CSR relies on voluntary disclosures, companies often see the value of reporting their journey towards their CSR goals (Gutterman, 2020).

CSR reporting is part of companies' environmental communication. Hohnen et al., 2007 provides recommendations for successful CSR reporting. Both large and small companies are recommended to designate at least one employee to be responsible for CSR actions if there isn't one already designated. In addition, staff briefings about the company's CSR activities are significant, so that all employees have knowledge about the company's ongoing CSR activities. It is also recommended, that even if a company is not using

international reporting standards to publish a CSR report, the information about their CSR activities should be provided on their website, both on success areas and areas of improvement. Local newspapers are also seen as a cost-effective and easy way to communicate about a company's CSR activities to a broader audience (Hohnen et al., 2007).

2.4 Presentation of the case company

In this section, a general introduction to the case company, Shell, will be presented. After that, a historical analysis of scandals where Shell was accused of greenwashing will be unveiled, along with the specific reasoning for choosing this company as a case in this study, leading to the research question.

2.4.1 Shell

Shell is an energy company that operates worldwide, specializing in oil and natural gas, from the extraction of the product to production and marketing (Shell, 2023). The company was founded in 1907 and has a revenue of approximately 382 billion $, while currently, they employ 93.000 people (Shell, 2023). While its main focus remains on the exploitation of oil and natural gas reserves, as a company, Shell has also been exploring other state-of-the-art technologies, in order to achieve a sustainable future for the energy sector (Shell, 2023). Specifically, they have invested in renewable energies, such as wind and solar energy, as well as hydrogen fuel and electric vehicles (Shell, 2023).

Nonetheless, as further explained in the upcoming subsection 2.4.2, Shell has been associated with numerous scandals and has been previously accused of greenwashing. As part of this project, the reason Shell was selected as a case company, lies in the contradictions that exist. On one hand, Shell has been working towards finding another more sustainable business model by investing in renewable energies. However, on the other hand, the company has been criticized heavily by the public whether it involves its operations' effect on the environment or even Shell's aim to improve its environmental sustainability. Therefore, the focus of this study has been to investigate whether Shell is actually greenwashing in two different settings: its sustainability reports and its Instagram account. While Shell's sustainability reports are considered to be a more formal way of communication with its stakeholders, Shell's official Instagram account is more informal. Furthermore, in order to establish if greenwashing is the latest occurrence or if the company has been engaging in these practices for a longer time period, the last decade of sustainability reports and Instagram posts have been taken into consideration.

2.4.2 History of Shell's scandals

Whether it is due to human rights violations, its climate strategy, or other reasons, Shell has been associated with numerous scandals throughout the years (Amnesty International UK, 2020; Client Earth, 2023a; Frynas, 2003; Global Witness, 2023; Grolin, 1998a; Hackett et al., 2021; Hansen & Lundholt, 2021; Hennchen, 2015; Holzer, 2007; Klinghoffer, 1989; Macchi & van Zeben, 2021; Minefee & Bucheli, 2021; Pupovac & Moerman, 2022; Reestorff, 2015; Schwartz, 2000).

The company has been targeted during 1970-1980 by activists for allegedly supplying oil to South Africa, despite the existing sanctions towards the self-proclaimed independent country, Rhodesia (Klinghoffer, 1989; Minefee & Bucheli, 2021). Klinghoffer, 1989 in their book addressed the sanctions against South Africa during that time and their inability to weaken and dissolve the apartheid. Despite that, NGOs still targeted Shell in hopes that the oil company would pull its investments from South Africa, resulting in added pressure to the regime and subsequently at the end of its existence (Minefee & Bucheli, 2021). On that note, Minefee and Bucheli, 2021 detailed the way multinational corporations are able to handle criticism from various NGOs, among them being Shell.

Another scandal occurred in 1995, due to Shell's decision to discard an oil storage platform, called Brent Spar, to the Scottish coast of the North Sea (Frynas, 2003; Grolin, 1998a; Schwartz, 2000). Although the oil company had taken the appropriate steps with the government to dispose of the oil platform safely, it still did not evade the scrutiny of Greenpeace (Frynas, 2003; Grolin, 1998a; Schwartz, 2000). While Shell, by all means, had a permit and thus the right to dispose of Brent Spar to the North Sea, the environmental activists took justice into their own hands and protested in Brent Spar to dissuade Shell from destroying it (Frynas, 2003; Grolin, 1998a; Schwartz, 2000). Through protesting and media exposure, Greenpeace successfully achieved to boycott Shell, which resulted in the oil company rescinding its decision, and parts of Brent Spar were reused after transportation in Norway (Frynas, 2003).

A number of studies have analyzed the violations against the environment and the human rights of people in Nigeria during the 1990s (Amnesty International UK, 2020; Frynas, 2003; Hackett et al., 2021; Hennchen, 2015; Holzer, 2007; Pupovac & Moerman, 2022; Schwartz, 2000). The exploration of Nigeria's oil reserves and subsequently the production of oil was first recorded in 1956 (Holzer, 2007). Shell, through its local subsidiary, the Shell Petroleum Development Company of Nigeria (SPDC), had expanded its business and established a close connection with the Nigerian government throughout the decades, despite the government being unstable and under a military regime (Holzer, 2007). It is worth noting that the military regime received the majority of the profits from oil production, while the local communities were often disregarded or received minimal compensation (Holzer, 2007). On that note, local environmental activist, Ken Saro-Wiwa, among others, advocated for the rights of Ogoni, an ethnic minority group, due to the injustice they have sustained after the regional environmental damage and unfair compensation (Frynas, 2003; Hackett et al., 2021; Holzer, 2007). However, after the successful national and international mobilization efforts of the activists, the military regime sentenced 9 of them and put them on trial illegally (Frynas, 2003; Schwartz, 2000). The aftermath of that trial led to the execution of those 9 people in 1995, despite the opposition of Shell to this matter (Frynas, 2003; Schwartz, 2000).

Some NGOs have heavily criticized Shell for its operations in Nigeria. One of them is Amnesty International, a human rights organization, that has accused Shell of being affiliated with the executions of local activists committed by the Nigerian government (Amnesty International UK, 2020). Another organization that has targeted Shell is Friends of the Earth. The latter has scrutinized Shell for its lacking efforts to conduct a CSR report right after the oil company's operations in Nigeria (Pupovac & Moerman, 2022).

Nevertheless, there has been some acknowledgment of Shell's part in the oil pollution of the environment (Hennchen, 2015). Hennchen, 2015 have explored the responsibilities that multinational corporations hold, while having as a case study Shell and its operations in Nigeria. In their study, they note that Shell was found accountable for its part in the environmental degradation of the Niger Delta in Nigeria, as decided by the Dutch court in 2013 (Hennchen, 2015).

Furthermore, in recent years, Shell was brought again into the public spotlight, due to its partnership with a toy company, LEGO (Hansen & Lundholt, 2021; Reestorff, 2015). In 2014, Greenpeace initiated a global campaign against Shell's plans to drill in the Arctic (Hansen & Lundholt, 2021; Reestorff, 2015). However, instead of solely criticizing Shell for its decisions, the environmental organization thought of an original and controversial way to target the oil company: through its partnership with LEGO, even though the latter company was not involved with those plans in any way (Hansen & Lundholt, 2021; Reestorff, 2015). The outcome of this campaign was the end of the collaboration between these two companies (Hansen & Lundholt, 2021; Reestorff, 2015).

Greenwashing scandals

Although there are some studies that have focused on the events that occurred in Nigeria and the Brent Spar incident among others, recently, there have been some accusations that Shell is promoting misleading content in its communication strategy, leading to greenwashing scandals (Client Earth, 2023a; Global Witness, 2023; Macchi & van Zeben, 2021).

First of all, in 2021, the Dutch court, in the case of Milieudefensie et al. v Royal Dutch Shell, ruled that Shell has to cut its CO_2 emissions by 45% by 2030 compared to its 2019 levels (Macchi & van Zeben, 2021). The reasons behind the plaintiffs' argumentation that led to the court's decision, lie within Shell's unattainable climate strategy and carbon emissions reductions, which do not coincide with the Paris Agreement (Macchi & van Zeben, 2021). In their study, Macchi and van Zeben, 2021 question the responsibility that corporations are liable for, in regard to environmental and human rights, by having as a case study the Milieudefensie et al. v Royal Dutch Shell.

Besides that, Shell has faced a lot of scrutiny lately by Global Witness, an environmental and human rights organization (Global Witness, 2023). The latter has accused Shell and other oil companies of conducting greenwashing through their social media advertisements, violating the UK's Green Claims Code (Global Witness, 2023). Global Witness through its analysis concluded that these companies are actively engaging in greenwashing since they have portrayed their sustainable energy transition in a disproportionate manner (Global Witness, 2023).

On a similar note, the latest scandal Shell has been associated with is a lawsuit from Client Earth, an environmental law organization, that is also a part of Shell's shareholders (Client Earth, 2023a). The non-governmental organization (NGO) has taken legal action against Shell's directors in early 2023, in order to hold them accountable for their plans to mitigate climate change and achieve net zero emissions (Client Earth, 2023a). According to the organization, although the oil company's goals are in line with the Paris Agreement,

its strategy to achieve that is misleading, unreasonable, and lacking, doubting that Shell will reduce its emissions by 45% by the end of this decade, as previously ordered by the Dutch government (Client Earth, 2023a; Macchi & van Zeben, 2021). While Client Earth's actions may be considered drastic, the aim of this legal action is to change Shell's business plan, in order to successfully achieve net zero emissions (Client Earth, 2023a).

2.5 Summary of the State of the Art

In Tables 2.3 and 2.4, an overview of the state-of-the-art can be seen. In the next chapter, the research question along with three sub-research questions that are being investigated in this project is going to be presented.

	Main findings	Citations
Corporate sustainability reporting	Disclosure of information related to sustainability issues and their significance to the business operations	European Commission, 2023a
	Significant increase in the number of companies engaging in sustainability reporting	Herzig & Schaltegger, 2011; KPMG, 2023
	Various reasons behind adopting, depending on companies' view of sustainability	Landrum, 2018; Landrum & Ohsowski, 2018
	5 stages of reporting: Compliance, Business-centered, Systemic, Regenerative and Coevolutionary	Landrum, 2018
	Most used reporting framework: the Global Reporting Initiative (GRI)	KPMG, 2023
	SASB, CDSB, IR framework: Merged with IFRS, to show a united front with the same goals	IFRS, 2023; SASB, 2023a
	EU: Directives that regulate sustainability reporting, such as the CSRD, NFRD, and CSDD US SEC: Proposed rule that focuses on disclosing information about the impact of climate-related risks on the company	European Commission, 2022c 2023b, 2023c; US Security and Exchange Commission, 2022
	Benefits: Boost of brand image and value, legitimacy offer, enhancement of stakeholders relations, competitive advantage gain, assistance in internal and external benchmarking	CDP, 2023; Herzig & Schaltegger, 2011
	Challenges: confusion around "Sustainable development" and "Corporate sustainability" , numerous sustainability reporting frameworks, inconsistencies in the worldwide legislation and disconnection of the reporting from the stakeholders' concerns	Bradford et al., 2017; Herzig & Schaltegger, 2011; Stolowy & Paugam, 2023

Table 2.3. Summary of the main findings of the literature review (1/2).

	Main findings	Citations
Greenwashing	A phenomenon, where companies have poor environmental performance, but communicating it positively	Delmas & Cuerel Burbano, 2011
	Framework of 7 sins: greenwashing detection by focusing on false environmental claims	TerraChoice, 2010
	EU: Green claims Directive launched to decrease greenwashing	Arbinolo, 2023; European Commission, 2020, 2023e
Environmental communication	*"The pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world"*	Cox, 2010
	Introduction of global environmental problems and environmental communicators spread knowledge needed for decision making	Lindenfeld et al., 2012; McEwen, 2014
	Support by policy decisions and infrastructure is needed	UNEP, 2005
	Poor environmental communication: Worsens consumers' perception of a company, and worse case: brand hate	Santos et al., 2023
	Successful CSR reporting: Employee responsible for CSR actions, communicating CSR activities to staff and company website	Hohnen et al., 2007
History of Shell's scandals	1970-1980: Accused by activists for allegedly supplying oil to South Africa, despite the existing sanctions.	Klinghoffer, 1989; Minefee & Bucheli, 2021
	1995: Public sabotage of the disposal of Brent Spar, after Greenpeace's involvement	Frynas, 2003; Grolin, 1998a; Schwartz, 2000
	1990s: Environment and the human rights violations in Nigeria	Amnesty International UK, 2020; Hackett et al., 2021; Pupovac & Moerman, 2022; Holzer, 2007
	2014: End of LEGO-Shell partnership, due to Greenpeace campaign	Hansen & Lundholt, 2021; Reestorff, 2015
	2021: Dutch court rules 45% CO2 emissions cut by 2030, compared to its 2019 levels	Macchi & van Zeben, 2021
	2023: Global Witness accused Shell of conducting greenwashing through their social media advertisements	Global Witness, 2023
	2023: Lawsuit from Client Earth due to misleading climate strategy	Client Earth, 2023a

Table 2.4. Summary of the main findings of the literature review (2/2).

Research Question 3

Sustainability has been an ever-increasing discourse topic and has gained a lot of attention among consumers and companies. The problem analysis has highlighted the role of sustainability reporting as part of companies' environmental communication to consumers and other stakeholders. Sustainability is already a part of the large European-based companies' annual reporting, and with the release of the new EU Corporate Sustainability Reporting Directive (CSRD) 2022/2464/EU, large companies will be obligated to disclose their impacts through their annual reports for the financial year 2024, and small and medium-sized enterprises (SMEs) for the financial year 2026 (European Commission, 2023b).

Even though it will be mandatory for large companies to include sustainability reporting, according to the non-financial reporting directive (NFRD) 2014/95/EU it is not always transparent (European Commission, 2023c). Sometimes, it has been observed that companies engage in non-transparent activities to appear more environmentally friendly than they actually are. As elaborated in section 2.2, companies' poor environmental performance combined with positive communication about their environmental performance is referred to as greenwashing (Delmas & Cuerel Burbano, 2011). This phenomenon can appear in companies' communication through activities such as environmental claims with no proof, vagueness, using false labels, or making unimportant or irrelevant environmental claims (Nemes et al., 2022).

The hypothesis the students would like to investigate for this project is whether the multinational oil and gas company Shell has adopted any greenwashing activities in its communication. As presented in the Problem Analysis chapter, Shell has been scrutinized for numerous greenwashing scandals, such as the case of BrentSpar or the most recent one with ClientEarth (Client Earth, 2023b; Grolin, 1998b). Therefore it is of interest to explore the evolution of the occurrence of greenwashing practices throughout the last decade in this fossil-fuel-based company in two different settings of communication: Shell's sustainability reports (formal mode of communication) and Shell's Instagram posts (informal communication), taking into account the growing trend of sustainability throughout the last decade.

This report aims to contribute to existing knowledge by examining the number of greenwashing claims and their evolution within a fossil fuel-focused company. The occurrence of greenwashing practices is investigated through analyzing its sustainability reports and Instagram account, from the perspective of environmental communication theory and Nemes et al., 2022 framework. The report aims in giving recommendations based on the theory on how to improve environmental communication and avoid

greenwashing practices in the future.

Taking into consideration the above-mentioned statement, the following research question has been formulated, followed by three sub-research questions:

Research Question:

How have greenwashing practices evolved in Shell's communication, and how can they be avoided in the future?

Sub-research Questions

1. *What is the number of greenwashing claims in the last decade in Shell's Sustainability reports and Instagram posts?*

2. *How can these claims be categorized into types of greenwashing?*

3. *How can Shell improve its sustainability communication through environmental communication theory?*

Research Design, Methodology, and Theory 4

In this chapter, we present the research design, the main research question, and the sub-research questions. The aim of the research design is to provide a structure for the project and a guide for the reader, as to what this project is going to focus on, why, and how this is going to be conducted. Afterward, in the next sections, the various methodologies used in this project are going to be elaborated on.

4.1 Research design

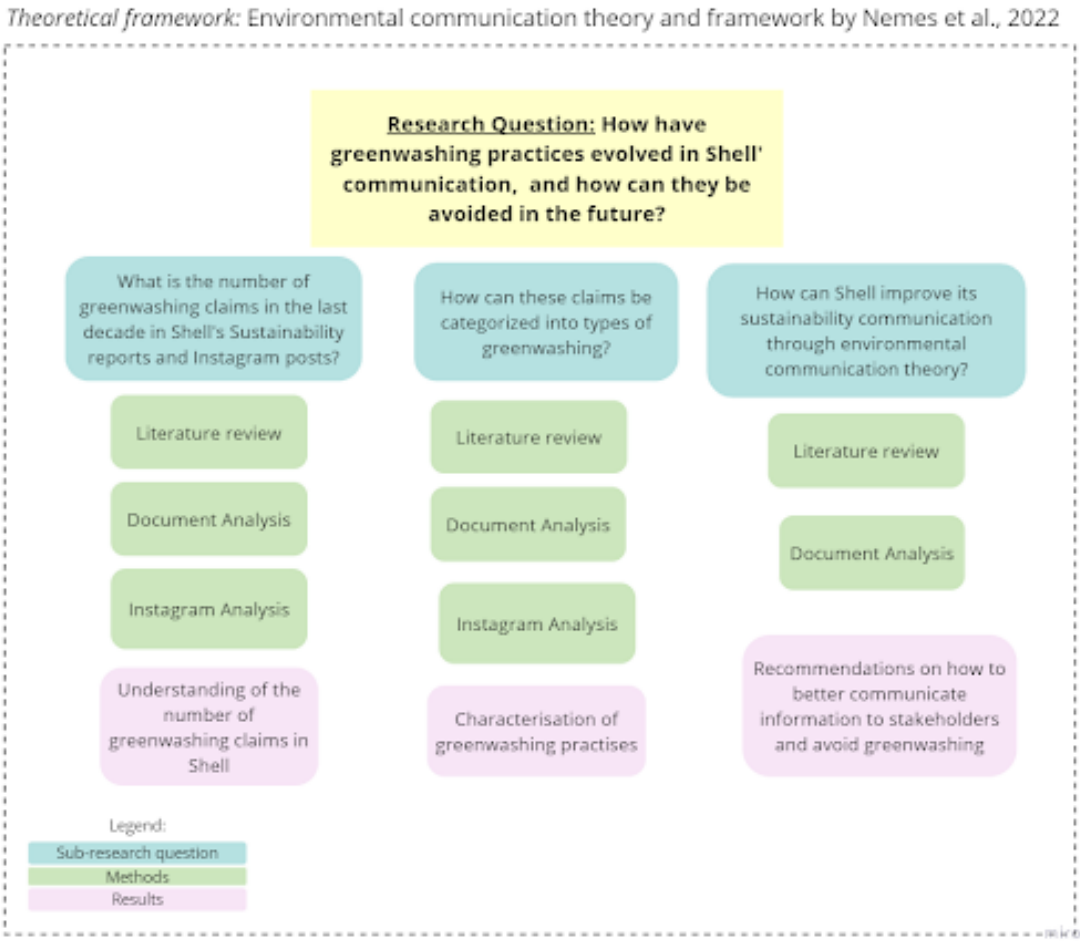


Figure 4.1. *An overview of the research design.*

In Figure 4.1, the outline of the research design is presented. This section, for the readers of this report, provides an understanding of the entire project, since it details how this research has been conducted, along with the reason behind it.

As previously explained in the Problem Analysis, this report investigates whether greenwashing practices have occurred in the energy sector company, Shell, and if so, the evolution of the number of greenwashing claims in the last decade. The reason behind this report is to determine whether greenwashing occurs in an oil and gas company (Shell), and if so, how often it happens in the span of the last 10 years.

In order to pinpoint the number of greenwashing instances, as well as the type of greenwashing, three methods are going to be used: an unstructured literature review, a document analysis, and an Instagram analysis. As part of the document analysis, the sustainability reports, and as part of the Instagram analysis, the Instagram posts, are going to be analyzed. In the Analysis and Recommendations and the Discussion chapters, the focus of the research will also be on good communication practices and the way Shell can avoid misleading content that could result in greenwashing, through the perspective of environmental communication theory.

In Figure 4.1, the research question is presented, along with three sub-research questions, that aim to collectively support and answer the main research question. Furthermore, in Table 4.1, the various methods used to answer each of the sub-research questions are presented.

Sub-research questions	**Methodology**
SQ1: What is the number of greenwashing claims in the last decade in Shell's Sustainability reports and Instagram posts?	• Literature review • Document Analysis • Instagram Analysis
SQ2: How can these claims be categorized into types of greenwashing?	• Literature review • Document Analysis • Instagram Analysis
SQ3: How can Shell improve its sustainability communication through environmental communication theory?	• Literature review • Document Analysis

Table 4.1. *Illustration of the different methods used for the analysis of the sub-research questions.*

For the structure and theoretical framing of the research design, the Environmental communication theory and the framework developed by Nemes et al., 2022 have been used.

Coming up in the next sections, the methodologies used to answer the main research question and sub-research questions will be presented.

4.2 Document Analysis

A significant part of this project's empirical data was gathered through qualitative document analysis, meaning a *"systematic procedure for reviewing or evaluating documents"* that could be in both electronic or paper form (Bowen, 2009). As a document, in this project, we specify a report containing text with or without images, in electronic or printed versions, but not posts on social media accounts. The latter is going to be included in the next section, which is 4.3, Instagram Analysis.

In this project, document analysis was selected since the students wanted to investigate whether any greenwashing practises have occurred in the oil company, Shell, through its sustainability reports, during the last 10 years. A document analysis provided further insight, specific to Shell and the company's way of communicating information to its stakeholders, which is not readily available in the literature. Thus, by establishing a general, up-to-date foundation of knowledge in topics such as sustainability reporting, greenwashing, and environmental communication, as seen in the Problem Analysis chapter, the students were able to examine in depth and gain an understanding of whether Shell is considered to be greenwashing or not in these means of communication.

In order to conduct the document analysis in a structured manner, first of all, all documents dating back up to 10 years were gathered through Shell's website. In Table 4.2, it is possible to see all the documents gathered that are going to be analyzed.

For the analysis of the documents, the students focused on the content and examined them by having as a framework the one constructed by Nemes et al., 2022, as well as the environmental communication theory. The reason for choosing this specific framework is due to the fact that they have built their framework by combining both the latest academic literature and frameworks developed by organizations (such as Greenpeace, BSR, TerraChoice Environmental Marketing, and others). Therefore for the aforementioned reasons, the students deemed relevant the work of Nemes et al., 2022 to apply it in this context.

Based on the framework by Nemes et al., 2022, there are 13 types of claims that could be considered greenwashing. To detect any kind of greenwashing claim in Shell's sustainability reports, Nemes et al., 2022 have provided accompanying questions that could help determine whether an environmental claim is considered greenwashing or not. For example, as shown in Figure 4.2, the question "I.2 While publishing the claim, has the organization failed to disclose all information regarding social and/or environmental performance on the specific aspect the claim refers to?", if answered positively, could point to greenwashing that falls under the category of "Selective disclosure".

The various types of greenwashing and a short description for each one, as described by Nemes et al., 2022, can be seen in Table 4.3.

Year	Sustainability Reports
2013	• Royal Dutch Shell PLC, 2013, 44 pages
2014	• Royal Dutch Shell PLC, 2014, 60 pages
2015	• Royal Dutch Shell PLC, 2015, 60 pages
2016	• Royal Dutch Shell PLC, 2016, 74 pages
2017	• Royal Dutch Shell PLC, 2017, 71 pages
2018	• Royal Dutch Shell PLC, 2018, 86 pages
2019	• Royal Dutch Shell PLC, 2019, 92 pages
2020	• Royal Dutch Shell PLC, 2020, 102 pages
2021	• Royal Dutch Shell PLC, 2021, 93 pages
2022	• Royal Dutch Shell PLC, 2022, 91 pages

Table 4.2. Document analysis: Sustainability reports of Shell from 2013-2022.

Types of greenwashing	Description
Selective disclosure	Claim is based on a narrow set of attributes and distracts consumers from the organization's greater environmental impact
Empty claims	Making claims/policies that either exaggerate achievements, or fail to live up to them
Irrelevant	Proclaiming accomplishments that are irrelevant or already required by law/competitors
Lies	Claims are out-right lying
Just not credible	Claim touts environmentally friendly attributes of a dangerous or highly controversial practice/product/service/policy
Corporate responsibility in action	Claim does not reflect consistent organizational practice
Dubious certifications and labels	Claim has certifications that are prone to greenwash
Political spin	Claim boasts of green commitments, while the organization lobbies against environmental laws
Co-opted endorsements	Claims that greenwash organization's activities are endorsed by other organizations
No proof	Claim cannot be substantiated by easily accessible supporting information
Vagueness	Claim is poorly defined/broad so its real meaning is misunderstood
Misleading symbols	Claim uses visuals and symbols that induce a false perception of the organisation's greenness
Jargon	Claim uses jargon/information that consumers cannot understand/verify

Table 4.3. A description of the 13 types of greenwashing, according to Nemes et al., 2022.

A step-by-step procedure for handling and analyzing the content of the documents can be seen below:

1. *Collection and categorization of all documents that have to be analyzed*

2. *Split the number of documents into 2 and delegate between the two students*

3. *Based on Nemes et al., 2022 framework and the environmental communication theory, each student goes through the documents and highlights any parts that could be considered as greenwashing.*

4. *Each student using the Nemes et al., 2022 framework categorises the claim into 1 or more types of greenwashing*

5. *Analysis, discussion and argumentation for each highlighted section between the two students*

6. *Final categorization of the claims into type(s) of greenwashing*

7. *Analysis of the number of greenwashing practices throughout the 10 years*

After conducting the initial analysis of the documents, which is for every student to review the documents and make argumentation on potential greenwashing claims, the next step is to evaluate and discuss each claim between the two students and determine the type of greenwashing, in case there are any claims that could be misleading. In case of doubts about a claim, the students will inform each other and point out the claim, without revealing the nature of the doubt. Hence it is up to the other student to evaluate whether this claim is valid or not, and the reason for it. If any claim leads to a disagreement between the two parties, the students will first discuss and make arguments for their position to reach a consensus. However, if that is not possible, the two different standpoints will be detailed in the Analysis chapter. Upon determining that for all years between 2013 and 2022, the greenwashing instances can be analyzed from a time perspective, and assess whether it has augmented, remained stagnant, or is non-existent in recent years. In the Appendix, all the recorded greenwashing claims are documented, as a means to provide further detail on the document analysis.

INTEGRATED FRAMEWORK OF GREENWASHING				
Types of claims used in GW	**Description of GW**	**Indicator questions**	**Possible Answers**	**Notes**
IMPACT				
I. Selective Disclosure	Claim is based on a narrow set of attributes and distracts consumers from the organisation's greater environmental impact	I.1 When making/supporting a claim about the product/organisation's environmental impact, has the organisation failed to consider the entire organisation/product/service's life cycle within its area of influence OR failed to assess the cumulative environmental impacts of its or its products' activities? For countries, does the claim cover only territorial emissions/footprints/impacts omitting a) imported ones or b) emissions from international aviation and shipping?	**No = No greenwash**: all LCA stages are included/cumulative impacts of at least the last 5 years (for biodiversity impacts the last 2 decades) are assessed; scope 1-2 is entirely covered and scope 3 is as much as feasibly possible. For countries, emissions from international aviation and shipping OR imported emissions/footprints/impacts are covered. If not all stages/scopes are covered, there is transparency about spatial and temporal boundaries (what is and what is not covered) and even though part of the organisation or product's/service's life cycle/scope 3 emissions are excluded, provisions exist for including them. **Likely greenwash**: e.g. the claim is based on only some part of the organisation's cumulative impacts or product's/service's life cycle or large part of scope 3 is excluded and while system boundaries are transparently communicated, there are no provisions to continuously improve the coverage of all impacts. **Yes = Obvious greenwash**: there is no transparency about the fact that a significant part of LCA/scope/cumulative impact/imported emission or footprint is excluded thereby misleading consumers about the organisation's/product/service's total environmental impact. For countries, there is no transparency about imported emissions/footprints/impacts OR emissions from international aviation and shipping are excluded or not specified in targets. **Unknown**	When assessing a claim related to environmental impacts, the product/service's impact over its whole life cycle (on and off-site) is relevant. For the organisation's impacts, the GRI Standards could provide an extensive list of specific measures. For products, all production steps including (where applicable) extraction through production, use, and post-use need to be included. Life cycle assessment should follow internationally accepted standards (e.g. ISO14000 series, ISO 2006). Claims lead to greenwashing where they reflect only part of the life cycle/impacts and do not make clear which part they refer to thereby creating a misleading impression about the overall impact on the environment. For assessing this indicator, it is important to understand whether a) the exact scope of action and b) the limitations/system boundaries are transparently communicated. Even if not all stages of life cycle or not all scopes/cumulative impacts can be assessed for the claim, if boundaries are clearly communicated (what is and what is not assessed) and there is a clear pathway of improving the coverage of scope, that is not a greenwash.
		I.2 While publishing the claim, has the organisation failed to disclose all information regarding social and/or environmental performance on the specific aspect the claim refers to?	**No = No greenwash** **Yes = Obvious greenwash** **Likely greenwash** **Unknown**	When publishing a positive claim about an aspect of the organisation/product/service which also has a significant negative consequence on the environment without it being disclosed by the organinsation, the claim is considered a greenwash. An example is when there is a conservation/ forest restoration-type claim but forests/other biodiverse ecosystems have been destroyed to make place for tree plantations, or when reforestation/conservation efforts create large scale monocultures. This indicator also relates to claims about projects which while potentially delievering some ecological benefit, intensify existing land disputes and accelerate displacement, violence and impoverishment among local villagers and/or exacerbate poor environmental conditions for local communities.
		I.3 Does the claim a) fail to relate to aspects that are significant in terms of the product/service/organisation's environmental impact OR b) result in an undue transfer of negative impacts?	**No = No greenwash** **Yes = Obvious greenwash**: a or b is true **Likely greenwash:** e.g. a or b is likely true, but evidence is hard to obtain. **Unknown**	The claim needs to relate to aspects that are significant in terms of the organisation/ product/service's environmental impact and should not result in an undue transfer of impacts, i.e. the creation or increase of other negative environmental impacts at other stages of the organisation/product/service's life cycle should be avoided, unless the total net environmental benefit has been significantly improved.
		I.4 Does the claim a) communicate a specific type of product/service/policy as "more green", compared to competitors, even though there is no evidence that the product is "greener" than the usual production/service/policy OR b) refer to 'better' (recycled/certified/sustainable/less carbon intensive/etc.) products/services, while the organisation fails to communicate the ratio of 'better' vs 'conventional' products/services?	**No = No greenwash** **Yes = Obvious greenwash**: a or b is true **Likely** **Unknown**	Absolute claims need to be supported by a high level of substantiation. Comparative claims such as "greener" "friendlier" "more sustainable" can be justified if the advertised product/organisation/service provides environmental benefit over that of the organisations' previous products/services or competitors' products/services, and the basis of the comparison is clear. Similarly, if the advertised "better" products/services only constitute a minority of the same product/service range within the organisation creating the impression that it is the dominant type of product/service, this has to be transparently communicated, otherwise it falls under this category of greenwashing.

Figure 4.2. Part of the integrated greenwashing framework as developed by Nemes et al., 2022

4.3 Instagram Analysis

Besides the document analysis presented in the previous section, another part of this project's empirical data is going to be provided by conducting an Instagram analysis of Shell's Instagram posts. This method was specifically chosen by the students to investigate Shell's presence on social media, more specifically on Instagram, and how it communicates information to its stakeholders through a less formal setting, compared to its sustainability reports. Particularly, by conducting this method of analysis, all posts and videos uploaded on Shell's official account on Instagram will be analyzed depending on their content, so that it can be explored whether they resolve into greenwashing practices.

For this project, the presence of Shell on other platforms, e.g. Facebook or Twitter, will not be taken into consideration. This is due to the fact, that often companies provide the same or similar information on both Facebook and Instagram. Twitter is excluded from the social media analysis, since it has a stronger focus on the interaction between the users, whereas the focus of this report is mainly on the communication from the company to its consumers and stakeholders, not the interaction between them. In combination with the document analysis and the literature review, the Instagram analysis will provide as well, an in-depth and more holistic evaluation of Shell as a company.

To conduct the Instagram analysis thoroughly and systematically, the students decided to establish a specific timeframe and a number of posts to analyze from Shell's Instagram account. The analysis will be conducted on 631 posts that have been uploaded from the 18th of October 2013 till the 8th of March 2023. These dates correspond to the first and last post made by Shell at the time of writing this project.

As shown in the previous section, 4.1, Nemes et al., 2022 framework will be applied in this case as well. In detail, the students will review each post and analyze whether any environmental claims Shell is making, could be considered greenwashing. To gather and analyze this kind of data, the students will review each post thoroughly whether it is a video or an image containing a caption. Again, depending on the framework and the environmental communication theory, any claims will be categorized by type of greenwashing if they exist.

For the Instagram analysis, the following procedure is going to be taken into consideration:

1. *Collection of all Instagram posts that have to be analyzed*
2. *Based on Nemes et al., 2022 framework and the environmental communication theory, the students collectively review the posts (images with captions and videos with-/without captions) and highlight any parts that could be considered as greenwashing.*
3. *Analysis, discussion and argumentation for each highlighted section*
4. *Categorization of greenwashing claims into types*
5. *Analysis of the number of greenwashing practices throughout the 10 years*

The greenwashing claims found in the Instagram posts can be seen in the Appendix.

4.4 Environmental Communication Theory

Environmental communication theory will be used in this project's analysis, to explore Shell's environmental communication through its sustainability reports and Instagram posts, and to provide recommendations on how to improve environmental communication and avoid greenwashing in the future.

Environmental communication is a research niche, that emerged in Europe and North America in the 1980s, and ever since it has become a global field of research and practice (Mocatta & Milstein, 2022). Nowadays, environmental communication offers a transdisciplinary sphere of scholarship, combining social and natural sciences (Mocatta & Milstein, 2022).

According to Milstein, 2009, environmental communication theory is based on the assumption, that *"the ways we communicate, affect our perceptions of the living world, and these perceptions shape how we define our relations with nature and how we act towards nature"*. Environmental communication is informed by social, economic, and political contexts and interests, that shape our perception of nature, letting us see it through particular lenses (Milstein, 2009).

In addition, this theory is also used as a means to drive a societal change regarding the environment (Milstein, 2009). According to R. Cox, 2007, environmental communication theory offers the possibility to *"enhance the ability of society to respond appropriately to environmental signals relevant to the well-being of both human communities and natural biological systems,"*. In other words, humans have an active role and an ethical responsibility in creating a society beneficial for both humans and the environment (R. Cox, 2007).

The research of environmental communication usually falls under seven different areas of study (R. J. Cox, 2010). These areas are:

1. *Environmental rhetoric and discourse.* This refers to the discourse of environmental groups, media and websites, and nature writing, among others.

2. *Media and environmental journalism.* This area focuses on the ways in which nature and environmental problems are portrayed in the news, advertising and commercial programs, as well as on the effects of media on public attitudes.

3. *Public participation in environmental decision making.* This study area focuses on the opportunities and barriers in involving public in environmental decision-making.

4. *Social marketing and advocacy campaigns.* This refers to campaigns, that aim to change the public's behaviour in order to reach an environmental goal.

5. *Environmental communication and conflict resolution.* This study area aims in finding alternative solutions to environmental conflicts.

6. *Risk communication.* This study area focuses on either the effectiveness of communication strategies for disseminating technical information about health risks to potentially affected populations, or on the impact of cultural understandings of risk on the public's judgment of the acceptability of a risk.

7. *Representations of nature in popular culture and green marketing.* This refers to the influence, that popular music, television shows, photography, and commercial advertising have on our attitude towards nature.

(R. J. Cox, 2010)

In the following chapter, the analysis of the data gathered in Shell's sustainability reports and Instagram posts from the last decade will be presented. In addition, recommendations for Shell on how to avoid greenwashing based on the environmental communication theory will be suggested.

Analysis and Recommendations 5

In this chapter, the project's research question: *How have greenwashing practices evolved in Shell's communication, and how can they be avoided in the future?*, will be addressed and answered by the analysis of all the data gathered.

In the first section of this chapter, the total number of greenwashing claims gathered by Shell's sustainability reports (2013-2022), as well as the most common topics of the Sustainability reports' greenwashing claims will be analyzed. In addition, the characterization of the greenwashing types as per the applied framework in this project (Nemes et al., 2022), will also be analyzed. All of the above will lead to the answer to the first sub-research question, *What is the number of greenwashing claims in the last decade in Shell's Sustainability reports and Instagram posts?* and second sub-research question, *How can these claims be categorized into types of greenwashing?*

In the second section, recommendations will be given to Shell through the perspective of the environmental communication theory, in order to potentially improve its communication with its stakeholders and reduce the risk of greenwashing. This will therefore lead to the answer to the third sub-research question, which is: *How can Shell improve its sustainability communication through environmental communication theory?*

5.1 Sustainability report Analysis

The data gathered from the Sustainability reports will be analyzed and presented into two different subsections, 5.1.1, about the number of claims, and 5.1.2, about the types of greenwashing. The full list of all greenwashing claims, both from the sustainability reports and Instagram posts can be seen in the Appendix.

Based on the theoretical framework presented in sections 4.2 and 4.4, the total number of greenwashing claims encountered will be analyzed. First of all, the theory is used in both Shell's sustainability reports and Instagram posts to detect greenwashing. In particular, the theory was used to assess the transparency of the reports and posts, meaning whether clear and precise language or unexplained technical language was used. Besides that, the theory is also applied to provide recommendations to Shell to potentially improve its environmental communication, as explained later on in section 5.3. Nevertheless, all aforementioned points are also covered by the Nemes et al., 2022 framework. The further contribution of the framework was the characterization of the Greenwashing claims into 13 different types.

5.1.1 Number of Greenwashing claims

For the last decade (2013-2022), the overall number of greenwashing claims in Shell's annual sustainability reports was analyzed and therefore can be observed in Figure 5.1. The total number of claims that the students deemed as greenwashing was 160 for all analyzed documents (Figure 5.1).

As seen in Figure 5.1, although the number of greenwashing claims in the annual sustainability reports has been varying from 8 to 22 claims, it should be noted that the lowest number of greenwashing claims appears in Shell's latest sustainability report. On the one hand, the potential reason behind this result could be the fact that in the latest Sustainability Report, (Royal Dutch Shell PLC, 2022), Shell has been using less text to disclose information about its environmental performance compared to previous years and has instead focused on increasing the use of links that refer all interested parties to visit, should they require any more information on the matter. Supporting this statement, the external review Panel that assessed Shell's sustainability report in 2022 also commented on the change as can be seen in the below statement:

"In 2021, Shell significantly changed its approach to sustainability reporting in order to focus more on the data and less on qualitative and contextual information, which is now referenced on its website. This has resulted in a far more concise and logical report with links to further information located on Shell.com".
Royal Dutch Shell PLC, 2022, p.10

Thus, it is making it harder to spot greenwashing, as well as for the stakeholders to review the information, gathered all in one place. On the other hand, another underlying positive cause for the low number of greenwashing claims could be the increased clarification of technical terms (eg. biodiversity or biofuel), so that every reader can comprehend easily.

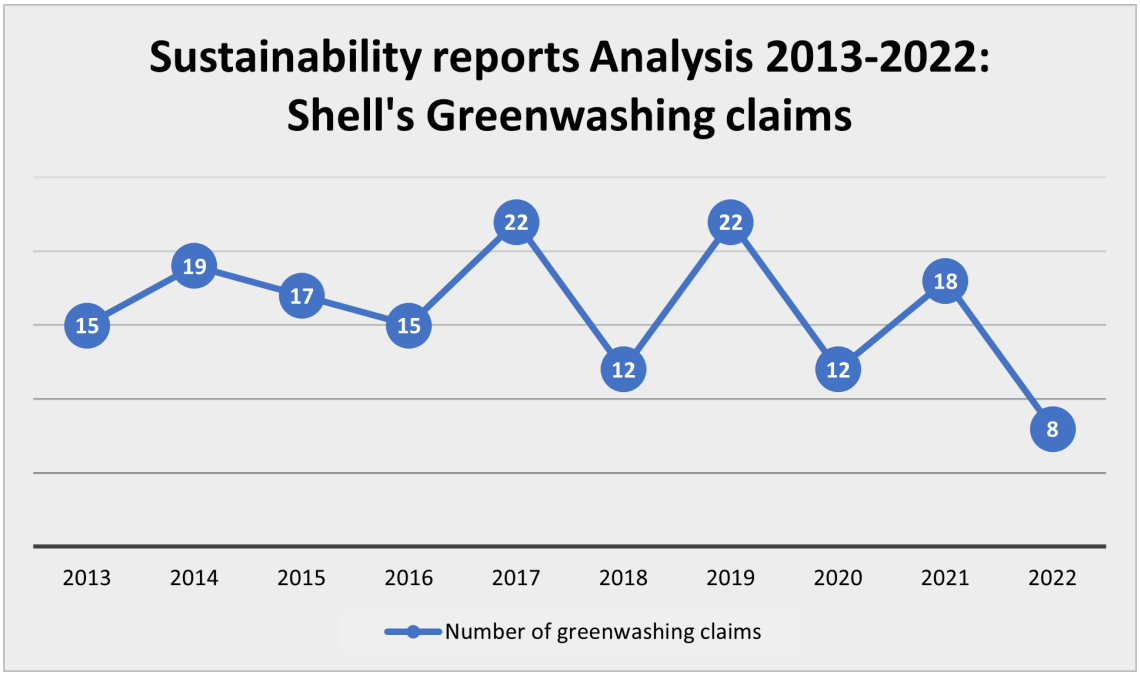


Figure 5.1. *Greenwashing claims in Shell's Sustainability reports for the years 2013-2022 (n=160).*

Furthermore, in order to better understand the areas that the greenwashing claims belong to, the students deemed it relevant to categorize each claim into a topic based on the content of the claim. For example, the below claim is referring to natural gas being the cleanest fossil fuel, hence the topic chosen for this claim is "Natural gas".

*"Gas is the **cleanest fossil fuel**, producing half as much carbon dioxide (CO_2) as coal in power generation and less local pollution."*
Royal Dutch Shell PLC, 2013, p.3

All of the topics that the claims were divided into, can be seen in Figure 5.2. Greenwashing claims that were found more than 2 times throughout the sustainability reports were placed into a topic category, whereas greenwashing claims that were detected either once or twice were combined into the category "Other". The reason behind grouping the claims into topics is to have an overview of what Shell is potentially misleading stakeholders. In addition, by gaining an understanding of the topic areas that are perhaps problematic and prone to greenwashing, the students will be able to focus on and provide better recommendations to address the issues through the environmental communication theory in section 5.3. Taking that into consideration, it can be seen in Figure 5.2, that there is a plethora of different topics that the claims belong to, with the most common being "Natural gas", "Carbon capture and storage" and "Sustainable energy".

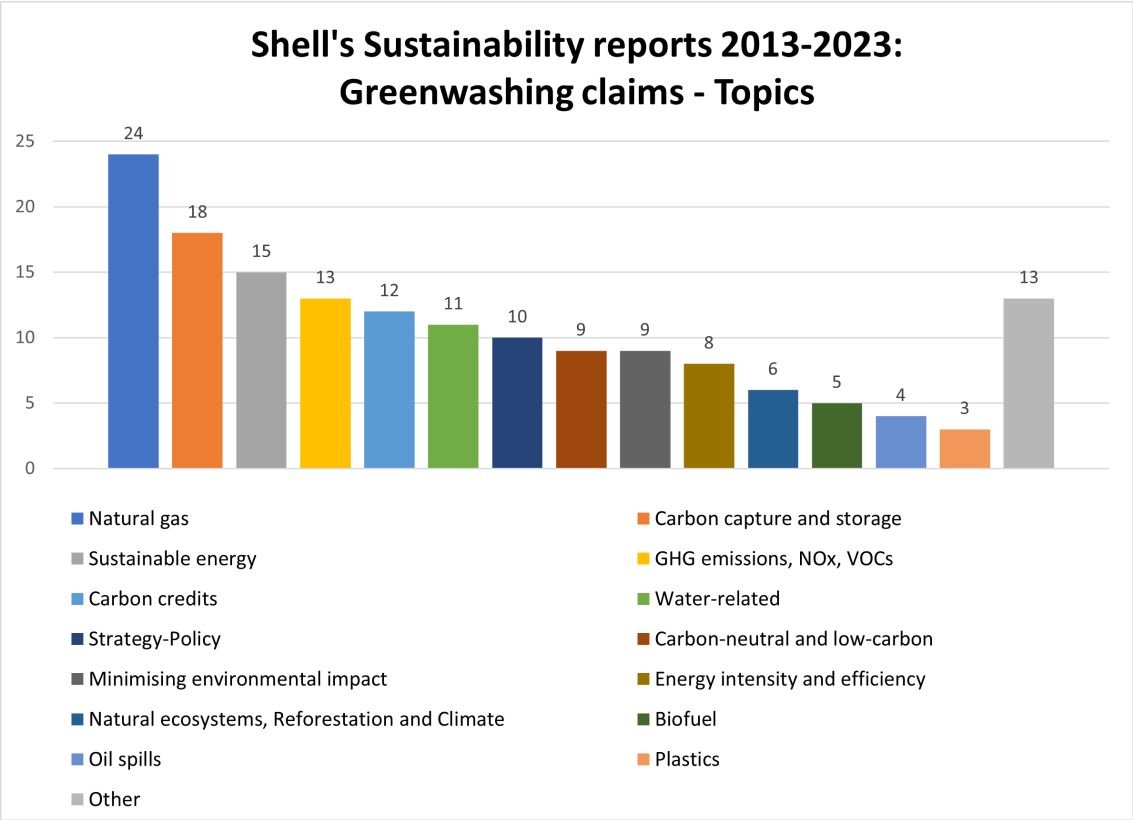


Figure 5.2. *Categorization to topics of Shell's Sustainability reports' Greenwashing claims for the years 2013-2022 (n=160).*

5.1.2 Types of Greenwashing

In this subsection, the types of greenwashing encountered in Shell's sustainability reports will be analyzed, in order to answer the second sub-research question *How can these claims be categorized into types of greenwashing?*. The emergence of the types is analyzed from the perspective of formal communication, through Shell's sustainability reports. The perspective of the environmental communication theory is also used in the analysis, as previously mentioned in section 5.1. It is worth noting that the analysis and categorization of the claims are based on the interpretation of the theoretical framework from the students' perspectives.

First of all, Figure 5.3 gives an overview of the greenwashing claims in Shell's sustainability reports 2013-2022, divided into 11 categories. The framework developed by Nemes et al., 2022 to detect and categorize greenwashing, contains 13 categories in total, but two of these categories; *Political spin* and *Co-opted endorsement* were not detected in the sustainability reports. One reason, why these two types of greenwashing were not included is that they are not within the scope of a sustainability report. For *Political spin*, there is a need for knowledge of Shell's positioning to current environmental laws, in order to determine whether the company is in favor or against them, while still making a green claim. For *Co-opted endorsement*, knowledge of potential greenwashing activities of Shell's partners would be required. Overall, this kind of information is not a part of Shell's sustainability reports, and therefore the two types were deemed irrelevant in this case.

From the figure 5.3, it can be seen, that the category that is represented the most in the reports is *Selective disclosure*, which was identified 99 times in total. After that, the category *Vagueness* was detected 30 times, followed by *No proof* 16 times. The rest of the categories were found in the sustainability reports less than 16 times.

It is worth noting that while the total number of greenwashing claims in Shell's sustainability reports for 2013-2022 is 160, due to some of the claims belonging to multiple types, the total number of claims in Figure 5.3 and Table 5.1 amounts to 180. To elaborate, some of the claims are applicable to multiple types of greenwashing, not just one. For example, the below claim belongs to two types; *Vagueness* and *No proof*. The reason for being a part of the first type is due to not defining how natural gas is considered to be cleaner-burning and compared to what and by how much, whereas for the second type, the reason is that Shell has not provided proof to substantiate their claim. Therefore, there are occasions where a claim can be suited to more than one type.

"The use of ***cleaner-burning natural gas****, especially in power generation, can help to build a* ***sustainable energy system****."*
Royal Dutch Shell PLC, 2013, p.14

The sum of the claims based on each type can be seen in Figure 5.3 and Table 5.1, and amounts to 180 in total.

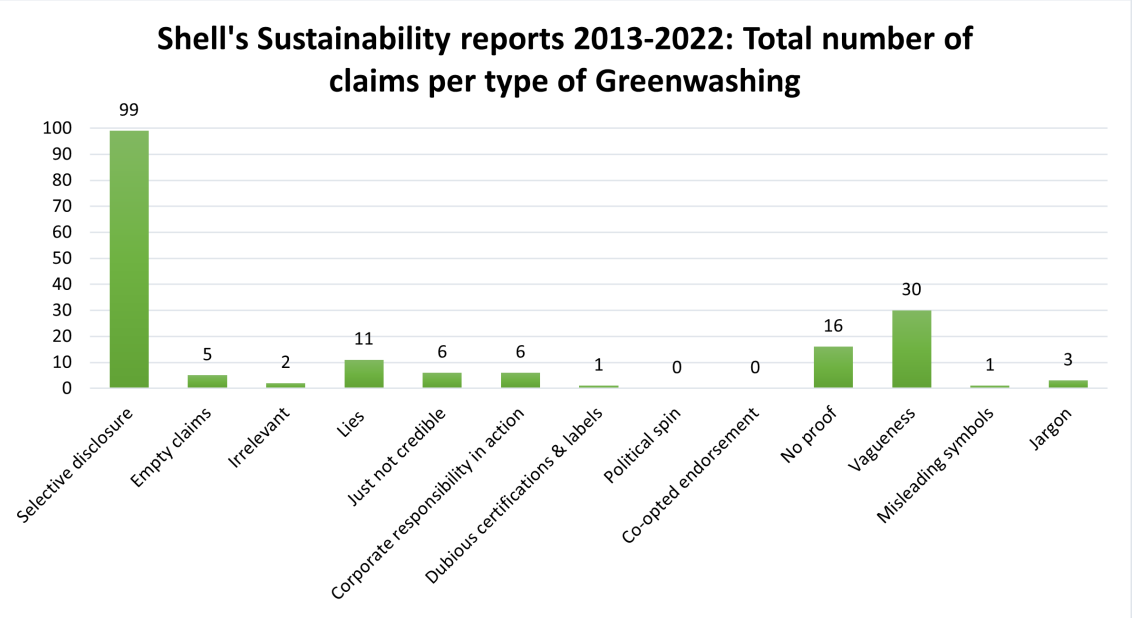


Figure 5.3. *Greenwashing claims from Shell's sustainability reports 2013-2022 divided into categories by Nemes et al., 2022*

	Year									
Type of Greenwashing	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Selective disclosure	7	10	11	15	10	7	11	9	12	7
Empty claims	-	-	-	-	3	-	1	-	-	1
Irrelevant	-	1	1	-	-	-	-	-	-	-
Lies	1	1	-	-	2	4	3	-	-	-
Just not credible	-	-	-	-	3	1	1	1	-	-
Corporate responsibility in action	2	-	-	-	1	-	1	-	2	-
Dubious certifications and labels	-	-	-	-	-	-	-	1	-	-
No proof	3	5	1	3	1	1	2	-	-	-
Vagueness	5	3	6	-	5	1	5	1	4	-
Misleading symbols	-	-	-	-	-	-	-	1	-	-
Jargon	1	1	-	-	-	1	-	-	-	-
Total	**19**	**21**	**19**	**18**	**25**	**15**	**24**	**13**	**18**	**8**

Table 5.1. *Analysis results of Shell's Sustainability reports 2013-2022: Number of Greenwashing claims divided into the Types of Greenwashing (Nemes et al., 2022). The Greenwashing types "Political spin" and "Co-opted endorsement" are not included in the table above, since there were no Greenwashing claims found, that belonged to those categories.*

Table 5.1 shows an overview of the number of greenwashing claims divided into 11 categories for each year. Based on the aforementioned table, it can be seen, that *Selective disclosure* is the most represented type of greenwashing in all of the sustainability reports. When it comes to other types of greenwashing, there is more variety between different years' reports in terms of the number of claims and the number of detected greenwashing types. The most common types of greenwashing are analyzed below through examples.

Selective disclosure

By definition, selective disclosure emerges, when *a claim is based on a narrow set of attributes and distracts consumers from the organization's greater environmental impact* (Nemes et al., 2022). From the document analysis, the majority of the claims fall into this category, and claims of this type represent different topics mentioned in Table 5.2. One of the most common claims representing *selective disclosure* is the one that concerns carbon capture and storage (CCS). This technology is mentioned in all of the sustainability reports as a means of lowering Shell's carbon emissions. However, according to IPCC, 2005, during the entire process, there can occur additional emissions, such as transport emissions, fugitive emissions during capture, and long-term physical leakage of stored CO_2, and therefore the process is much more complicated than it sounds and not as effective if not properly managed. In addition, by focusing on offsetting its emissions by using CCS rather than concentrating on reducing its own emissions, Shell's actions regarding CCS fulfill the criteria of *Selective disclosure*.

In the examples below, CCS is presented as an essential factor in achieving an above 2°C pre-industrial temperature scenario, in alignment with the goals set by the Paris Agreement.

"The International Energy Agency estimates that without CCS the cost of achieving a 2°C scenario could be around 138% higher. Over time, CCS could capture enough CO_2 to deliver a 13% reduction in overall emissions needed by 2050 to limit the rise in global temperature to 2°C. CCS is currently the only technology that can capture industrial CO_2 emissions."
Royal Dutch Shell PLC, 2015, p.14

&

"Natural gas can also be used in combination with carbon capture and storage (CCS) to reduce CO_2 emissions. CCS could remove up to 90% of CO_2 emissions from power generation and play a key role in supporting the shift to a lower-carbon future." Royal Dutch Shell PLC, 2015, p.16

In fact, the International Energy Agency supports that CCS is to play a role, among others, in reducing overall emissions. However, Shell does not take effective measures to reduce its own emissions in order to reach the climate goal but heavily relies on CCS. While CCS can be a useful tool that should not be disregarded or dismissed as a technology, it should also not be the only option to reduce emissions. In order to achieve a sustainable energy future, society's overall consumption rate should be put into perspective.

On a similar note, offsetting Shell's own and its partners' emissions through investing in carbon credits and reforestation is seen as *Selective disclosure*. Mentioning carbon credits as a means of reducing emissions can be problematic, since it distracts the reader from the fact, that Shell reinforces the continuous use of fossil fuels. In the quote below, Shell claims, that the carbon credits the company offers to customers, will help them compensate for the carbon emissions from Shell's products. However, by encouraging customers to buy its products together with the carbon credits, Shell is contributing to more GHG emissions, since the company reinforces the use of fossil fuels, and sustains their power in the global market, instead of choosing more environmentally friendly options and phasing out fossil fuels. Thus, offering carbon credits can be seen as one contributing factor to the creation of a vicious circle, where Shell produces more oil and gas because customers are willing to buy more. Furthermore, according to Trouwloon et al., 2023, using carbon credits can possibly undermine the efforts for reaching the goals of the Paris Agreement, since the emissions reduction may be overestimated.

> *"We offer customers the opportunity to purchase high-quality carbon credits with the Shell fuel they buy to help compensate for the CO_2 emissions generated by the extraction, refining, distribution and use of the product"*
> (Royal Dutch Shell PLC, 2022, p. 32)

When it comes to investments in reforestation, similarly to CCS, it is not a simple way to compensate for emissions, since reforestation is a long process and therefore trees do not sequester the same amount of carbon at every point of their life cycle, and thus that cannot compensate for carbon emissions in a short time perspective (Lefebvre et al., 2011). In addition, other factors not taken into consideration when using reforestation to compensate CO_2 emissions, involve the omission of the GHG emissions when planting trees into a plot, as well as when the ones released from the decomposition of trees, and the inevitable losses of trees (Lefebvre et al., 2011).

While Shell claims, that its goal is to align with the Paris Agreement to reduce its emissions towards the end of the century, in its report from 2018, the company also mentions, that it has *"no immediate plans to move to a net-zero emissions portfolio over [the company's] investment horizon of 10-20 years."* (Royal Dutch Shell PLC, 2018, p.1). In essence, on the one hand, the company was committed at that time to reducing its carbon emissions by half by 2050, but on the other hand, it does not plan for the next 10-20 years to invest in a net-zero portfolio, thus omitting essential information every time the company mentions its alignment with the Paris Agreement. Even though Shell has disclosed its intentions, its commitment to invest in net-zero emissions projects after 10-20 years, is mentioned at the beginning of the report as a postscript and nowhere after that.

Therefore, this claim is considered to be Selective disclosure, since Shell does not make clear its intentions throughout the report. A disadvantage of the use of notes in sustainability reports is that they appear less visible to the reader. Thus Shell is risking the reader avoiding this section and potentially misleading them by leading to an erroneous positive impression. On a positive note, contrary to 2018, the company has created both short and long-term goals in its 2022 sustainability report to achieve carbon neutrality by 2050 (Royal Dutch Shell PLC, 2022, p.66).

In the sustainability reports through the years 2013-2022, there are multiple other cases, where Shell is selectively disclosing or omitting to disclose information regarding its environmental performance. For example, in the claim below Shell declares that the company will have an energy management plan for projects that are expected to produce more than 50,000 tonnes of carbon dioxide equivalent emissions, but they do not disclose, how projects with lower amounts of carbon dioxide will be managed.
"We require projects and facilities that we operate to have a greenhouse gas (GHG) and energy management plan in place if they are expected to produce, at peak, more than 50,000 tonnes of carbon dioxide equivalent emissions." (Royal Dutch Shell PLC, 2021, p. 61)

When it comes to not disclosing information transparently, in 22 cases Shell fails to inform the reader of the reasons behind its emissions reduction or increase. By using phrases *this is mainly due to* or *partly due to*, the reader is possibly misled by the disclosed reasons for these reductions, as shown in an example below.
"The decrease was mainly due to the change in oil sands mining reporting boundary and changes in calculation methodologies at some of our facilities (for example in Australia to align with regulatory methodologies)."
(Royal Dutch Shell PLC, 2017, p.56)

In a similar vein, the company also fails to disclose clearly the total number of oil spills, since the cutoff for this performance indicator is 100 kilograms. In other words, Shell only discloses oil spills above 100 kilograms, not the total number of oil spills irrespective of their weight. The reason behind choosing the cutoff for this indicator to be 100 kilograms is unspecified in the sustainability reports.

"There were 69 operational spills of more than 100 kilograms in 2020 compared with 67 in 2019."
(Royal Dutch Shell PLC, 2020, p. 30)

Other examples from this greenwashing category are mentions of minor achievements, that distract readers' attention from the greater environmental impact. In the claim below, Shell deflects the reader from its effects on biodiversity, which result from the company's operations. Mentioning the placement of radio towers so as to not affect biodiversity, is seen as a very minor act compared to the fact, that Shell is operating in sensitive and vulnerable environments and causing harm to local biodiversity. By mentioning minor positive achievements, the whole operation sounds greener to the reader.
"To minimise the environmental impact, we placed the radio tower on the ridge during frozen ground conditions, using track equipment and solar panels."
(Royal Dutch Shell PLC, 2017, p.35)

One way that Shell continuously distracts the reader from the company's greater environmental impact is through claims about natural gas. In the claim *"Shell produces natural gas, the cleanest-burning fossil fuel"* (Royal Dutch Shell PLC, 2013, p.3), Shell refers to natural gas as the cleanest burning hydrocarbon. This statement is seen as misleading since even though natural gas has lower carbon emissions compared to coal, it still contributes to methane emissions which is an effective greenhouse gas. By using the word 'cleanest burning', Shell distracts the reader from the environmental impacts, that result from burning natural gas. In addition, the word 'clean' has a positive connotation

by default, and is not associated with pollution. Therefore mentioning the word when talking about fossil fuels is considered greenwashing since it gives an erroneous impression that fossil fuels are free from pollutants.

Vagueness

The category, that is the second most common among the greenwashing claims in Shell's sustainability reports, is *vagueness*. This type of greenwashing claim is defined as *poorly defined/broad so its real meaning is misunderstood*. In Shell's sustainability reports, *Vagueness* is detected in terms, that describe Shell's products but are not defined well enough. Examples of these kind of terms are *lower carbon* (Royal Dutch Shell PLC, 2021, p. 30), *cleaner burning* (Royal Dutch Shell PLC, 2019, p. 47) or *cleaner fuel* (Royal Dutch Shell PLC, 2013, p. 16). When reading these terms, the reader cannot be sure, what is meant by them, and by using broad and vague terms to describe its products, Shell possibly misleads the reader from the real meaning behind these terms.

Dubious labels & certificates

A claim belongs to this category when a *claim has certifications that are prone to greenwash (Nemes et al., 2022)*. In the sustainability report 2020, there is a label about CO_2 neutrality. However, this label is not recognized by third parties, and it is not found outside Shell's sustainability reports. Therefore, in addition to the claims of being carbon neutral, using this self-made unverified by third parties label is considered greenwashing.

Figure 5.4. *Unverified by a third party label used in Shell's sustainability report 2020 (Royal Dutch Shell PLC, 2020, p. 2)*

No proof

This type of greenwashing is defined as *claims, that cannot be substantiated by easily accessible supporting information*. In Shell's sustainability reports, the company makes environmental claims with no proof that the claim is actually true. For example, by claiming, that *"The plant is more energy efficient than an average LNG plant."* (Royal Dutch Shell PLC, 2014, p.26), Shell does not provide concrete quantifiable supporting information about how much more energy efficient its plant is, or how this is measured.

Lies

In addition, in the sustainability reports, there are claims, that are simply not true. For example, Shell claims, that *"In our projects and operations, our primary aim is to avoid impacts on biodiversity and ecosystem services." (Royal Dutch Shell PLC, 2017, p.52).* Claiming, that avoiding impacts on biodiversity and ecosystem services is the primary aim of its operations can be considered as a lie, since Shell's actions, such as drilling oil in vulnerable ecosystems have grave effects on the biodiversity of the area (Jones et al., 2015).

Jargon

As defined by Nemes et al., 2022 *claim uses jargon/information that consumers cannot understand/verify.* In Shell's sustainability reports, jargon emerged through using technical or scientific terms, that the common reader cannot simply comprehend. Examples of such terms, whose meaning is not explained in the reports, are *biofuels* (Royal Dutch Shell PLC, 2013, p. 10), *biodegradable* (Royal Dutch Shell PLC, 2014, p. 40) and *voluntary carbon credits* (Royal Dutch Shell PLC, 2018, p. 54).

Empty claims

Empty claims are considered the ones that *exaggerate achievements or fail to live up to them* (Nemes et al., 2022). In Shell's sustainability reports, a claim representing this type is regarding the company's commitment to end plastic waste. In 2020, Shell committed to recycling 1 million tonnes of plastic waste by 2025 through pyrolysis.

"Shell has an ambition to use 1 million tonnes of plastic waste as raw material at our chemical plants by 2025. Using a technique called pyrolysis, we use plastic waste to produce chemicals, which can be used to make plastics again." (Royal Dutch Shell PLC, 2020, p. 61)

However, in the latest sustainability report, the company retracted its statement and, as per the type's definition, "failed to live up" to its claim, since Shell cannot meet the target in a profitable manner.

"Due to market factors, such as lack of available feedstock and progress in technology development, Shell's ability to profitably meet its 1 million tonne plastic waste ambition by 2025 is unfeasible.", (Royal Dutch Shell PLC, 2022, p. 43)

5.1.3 Summary of Sustainability report Analysis

Taking into consideration all the aforementioned statements, in this part of the analysis, all the data gathered from Shell's sustainability reports 2013-2022 has been presented in terms of their total number and the topics they belong to, as well as the types of greenwashing, that the claims represent. In the sustainability reports during the last decade, the recorded greenwashing claims have varied in number, with the lowest one recorded in the last report in 2022. The reasons behind this result could be attributed to changes that have both a positive and a negative effect. On the one hand, Shell has been more meticulous with the use of thoroughly explained technical language. On the other

hand, the company has augmented the use of links in its environmental performance, thus overcomplicating matters for the readers to gain a holistic view, should they not wish to spend time and effort visiting various internet links for more information. In addition, the topics of the greenwashing claims gave an overview of the potentially problematic areas that Shell should pay extra attention to when disclosing information, with the most predominant being natural gas, followed by carbon capture and storage technology (CCS).

For the sustainability reports, selective disclosure was the most dominant greenwashing type, and the second and third most represented types were *Vagueness* and *No proof*. For the document analysis, two types (*Co-opted endorsement* and *Political spin*) were not detected in the analysis. One possible reason why the *Selective disclosure* category is the most common among the greenwashing claims in Shell's sustainability reports is, that the definition of this type is quite broad, and the framework by Nemes et al., 2022 offers multiple different examples of claims that belong to this category. In addition, a couple of times, when a claim is applicable to two categories simultaneously, selective disclosure is one of these categories, due to its broad definition.

The following section will present an analysis of the Instagram posts during 2013-2023 for both the total number of detected greenwashing claims, as well as for the greenwashing types.

5.2 Instagram posts Analysis

In this section, the analysis of the Instagram posts will be conducted, in order to answer both the first and second sub-research questions: *What is the number of greenwashing claims in the last decade in Shell's Sustainability reports and Instagram posts?* and *How can these claims be categorized into types of greenwashing?*.

5.2.1 Number of Greenwashing claims

In Figure 5.5, the total amount of greenwashing claims per year (27), that was detected in Shell's 631 Instagram posts, can be seen. It is worth noting that as was the case for the sustainability reports, the number of greenwashing claims varies and does not have a clear indication of if it is increasing or decreasing. By observing Figure 5.5, one can make the assumption that since there are zero greenwashing claims for the year 2023, Shell has better environmental communication than the previous years. That assumption would be incorrect since it lacks context. In particular, in Figure 5.7, the total amount of posts uploaded per year can also be observed. As it seems in Figure 5.7, Shell has decreased its engagement through posts on Instagram to less than 10 posts per year since 2020. The reasons behind its decision to disengage from its Instagram account are unknown, but it is worth noting that Shell is still active on the platform.

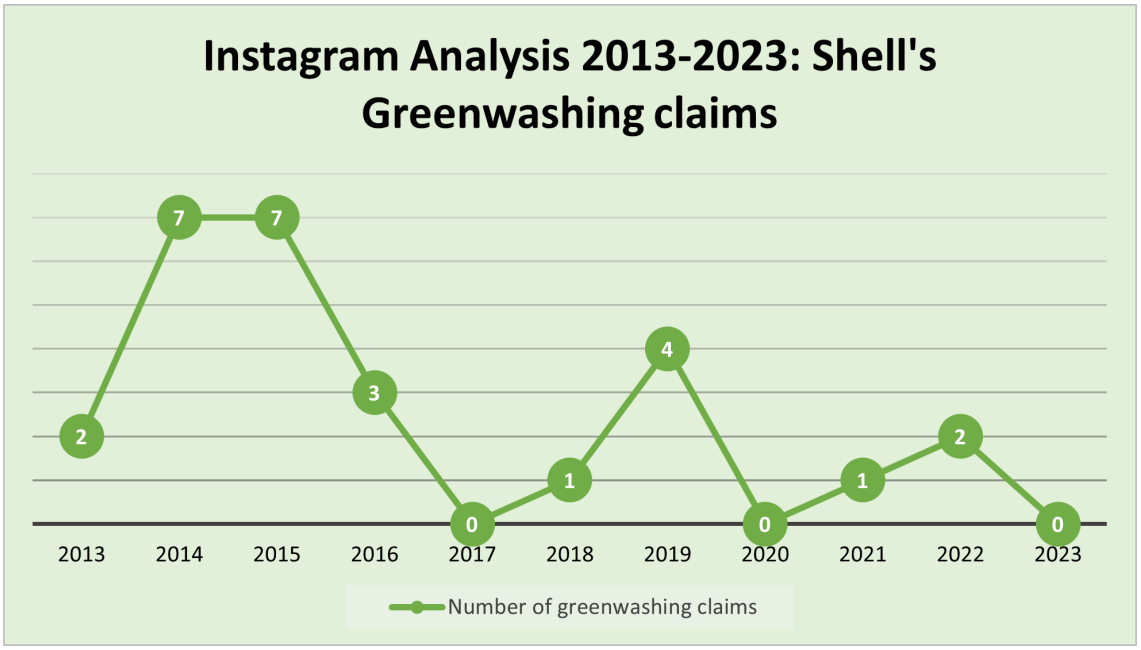


Figure 5.5. *Greenwashing claims in Shell's Instagram posts for the years 2013-2023 (n=27).*

In order to comprehend Shell's focus on the nature of Instagram posts, an analysis, and categorization of the content of posts was conducted. Based on the content, all 631 posts were divided into three categories: Environment, Operation, and People. These three categories were chosen, since during the analysis of the posts, their contents were represented by the aforementioned most common categories. The reason behind dividing the posts into categories was to determine the company's primary focus on its Instagram

account and assess whether the environmental posts were the most predominant. In their study, Global Witness, 2023 found that social media advertisements of some oil companies, among them being Shell, were mainly focused in a disproportionate manner on the companies' green initiatives and thus concluded that these companies are greenwashing (Global Witness, 2023). Therefore it was of interest to the students to investigate whether the same applies to Shell's Instagram posts.

In the first category, Environment, all posts that had a reference to nature and green claims, were included. In the second category, Operation, all posts that mentioned the company's actions and operations, were included. The third category, People, contains posts that either involve employees' actions in Shell's operations or the company's community engagement events. The percentage of each category was calculated as followed: Number of posts in Category X/ Total number of posts within the timeframe x 100.

In Figure 5.6, all of the Instagram posts divided into the 3 categories, can be observed. It can be noted that the majority of the posts, 56%, belong to the "People" category and thus were related to employee and community engagement. The second largest portion of posts was the "Operation" category, with 30% of the posts, while the environment-related posts comprised only 14% of the total number of posts.

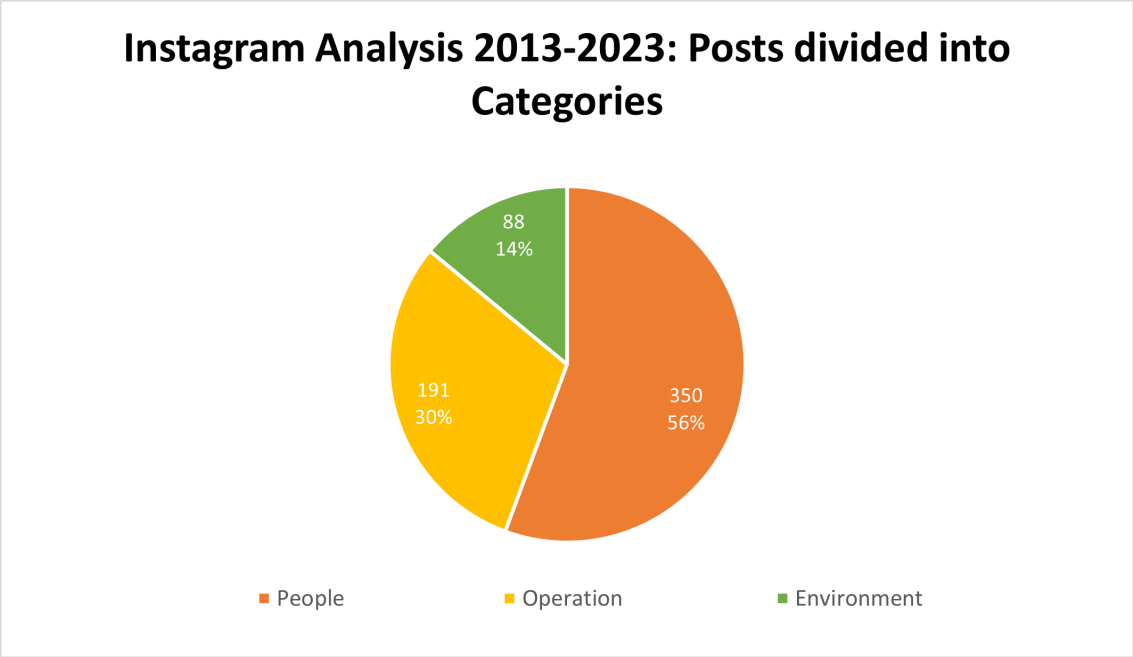


Figure 5.6. *Categorization of Shell's Instagram posts (2013-2023) into 3 categories, based on content: Environment, People, Operation.*

Taking the above statement into consideration, it can be noted that the main focus of Shell in its official Instagram account is not conveying information about its environmental performance, but rather disclosing information about its initiatives and outreach actions to its stakeholders and community. However, the percentage of the posts that belong to the three categories represents the overall posts that Shell uploaded during 2013-2023. On a yearly basis, the proportions of each category fluctuate, and as previously mentioned,

there has been minimal post-engagement in Shell's account during 2020-2023 (Figure 5.7).

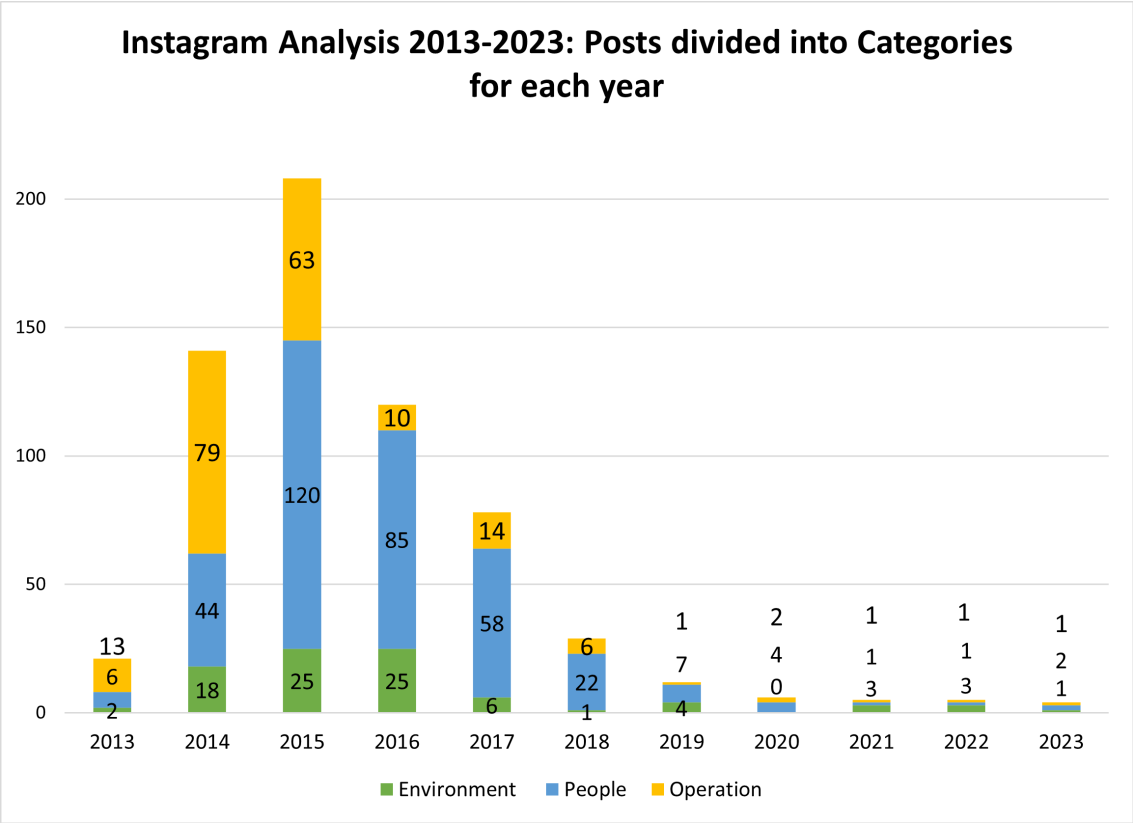


Figure 5.7. *Categorization of Shell's Instagram posts (Environment, People, Organization) per year, during 2013-2023.*

5.2.2 Types of Greenwashing

Figure 5.8 shows the total number of greenwashing claims from Shell's Instagram account divided into categories of the framework by Nemes et al., 2022. In total, 8 of the 13 categories were represented in the Instagram posts, leaving 5 categories; *Irrelevant, Dubious certifications & labels, Political spin, Co-opted endorsement* and *Jargon* out.

In figure 5.8 it is shown, that *Selective disclosure* was the most represented category for the greenwashing claims in the Instagram analysis since 44% of the claims belong to this category. The second and third most represented categories are *Vagueness* and *No proof*. This aligns with the results from the document analysis, where these three categories also existed the most. Examples of posts belonging to different greenwashing categories are presented below.

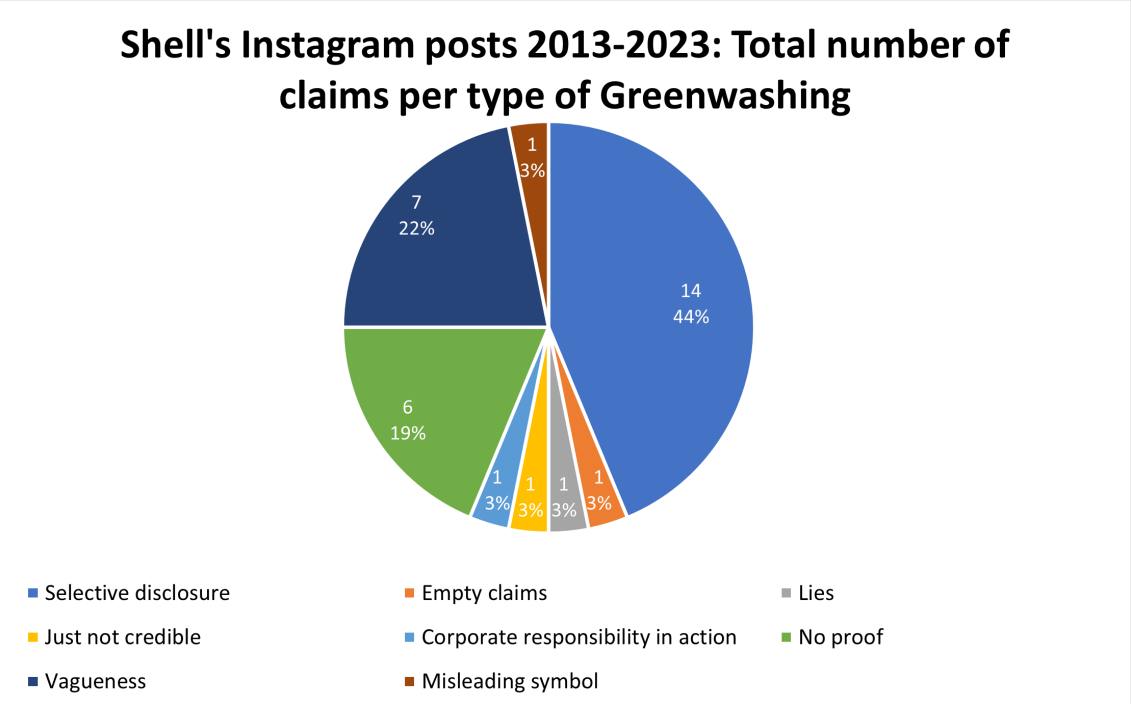


Figure 5.8. *Greenwashing claims in Shell's Instagram posts divided into categories.*

Selective disclosure

Examples of the claims belonging to this greenwashing type are similar to those detected from the document analysis when it comes to carbon capture and storage, and carbon sequestration through reforestation. In addition to these topics, Shell distracts the reader by mentioning various projects with their partners. In a caption of a picture from the 7th of July 2015, Shell writes *"With responsibility comes #sustainability. Shell researchers work with NGOs to install engineered oyster reefs in Louisiana to help keep the shorelines and adjacent marshland thriving."* Even though Shell has become more accountable for its actions, solely mitigating its own adverse effects on the environment and biodiversity will not lead to sustainability. Therefore, for the above reason, this claim is detected to be selective disclosure.

Another example of selective disclosure is Shell's Instagram post from the 2nd of April 2014. In the picture 5.9, there is a person building a wall using plastic bottles and a text saying "What if... bottles could be bricks?" The caption says *"An environmentally-friendly building alternative. Ignite your thinking. #Shell #ShellCareers #ShellIdeas360"*. This claim is seen as *Selective disclosure* since it is based on a narrow set of attributes. The claim is misleading since substituting one resource with another does not solve the problem and is not considered sustainable, since after running out of bottles to make bricks, more plastic would have to be produced to make bottles. Instead, the focus should be on reducing the current use of resources (Reijnders, 2021).

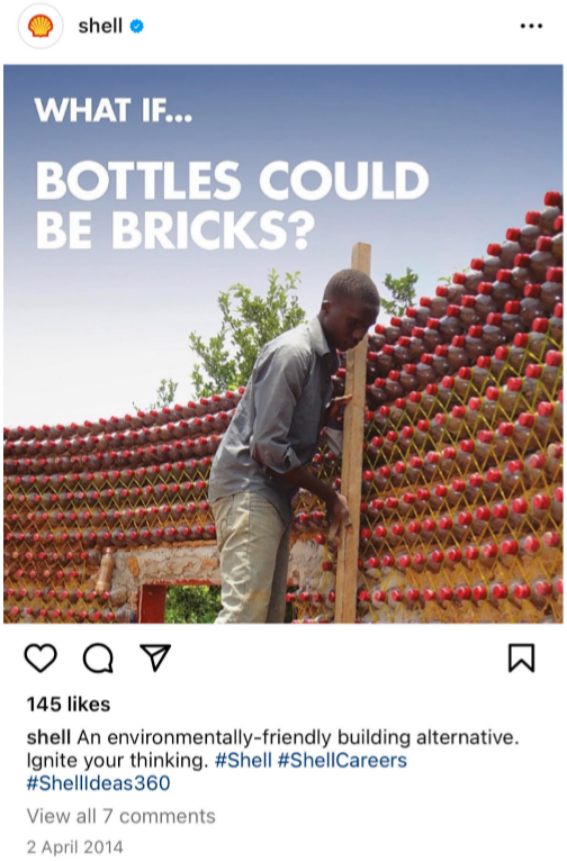


Figure 5.9. *Example of 'Selective disclosure' in Shell's Instagram post (2/4/2014).*

Just not credible

A category, that one greenwashing claim in the Instagram posts belongs to is *just not credible*, which by definition means *Claim touts environmentally friendly attributes of a dangerous or highly controversial practice/product/service/policy (Nemes et al., 2022)*. An example of this greenwashing type is Shell's Instagram post from the 2nd of June 2015 with the caption *"When burnt for power, gas produces around half the CO_2 and one-tenth of the air pollutants that coal does. A switch saves lives today and ensures a sustainable energy system tomorrow" -Ben van Beurden, CEO. #Energy #WGCParis2015 #naturalgas"*. Shell claims, that a switch from coal to gas can save lives and ensures a sustainable energy future. Claiming that natural gas is sustainable can be seen as controversial since it is still a fossil fuel and therefore of limited resources. Furthermore, Shell is proposing only one option for replacing coal for a more sustainable energy future, which is natural gas. By having this mindset, Shell is leading the reader into believing that natural gas is the only viable alternative to replacing coal, by effectively omitting to disclose other types of energy, such as renewable energy. As a result, readers are confronted with a "Hobson's choice", meaning an illusion of a free choice, where a limited number of options is presented, in this case, natural gas over coal (Lund, 2014).

Figure 5.10. *Example of type 'just not credible' in Shell's Instagram post (2/6/2015).*

Misleading symbols

Defined by Nemes et al., 2022, a claim belongs to this category, when *claim uses visuals and symbols that induce a false perception of the organization's greenness (Nemes et al., 2022)*. Shell's Instagram post (28/2/2015), below in Figure 5.11, is a picture of nature and ducks walking on the road, and the quote *"Adopt the pace of nature: her secret is patience" -Ralph Waldo Emerson*. In the quote, nature is referred to with the pronoun 'her', and therefore the writer addresses nature as a woman. This quote together with the picture of nature and animals gives the reader a false impression of the greenness of Shell as a company. From the perspective of environmental communication theory, Shell is 'speaking for nature', and trying to deliver a green image of the company.

Figure 5.11. *Example of using misleading symbols in Instagram post (28/2/2015).*

5.2.3 Summary of Instagram analysis

To sum up, all the data gathered from Shell's Instagram posts during 2013–2023 has been presented in terms of their total number and the categories they belong to. The analysis of the Instagram posts has shown a fluctuating number of greenwashing claims, the same as with the sustainability reports. Although the lowest number of greenwashing claims on Instagram is present in 2023, the underlying cause of this cannot be determined. First of all, that number does not give a holistic overview of the year 2023, since the analysis of the posts was conducted only for the first 3 months. However, Shell has been disengaging from the platform steadily since reaching a peak in 2015, achieving the lowest number of posts published at the time of writing this report. On a similar note, as far as the content of the Instagram posts is concerned, Shell has been mainly focusing on its employees and community engagement, followed by their operations, and lastly, their environmental performance. In the analysis of the greenwashing types, selective disclosure was the most dominant type, and the second and third most represented types were *Vagueness* and *No proof*. For the Instagram analysis, five types (*Irrelevant, Dubious certifications & labels, Political spin, Co-opted endorsement* and *Jargon*) were excluded.

In the following section, recommendations based on the environmental communication theory will be suggested, in order to potentially improve Shell's environmental communication.

5.3 Recommendations for Shell

In this section, recommendations will be provided to Shell in order to improve its environmental and sustainability communication. The recommendations are based on the environmental communication theory, and the aim is to help avoid greenwashing in Shell's future communication, especially through its Sustainability reports and Instagram posts. Along with the recommendations, some insights and comments in Shell's sustainability reports will be included to reinforce the need for the proposed recommendations. The above-mentioned analysis will lead to the answer to the third sub-research question, which is:

> *How can Shell improve its sustainability communication through environmental communication theory?*

- *Increase the transparent and concise language*

One recommendation based on the environmental communication theory is the use of clear and concise language throughout Shell's Sustainability reports and Instagram posts. In particular, since the majority of greenwashing claims involved selective disclosure on a topic, Shell should strive to be as transparent as possible when disclosing information regarding its environmental performance. The company could highlight both achievements and challenges that it faces so that its readers are well-informed and have gained a holistic perspective of Shell as a company. For example, when Shell failed to meet its commitment to recycling 1 million tonnes of plastic waste, although they did share the challenges and the reasons behind it, the company did not disclose any lessons learned or how could Shell try to achieve the claim in the future (Royal Dutch Shell PLC, 2020, p. 61).

Furthermore, another way to become more transparent is to avoid irrelevant content that has no business affiliation with Shell as a company. In particular, on Shell's official Instagram account, the company has posted that the Eiffel Tower has added wind turbines to its structure.

"Wind turbines have been added to the Eiffel Tower as part of its green renovation. What other landmarks could be used as sources of renewable energy? Like if you think more landmarks could go green. #PoweringProgress"
Royal Dutch Shell, 2023, pp. 26/3/2015

However, although this fact is true, it is not relevant to Shell in any way and can be considered misleading, as it induces a false sense of "greenness" to the reader.

- *Mutual learning and collaboration with partners*

Shell has already established several partnerships with global environmental NGOs, such as The Nature Conservancy, Flora & Fauna International, and Wetlands International. Together with environmental NGOs, Shell is taking part in projects focused for example on preserving biodiversity. However, by mentioning, that the company supports the projects of environmental NGOs, it remains unclear, to which degree Shell is actively involved in these projects. As mentioned earlier in section 2.3.1, engaging with stakeholders is the

most effective, when the communication works both ways, instead of being only one-sided (Lindenfeld et al., 2012). Therefore, projects with Shell's partners should focus on mutual learning and active participation, where Shell could learn about environmental issues and thus better communicate about its actions.

Furthermore, when talking about its environmental partnerships, Shell has mentioned multiple times in its sustainability reports, that its environmental visions and perceptions do not necessarily coincide with its environmental partners. For example, in the sustainability report 2018, Shell states, that its views on climate change do not always align with its partners (Royal Dutch Shell PLC, 2018, p.71). Instead of maintaining its own views, these cases could be a great opportunity for Shell to learn from its partners and broaden its perspective regarding the environment and sustainability. In particular, the company could take into consideration the results of the studies conducted by environmental NGOs on how to preserve and enhance the biodiversity of the targeted area and apply this knowledge when designing new projects. In addition, another form of mutual learning is to include representatives of the NGOs during decision-making processes regarding new operations, so that Shell can gain a holistic perspective of the impacts of its operations.

- *Conduct educative seminars and workshops for stakeholders*

A proactive way to engage stakeholders and foster sustainable thinking is to conduct educative seminars and workshops. In particular, Shell can hold seminars, where external experts can educate Shell's stakeholders on how to make more environmentally friendly choices in their life. As a matter of fact, Shell can encourage its stakeholders, and especially its consumers, to work with them and help the company meet its target to reduce the net-carbon footprint of its energy products by 50% by 2030 and achieve net carbon by 2050, as per the Paris Agreement. In that way, the company, even though it is not accountable for society's actions, can strive to do better and exert its influence for a sustainable energy future.

In addition, Shell can hold workshops for their employees, where external specialists can guide them on how to avoid greenwashing in the future. The experts could inform, for example, the Sales and Marketing department on how to become more transparent in its communication and could shed light on different scenarios on how to avoid using misleading content. Hence, in that way, the company could actively become more transparent in its communication. Another example to educate its stakeholders could be to hold a seminar with specialists for its consumers on how to spot greenwashing in every form of communication (eg. advertisements, reports, social media posts, etc.). Therefore, Shell could hold itself and other companies accountable for their actions, leading steadily to the elimination of greenwashing.

- *Set realistic, short-term goals*

In order to avoid being accused of greenwashing, Shell should have clear and understandable sustainability goals as part of its environmental communication. The goals should be realistic and achievable, but at the same time aligned with global commitments, such as the 2°C scenario set by the Paris Agreement for mitigating climate change. Good

sustainability goals are measurable, by having short-term targets, and communicated clearly. Through the sustainability reports it has been detected, that Shell claims to have a net-zero emissions target for 2050, but the company does not mention short-term targets to achieve this. In fact, the company in its sustainability report of 2018 mentioned that it had no immediate plans of moving to a net-zero emissions portfolio in the time horizon of 10-20 years (Royal Dutch Shell PLC, 2018, p.1). Its short-term targets focus on reducing the carbon intensity of energy products. In addition, Shell mentions a mid-term goal for reducing scope 1 and 2 emissions. However, scope 3 emissions are not mentioned in this target, even though usually they contribute to the largest share of the companies' emissions and present the greatest opportunity for emission reductions (Greenhouse Gas Protocol, 2011). Furthermore, Shell aims for the goals set in the Paris Agreement assuming, that the society aligns itself with these goals. In other words, Shell will not improve its performance, if the rest of the society is not aligned.

5.3.1 Summary of the Recommendations based on the Environmental communication theory

In this section, four recommendations based on the environmental communication theory have been analyzed and presented. The recommendations' aim is to be used in Shell's communication means, in order to avoid greenwashing and foster a sustainable mindset both inside the company and among its stakeholders. First of all, it is suggested to Shell, to increase its transparency by using more clear and concise language in every means of communication. In that way, the company's stakeholders are not misled, but instead hold a well-rounded perspective of the company and its actions. Furthermore, Shell should indulge in mutual learning with its environmental partners in order to widen its perspective when it comes to environmental and sustainability issues. Another recommendation is to conduct both internal and external seminars and workshops for Shell's stakeholders with the ultimate goal for its employees to avoid greenwashing and for its consumers to gain sustainable thinking and help the company achieve its commitment to the goals set by the Paris Agreement. Lastly, Shell is recommended to make more clear and short-term goals for achieving net-zero emissions to show its consumers, that the company is committed to achieving its targets.

Discussion 6

In this chapter, the results presented in the Analysis chapter will be discussed, as well as further research opportunities. Furthermore, to evaluate the validity and reliability of the research, reflections on both the results of the analysis and the methodology will be presented.

Contribution to the current knowledge

In the previous chapter, the analysis focused on the number and types of greenwashing claims from Shell's sustainability reports and Instagram posts during the last decade (2013-2022), in addition to recommendations that could potentially improve the company's environmental communication. The analysis of the obtained data contributes to the current literature body on how a framework designed to detect greenwashing (Nemes et al., 2022), can be applied to different forms of documents, i.e. sustainability reports and Instagram posts. In addition, a further contribution can be the application of the environmental communication theory to first detect any greenwashing claims and then to offer potential solutions to Shell, all of which have contributed to gaining new insights and perspectives.

During the analysis of the data, the number of greenwashing claims was determined to be 160 for Shell's sustainability reports from 2013 to 2022, whereas for the Instagram posts it was 27 during 2013-2023. In line with the results of this report, Li et al., 2022 have concluded that there are inconsistencies in the investments, pledges, actions, and discourses made by oil and gas companies, and therefore the companies' commitment to transitioning to a sustainable energy business model is not feasible at the moment. In addition, Li et al., 2022 noted that the greenwashing accusations that surround the companies are valid, thus providing legitimacy to this report's findings.

In addition, in this project, it was also identified that the most common type of greenwashing used in both Shell's sustainability reports and its Instagram posts was *Selective disclosure*, followed by *No proof* and *Vagueness*. In a similar study, Si et al., 2023 investigated through topic modeling of Twitter posts, the communication of the four biggest oil and gas companies (Shell, ExxonMobil, BP, and TotalEnergies) in regard to their transition to renewable energies. Supporting the findings of this report, Si et al., 2023 also noted the vagueness of the word "clean" when referring to natural gas. In particular, Si et al., 2023 have found that tweets of the oil and gas industry refer to natural gas by using the words "cleaner fuel" instead of "clean fuel". This way companies create an impression of natural gas being a clean fuel, and by this strategic distinction, distract the reader from the overall impacts of fossil fuels (Si et al., 2023). On a similar note, in their study, Si et al., 2023 have also mentioned that among other companies, Shell is familiar with using vague

language to avoid accountability for its climate change-related actions. Furthermore, in line with Shell's reliance on CCS as an effective way of reducing emissions, Si et al., 2023 have also found oil companies to be focused on using technologies to reduce emissions, instead of taking responsibility for contributing to climate change.

Further research opportunities

This project has focused on the identification of greenwashing in Shell's communication through sustainability reports and Instagram posts. It is worth noting, that the analysis of these two means of communication does not give a full picture of the company's environmental communication and is not an assessment of its performance. In order to widen the scope of the research, other means of Shell's communication, such as the company's website, other social media platforms, media presence, and advertisements could be researched. In that case, it would offer further insights into whether greenwashing is a common practice for the company and in which area it is most prevalent. Furthermore, all data used in the research is publicly available and therefore did not require being in contact with Shell's representatives. This can be seen as an advantage, which increases the reliability of the findings since everyone can obtain that data, and therefore easy to reproduce without requiring access to private corporate information. As further research, in order to have a holistic perspective of the company and gain insights into its view on greenwashing, interviews could have been conducted with, for example, people from Shell's sustainability and communication departments, who are responsible for the sustainability reports and Instagram posts. An advantage of having an inside perspective of the company is that it can offer newfound insights into Shell's view of sustainability. Another possibility would have been to be in contact with a person from the Report Review Panel, a group that annually reviews Shell's sustainability reports and provides Shell with recommendations on how to improve the reporting for the next year. The insight from this review panel of professionals could have offered an opinion of an expert on what is considered good environmental communication in a sustainability report.

By including the standpoint of Shell's employees or someone from the Report Review Panel, it could offer an opportunity to take another direction with the research. In particular, stakeholder theory could have been included, if the students would have had the possibility to hear either an inside or outside opinion of Shell's communication strategy, in addition to the student's own analysis based on publicly available information. The theory could help map Shell's stakeholders and offer insights into the way greenwashing practices would affect them and their view of the company.

When it comes to further research ideas, the analysis of sustainability reports and other means of communication of other oil and gas companies could have been conducted, in order to provide a perspective to the analysis of greenwashing practices in Shell. It would be of interest to research another fossil fuel-based company in order to gain a broader view of the existence of greenwashing in the field of oil and gas companies. When it comes to comparison between companies, another possibility would have been to research a company, that is focused on renewable energy and is therefore considered being green by default. In that case, the focus of the research would be to establish if greenwashing is a common practice irrespective of whether the companies' business plan is sustainable or

not.

One possibility to widen the research would be to assess the quality of sustainability reporting. As it is for the current analysis, only greenwashing claims have been analyzed from the sustainability reports, but it could also be researched, how well and reliably a company's sustainability work is presented in sustainability reports, again using Shell as a case company.

Reflections on methodology

In this section, reflections on the chosen methodology will be elaborated upon, combined with both the strengths and weaknesses of the methods. All of the above will be taken into consideration in terms of how they impacted the data analysis and what efforts were made to mitigate their impact.

First of all, for the analysis of the sustainability reports, an alternative option would be for each student to conduct the analysis on all 10 reports separately (instead of splitting the documents into 2 parts). Then, after conducting the initial analysis, the two students could compare, discuss and evaluate each claim. In that way, the documents would have been handled the same way and differences in each student's detection of a claim could be avoided. However, even though the students chose to split the documents into 2 parts, after the analysis, each claim made was evaluated by both parties. In addition to that, prior to the analysis, the students discussed based on the theoretical framework chosen, how to approach the analysis of the documents, thus establishing a similar perspective. As far as Shell's Instagram posts analysis is concerned, the aforementioned statement does not affect that part of the analysis, since both students carried out the analysis of the posts collectively.

On a similar note, the reliability and validity of the study could have been improved with topic modeling in a programming language, since it would increase the credibility of this report's findings through further methodological triangulation. Even though the students have remained objective when reading the sustainability reports and Instagram posts, potential biases and errors cannot be fully avoided. Using the programming language to detect words like "cleaner", "more sustainable" and "environmentally friendly" for example, would improve the accuracy of the number of greenwashing claims. Therefore it would be a way to validate the data found and include any claims that were not detected due to human error.

When it comes to the types of greenwashing, claims have been divided into categories based on the framework by Nemes et al., 2022, but another person could have made a different choice of category for some of the claims, based on their interpretation of the framework. However in order to eliminate the margin of error, the framework provides questions to help categorize greenwashing claims. On the other hand, sometimes one claim can be applicable to questions of different greenwashing types, and then it is up to the choice of the reader, to which category they think the claim belongs to. In order to eliminate that possibility of error, in this case, the students applied all of the types that could be applicable, so as not to skew the results. Hence some claims were applied to more than one type.

A reflection on the Instagram Analysis is regarding the usability of the platform. Posts on Instagram have a limited amount of words available since the captions are supposed to be short, and enticing to the reader. As a result, based on the Instagram analysis, the possibility of the reader misinterpreting the text is increased, since not all information relevant to the topic can be added to make it more clear to the reader. However, in order to avoid this possibility, besides the use of concise language, is to use links that provide further information and substantiate the claim, as was observed more during most recent sustainability reports and Instagram posts. In that way, companies can refrain from greenwashing unintentionally.

Overall achievement of the project

The aim of the project has been to research the evolution of greenwashing in Shell throughout the last decade, by using sustainability reports and Instagram posts as a data source. In addition, the aim was to categorize the different greenwashing claims into types to gain an understanding, of which way greenwashing emerges in Shell's communication. From the analysis, both the quantity and quality of greenwashing claims have been established, and therefore the aim of the research has been successfully fulfilled. Furthermore, based on the analysis and literature gathered in the literature review, recommendations have been provided to Shell on how they could improve their environmental communication in the future. The provided recommendations are seen as an achievement of the project, since through implementing them, Shell, and possibly other similar energy companies as well, could improve their sustainability communication and therefore increase transparency and trust within the field of energy companies.

Overall, the purpose of the study was not to condemn or criticize Shell as a company for its environmental communication, but rather to evaluate whether there is greenwashing present in the two communication means chosen in this project. By taking that into consideration, the greenwashing claims present can become a learning opportunity and encourage the company to actively transition into a sustainable energy future.

Conclusion 7

In this last chapter of the report, the conclusion will be presented in order to answer the research question: *How have greenwashing practices evolved in Shell's communication, and how can they be avoided in the future?*. To do that, first of all, the answer to the three sub-research questions will be given, and afterward, the main research question will be answered.

What is the number of greenwashing claims in the last decade in Shell's Sustainability reports and Instagram posts?

The analysis of 10 of Shell's sustainability reports and 631 Instagram posts revealed greenwashing claims during the last decade. The total number of greenwashing claims from the sustainability reports 2013-2022 was detected to be 160, whereas, for the Instagram posts during 2013-2023, the total number was 27. The 160 greenwashing claims discovered in the sustainability reports were divided into 15 topics based on the content, and of these topics, the most represented ones were *Natural gas*, *Carbon capture and storage*, and *Sustainable energy*. Similarly, the Instagram posts were divided into three categories based on the content and focus of the posts. These categories were *People* with 350 posts, *Operation* with 191 posts, and *Environment* with 88 posts. The greenwashing claims were detected among the environmental posts.

How can these claims be categorized into types of greenwashing?

Based on the analysis of the data, the most common type of greenwashing present in both Shell's sustainability reports and Instagram posts was *Selective disclosure*. First, that was due to the omission of vital information in a claim to offer the reader a well-rounded opinion, in conjunction with the wide applicability of the type. Besides *Selective disclosure*, other types that were frequently used were *Vagueness* and *No proof*. Not all types of greenwashing were present in both the document and Instagram analysis. As a matter of fact, two types (*Co-opted endorsement* and *Political spin*) were not detected in the document analysis, whereas for the Instagram analysis, five types (*Irrelevant, Dubious certifications & labels, Political spin, Co-opted endorsement* and *Jargon*) were excluded. As far as the Nemes et al., 2022 framework is concerned, limitations regarding the categorization of the claims were detected. The framework is divided into 13 types of greenwashing, with each type having supporting questions to help determine if the claim belongs to that type (Nemes et al., 2022). Despite that, there were several occasions, where the claims were applicable to more than one type. For example, the type *Selective disclosure* has a broad definition, which makes it easier to apply to a claim. In addition, there was an occasion

where none of the greenwashing types were applicable to that case, however, the content was misleading and irrelevant to Shell overall. That claim was regarding the renovation of the Eiffel Tower, which included the installation of wind turbines on the monument, as a way to lead to a green transition (Royal Dutch Shell, 2023, pp. 26/3/2015). In that case, one potential improvement to the greenwashing type definition *Irrelevant* that could include the above-mentioned claim is the following: ***Content and*** *accomplishments irrelevant or already required by law/competitors.*

How can Shell improve its sustainability communication through environmental communication theory?

The environmental communication theory can be seen as a crucial tool to enhance the reader's environmental literacy and drive social change, all of which can contribute positively to detecting greenwashing and gradually eliminating it. The recommendation proposed to Shell is to first of all increase the transparency of its communication, by using more concise language and disclosing both strengths and weaknesses of its claims. Second, it is proposed to Shell, to initiate mutual learning and collaboration with its partners, in order to gain a holistic perspective. In addition, Shell could host seminars and invite specialists to educate both the company and its stakeholders on how to avoid greenwashing. The last recommendation given to Shell is to set realistic, short-term goals to achieve its targets, which are in line with the ones set by the Paris Agreement.

How have greenwashing practices evolved in Shell's communication, and how can they be avoided in the future?

Taking into consideration all the aforementioned answers to the three sub-research questions, the main research question can be answered. Throughout the analysis, greenwashing practices have been discovered in Shell's sustainability reports and Instagram posts during the years 2013-2023. However, there has been fluctuation between different years, and the evolution does not have a fixed trend, meaning that it has not been solely increasing or decreasing. Throughout the last decade, *Selective disclosure* has been the most dominant type of greenwashing, followed by *Vagueness* and *No proof*. For the Instagram posts, there have been investigated years with no greenwashing claims, which can be explained by a low number of posts in general. For the sustainability reports, the latest report from the year 2022, has the lowest number of greenwashing claims. This can be due to Shell using more links in the report for additional information, and increasing transparency by defining some technical words for the reader. Since greenwashing practices are present in Shell's communication, this report has provided Shell with recommendations on how to potentially improve its environmental communication in order to avoid greenwashing. Among these recommendations are to further increase transparency, focus on mutual learning with partners, set realistic short-term goals, and last but not least invite external experts to educate its stakeholders on how to avoid greenwashing.

Bibliography

Afolabi, H., Ram, R., & Rimmel, G. (2022). Harmonization of sustainability reporting regulation: Analysis of a contested arena. *Sustainability*, *14*, 5517. https://doi.org/10.3390/su14095517

Amnesty International UK. (2020). *Shell: A criminal enterprise?* [Last seen: 22-03-2023]. https://www.amnesty.org.uk/shell-criminal-enterprise.

Arbinolo, R. (2023). *Eu commission prepares to crack down on greenwashing with new green claims law.* https://eeb.org/eu-commission-prepares-to-crack-down-on-greenwashing-with-new-green-claims-law/

Baumüller, J., & Grbenic, S. O. (2021). Moving from non-financial to sustainability reporting: Analyzing the eu commission's proposal for a corporate sustainability reporting directive (csrd). *Facta universitatis economics and organization*, 369. https://doi.org/10.22190/FUEO210817026B

Baumüller, J., & Sopp, K. (2022). Double materiality and the shift from non-financial to european sustainability reporting: Review, outlook and implications. *Journal of Applied Accounting Research*, *23*, 8–28. https://doi.org/10.1108/JAAR-04-2021-0114

Bjørn, A., Lloyd, S., & Matthews, D. (2021). From the paris agreement to corporate climate commitments: Evaluation of seven methods for setting 'science-based' emission targets. *Environmental Research Letters*, *16*, 1–14. https://doi.org/https://doi.org/10.1088/1748-9326/abe57b

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, *9*, 27–40. https://doi.org/10.3316/QRJ0902027

Bradford, M., Earp, J. B., Showalter, D. S., & Williams, P. F. (2017). Corporate sustainability reporting and stakeholder concerns: Is there a disconnect? *Accounting horizons*, *31*, 83–102. https://doi.org/10.2308/acch-51639

Burgess, J., Harrison, C., & Filius, P. (1998). Environmental communication and the cultural politics of environmental citizenship. *Environment and planning. A*, *30*, 1445–1460. https://doi.org/10.1068/a301445

CDP. (2023). *Why disclose as a company* [Last seen: 30-03-2023]. https://www.cdp.net/en/companies-discloser.

Client Earth. (2023a). *We're taking shell's board of directors to court* [Last seen: 22-03-2023]. https://www.clientearth.org/latest/latest-updates/news/we-re-taking-legal-action-against-shell-s-board-for-mismanaging-climate-risk/?utm_source=linkedin&utm_medium=social&utm_campaign=shell.

Client Earth. (2023b). *We're taking shell's board of directors to court* [Last seen: 16-03-2023]. https://www.clientearth.org/latest/latest-updates/news/we-re-taking-legal-action-against-shell-s-board-for-mismanaging-climate-risk/?utm_source=linkedin&utm_medium=social&utm_campaign=shell.

Competition & Markets Authority. (2021). *Guidance making environmental claims on goods and services*. https://www.gov.uk/government/publications/green-claims-code-making-environmental-claims/environmental-claims-on-goods-and-services

Cox, R. (2007). Nature's "crisis disciplines": Does environmental communication have an ethical duty? *Environmental Communication Vol. 1, No. 1*, 5–20. https://doi.org/10.1080/17524030701333948

Cox, R. J. (2010). *Environmental communication and the public sphere*. (J. R. Cox, Ed.; 2. ed.). Sage Publications.

Delmas, M. A., & Cuerel Burbano, V. (2011). The drivers of greenwashing. *California Management Review*, *54*, 64–87. https://doi.org/10.1525/cmr.2011.54.1.64

EnviroMedia and University of Oregon School of Journalism and Communication. (2023). *Greenwashing index*. https://www.greenwashingindex.com/about-greenwashing/#score

European Commission. (2019a). *A european green deal striving to be the first climate-neutral continent* [Last seen: 29-03-2023]. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en.

European Commission. (2019b). *Unfair commercial practices directive*. https://commission.europa.eu/law/law-topic/consumer-protection-law/unfair-commercial-practices-law/unfair-commercial-practices-directive_en

European Commission. (2020). *Environmental claims in the eu inventory and reliability assessment final report*. www.milieu.be

European Commission. (2021). *Causes of climate change* [Downloaded: 25-05-2023]. https://ec.europa.eu/clima/climate-change/causes-climate-change_en.

European Commission. (2022a). *Corporate sustainability due diligence* [Last seen: 30-03-2023]. https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en.

European Commission. (2022b). *Proposal for a directive of the european parliament and of the council on corporate sustainability due diligence and amending directive (eu) 2019/1937* [Last seen: 30-03-2023]. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022PC0071.

European Commission. (2023a). *Corporate sustainability reporting* [Last seen: 28-03-2023]. https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en.

European Commission. (2023b). *Directive (eu) 2022/2464 of the european parliament and of the council of 14 december 2022 amending regulation (eu) no 537/2014, directive 2004/109/ec, directive 2006/43/ec and directive 2013/34/eu, as regards corporate sustainability reporting (text with eea relevance)* [Last seen: 16-03-2023]. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022L2464.

European Commission. (2023c). *Directive 2014/95/eu of the european parliament and of the council of 22 october 2014 amending directive 2013/34/eu as regards disclosure of non-financial and diversity information by certain large undertakings and groups text with eea relevance* [Last seen: 16-03-2023]. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0095&qid=1685017981274.

European Commission. (2023d). *Initiative on substantiating green claims*. https://ec.europa.eu/environment/eussd/smgp/initiative_on_green_claims.htm

European Commission. (2023e). *Proposal for a directive of the european parliament and of the council on substantiation and communication of explicit environmental claims (green claims directive)*. https://environment.ec.europa.eu/system/files/2023-03/Proposal%5C%20for%5C%20a%5C%20Directive%5C%20on%5C%20Green%5C%20Claims.pdf

European Environmental Bureau. (2022). *Open letter on concerns about the pef methodology and its application to apparel and footwear products*. https://eeb.org/wp-content/uploads/2022/10/Civil-society-open-letter-on-concerns-about-the-PEF-methodology-and-its-application-to-apparel-and-footwear-products-2022.pdf?utm_source=T%5C%26E+EEB+super+list&utm_campaign=3d0fb2fff3-EMAIL_CAMPAIGN_2023_03_16_09_05&utm_medium=email&utm_term=0_-3d0fb2fff3-%5C%5BLIST_EMAIL_ID%5C%5D

Fassbinder, S. D., II, A. J. N., & Kahn, R. (2012). *Greening communication*. BRILL. https://doi.org/10.1007/978-94-6209-101-6_10

Frynas, J. G. (2003). Royal dutch/shell. *New Political Economy*, *8*, 275–285. https://doi.org/10.1080/13563460307169

Global Witness. (2023). *Fossil fuel greenwash* [Last seen: 22-03-2023]. https://www.globalwitness.org/en/campaigns/greenwashing/fossil-fuel-greenwash-since-launch-of-green-claims-code/.

Greenhouse Gas Protocol. (2011). *Corporate value chain (scope 3) accounting and reporting standard* [Last seen: 18-05-2023]. https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf.

GRI. (2023a). *About gri* [Last seen: 28-03-2023]. https://www.globalreporting.org/about-gri/.

GRI. (2023b). *Continuous improvement* [Last seen: 28-03-2023]. https://www.globalreporting.org/standards/.

GRI. (2023c). *Our mission and history* [Last seen: 28-03-2023]. https://www.globalreporting.org/about-gri/mission-history/.

Grolin, J. (1998a). Corporate legitimacy in risk society: The case of brent spar. *Business Strategy and the Environment*, *7*. https://doi.org/10.1002/(SICI)1099-0836(199809)7:4<213::AID-BSE158>3.0.CO;2-I

Grolin, J. (1998b). Corporate legitimacy in risk society: The case of brent spar. *Business Strategy and the Environment*, *7*(4), 213–222. https://doi.org/https://doi.org/10.1002/(SICI)1099-0836(199809)7:4<213::AID-BSE158>3.0.CO;2-I

Gutterman, A. (2020). *Sustainability reporting and communications: An introduction*. https://doi.org/10.13140/RG.2.2.15695.61607

Hackett, C., Hopkins, S., O'Kelly, C., & Patton, C. (2021). Okpabi and others v royal dutch shell plc and another [2021] uksc 3. *Northern Ireland Legal Quarterly*, *72*. https://doi.org/10.53386/nilq.v72i1.922

Hansen, P. K., & Lundholt, M. W. (2021). "i thought shell was the bad guy": Narrative and fictionality in greenpeace's campaign against the lego-shell partnership. *Narrative*, *29*, 29–46. https://doi.org/10.1353/nar.2021.0001

Hennchen, E. (2015). Royal dutch shell in nigeria: Where do responsibilities end? *Journal of Business Ethics*, *129*. https://doi.org/10.1007/s10551-014-2142-7

Herzig, C., & Schaltegger, S. (2011). *Corporate sustainability reporting*. Springer Netherlands. https://doi.org/10.1007/978-94-007-1697-1_14

Hohnen, P., Potts, J., & for Sustainable Development., I. I. (2007). *Corporate social responsibility: An implementation guide for business*. International Institute for Sustainable Development = Institut international du développement durable.

Holzer, B. (2007). Framing the corporation: Royal dutch/shell and human rights woes in nigeria. *Journal of Consumer Policy*, *30*. https://doi.org/10.1007/s10603-007-9035-4

IFRS. (2023). *Who we are* [Last seen: 30-03-2023]. https://www.ifrs.org/about-us/who-we-are/.

IPCC. (2005). *Implications of carbon dioxide capture and storage for greenhouse gas inventories and accounting* [Last seen: 13-05-2023]. https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_chapter9-1.pdf.

IPCC. (2023). *Climate change 2023 synthesis report summary for policymakers* [Downloaded: 25-05-2023]. https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.

Jones, N. F., Pejchar, L., & Kiesecker, J. M. (2015). The Energy Footprint: How Oil, Natural Gas, and Wind Energy Affect Land for Biodiversity and the Flow of Ecosystem Services. *BioScience*, *65*(3), 290–301. https://doi.org/10.1093/biosci/biu224

Kenner, D., & Heede, R. (2021). White knights, or horsemen of the apocalypse? prospects for big oil to align emissions with a 1.5°c pathway. *Energy Research & Social Science*, *79*, 102049. https://doi.org/https://doi.org/10.1016/j.erss.2021.102049

Klinghoffer, A. J. (1989). *Exposing south africa's secret oil trade* [Last seen: 24-03-2023]. Lynne Rienner Publishers.

KPMG. (2023). *Big shifts, small steps, survey of sustainability reporting 2022* [Last seen: 28-03-2023]. https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2022/10/ssr-small-steps-big-shifts.pdf.

Landrum, N. E. (2018). Stages of corporate sustainability. *Organization & environment*, *31*, 287–313. https://doi.org/10.1177/1086026617717456

Landrum, N. E., & Ohsowski, B. (2018). Identifying worldviews on corporate sustainability: A content analysis of corporate sustainability reports. *Business strategy and the environment*, *27*, 128–151. https://doi.org/10.1002/bse.1989

Lefebvre, D., Williams, A., & Kirk, G. e. a. (2011). Assessing the carbon capture potential of a reforestation project. *Sci Rep*, *11*(19907). https://doi.org/10.1038/s41598-021-99395-6

Li, M., Trencher, G., & Asuka, J. (2022). The clean energy claims of bp, chevron, exxonmobil and shell: A mismatch between discourse, actions and investments. *PLOS ONE*, *17*, e0263596. https://doi.org/10.1371/JOURNAL.PONE.0263596

Lindenfeld, L. A., Hall, D. M., McGreavy, B., Silka, L., & Hart, D. (2012). Creating a place for environmental communication research in sustainability science. *Environmental Communication*, *6*(1), 23–43. https://doi.org/10.1080/17524032.2011.640702

Lund, H. (2014). Chapter 2 - theory: Choice awareness theses. *Renewable Energy Systems (Second Edition)*, 15–34. https://doi.org/10.1016/B978-0-12-410423-5.00002-X

Lyon, T., & Maxwell, J. W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. *Journal of Economics & Management Strategy*, *20*(1), 3–41. https://EconPapers.repec.org/RePEc:bla:jemstr:v:20:y:2011:i:1:p:3-41

Macchi, C., & van Zeben, J. (2021). Business and human rights implications of climate change litigation: Milieudefensie et al. v royal dutch shell. *Review of European, Comparative and International Environmental Law*, *30*. https://doi.org/10.1111/reel.12416

McEwen, G. E. (2014). The right and the good: Communicating environmental issues. *Earth Common Journal*, *4*. https://doi.org/10.31542/j.ecj.180

Milstein, T. (2009). Environmental communication theories.

Minefee, I., & Bucheli, M. (2021). Mnc responses to international ngo activist campaigns: Evidence from royal dutch/shell in apartheid south africa. *Journal of International Business Studies*, *52*. https://doi.org/10.1057/s41267-021-00422-5

Mocatta, G., & Milstein, T. (2022). Environmental communication theory and practice for global transformation: An ecocultural approach.

Nemes, N., Scanlan, S. J., Smith, P., Smith, T., Aronczyk, M., Hill, S., Lewis, S. L., Montgomery, A. W., Tubiello, F. N., & Stabinsky, D. (2022). An integrated framework to assess greenwashing. *Sustainability (Switzerland)*, *14*. https://doi.org/10.3390/su14084431

Pupovac, S., & Moerman, L. (2022). Bringing shell and friends of the earth on stage: A one-act spectacle of oil spills in the niger delta. *Critical Perspectives on Accounting*, *85*. https://doi.org/10.1016/j.cpa.2020.102264

Reestorff, C. M. (2015). 'lego: Everything is not awesome!' *Conjunctions*, *2*, 21–43. https://doi.org/10.7146/tjcp.v2i1.22269

Reijnders, L. (2021). Substitution, natural capital and sustainability. *Journal of Integrative Environmental Sciences*, *18*(1), 115–142. https://doi.org/10.1080/1943815X.2021.2007133

Roome, N. (1992). Developing environmental management strategies. *Business Strategy and the Environment*, *1*(1), 11–24. https://doi.org/https://doi.org/10.1002/bse.3280010104

Royal Dutch Shell. (2023). *Shell's official instagram account* [Last seen: 08-05-2023]. https://www.instagram.com/shell/.

Royal Dutch Shell PLC. (2013). *Sustainability report 2013*. https://reports.shell.com/sustainability-report/2013/servicepages/downloads/files/entire_shell_sr13.pdf

Royal Dutch Shell PLC. (2014). *Sustainability report 2014*. https://reports.shell.com/sustainability-report/2014/servicepages/downloads/files/entire_shell_sr14.pdf?cat=b

Royal Dutch Shell PLC. (2015). *Sustainability report 2015*. https://reports.shell.com/sustainability-report/2015/servicepages/downloads/files/entire_shell_sr15.pdf

Royal Dutch Shell PLC. (2016). *Sustainability report 2016*. https://reports.shell.com/sustainability-report/2016/servicepages/downloads/files/entire_shell_sr16.pdf

Royal Dutch Shell PLC. (2017). *Sustainability report 2017*. https://reports.shell.com/sustainability-report/2017/servicepages/downloads/files/shell_sustainability_report_2017.pdf

Royal Dutch Shell PLC. (2018). *Sustainability report 2018*. https://reports.shell.com/sustainability-report/2018/servicepages/downloads/files/shell_sustainability_report_2018.pdf

Royal Dutch Shell PLC. (2019). Sustainability report 2019. https://reports.shell.com/sustainability-report/2019/servicepages/downloads/files/shell_sustainability_report_2019.pdf

Royal Dutch Shell PLC. (2020). Sustainability report 2020. https://reports.shell.com/sustainability-report/2020/servicepages/downloads/files/shell-sustainability-report-2020.pdf

Royal Dutch Shell PLC. (2021). Sustainability report 2021. https://reports.shell.com/sustainability-report/2021/_assets/downloads/shell-sustainability-report-2021.pdf

Royal Dutch Shell PLC. (2022). *Sustainability report 2022*. https://reports.shell.com/sustainability-report/2022/_assets/downloads/shell-sustainability-report-2022.pdf

Santos, C., Coelho, A., & Marques, A. (2023). The greenwashing effects on corporate reputation and brand hate, through environmental performance and green perceived risk. *Asia-Pacific journal of business administration*. https://doi.org/10.1108/APJBA-05-2022-0216

SASB. (2023a). *About us* [Last seen: 28-03-2023]. https://www.sasb.org/about/.

SASB. (2023b). *Sasb standards & other esg frameworks* [Last seen: 30-03-2023]. https://www.sasb.org/about/sasb-and-other-esg-frameworks/.

Schwartz, P. (2000). When good companies do bad things. *Strategy & Leadership*, *28*, 4–11. https://doi.org/10.1108/10878570010348530

Shell. (2023). *Who are we* [Last seen: 22-03-2023]. https://www.shell.com/about-us/who-we-are.html.

Si, Y., Desai, D., Bozhilova, D., Puffer, S., & Stephens, J. C. (2023). Fossil fuel companies' climate communication strategies: Industry messaging on renewables and natural gas. *Energy Research & Social Science*, *98*, 103028. https://doi.org/https://doi.org/10.1016/j.erss.2023.103028

Stolowy, H., & Paugam, L. (2023). Sustainability reporting: Is convergence possible? *Accounting in Europe*, *ahead-of-print*, 1–27. https://doi.org/10.1080/17449480.2023.2189016

TerraChoice. (2010). *The sins of greenwashing, home and family edition 2010, a report on environmental claims made in the north american consumer market*. https://www.twosides.info/wp-content/uploads/2018/05/Terrachoice_The_Sins_of_Greenwashing_-_Home_and_Family_Edition_2010.pdf

Trouwloon, D., Streck, C., Chagas, T., & Martinus, G. (2023). Understanding the use of carbon credits by companies: A review of the defining elements of corporate climate claims. *Global Challenges*, *7*(4), 2200158. https://doi.org/https://doi.org/10.1002/gch2.202200158

UL Solutions. (2023). *Environmental and sustainability certification and validation marks*. https://www.ul.com/resources/environmental-and-sustainability-certification-and-validation-marks

UNFCCC. (2023). *The paris agreement. what is the paris agreement?* [Last seen: 25-05-2023]. https://unfccc.int/process-and-meetings/the-paris-agreement.

United Nations Environment Programme and Futerra Sustainability Communications Ltd. (2005). *Communicating sustainability: How to produce effective public campaigns*. UNEP.

U.S. Securities and Exchange Commission. (2022). *Sec proposes rule changes to prevent misleading or deceptive fund names*. https://www.sec.gov/news/press-release/2022-91?utm_medium=email&utm_source=govdelivery

US Security and Exchange Commission. (2022). *The enhancement and standardization of climate-related disclosures for investors* [Last seen: 30-03-2023]. https://www.sec.gov/rules/proposed/2022/33-11042.pdf.

Vieira de Freitas Netto, S., Falcão Sobral, M. F., Bezerra Ribeiro, A. R., & da Luz Soares, G. R. (2020). Concepts and forms of greenwashing: A systematic review. *Environmental sciences Europe*, *32*. https://doi.org/10.1186/s12302-020-0300-3

Wolniak, R. (2015). Reporting process of corporate social responsibility and greenwashing. https://doi.org/10.5593/SGEM2015/B53/S21.063

Appendix A

Shell's Sustainability reports' Greenwashing claims

Below is the complete list of Greenwashing claims gathered by the students from Shell's Sustainability reports during the years 2013 - 2022. Some claims were deemed relevant to two types of Greenwashing; therefore, these examples are marked with an asterisk (*) at the end. In addition, some Greenwashing claims are marked with **bold** text, since this part of the quote is considered to be misleading.

Shell's Sustainability report 2013

Selective Disclosure

1. *"Gas is the **cleanest fossil fuel**, producing half as much carbon dioxide (CO_2) as coal in power generation and less local pollution."*
   Royal Dutch Shell PLC, 2013, p.3
2. *"Shell produces natural gas, the **cleanest-burning fossil fuel**"*
   Royal Dutch Shell PLC, 2013, p.3
3. *"We are also working to manage CO_2 emissions by advancing carbon capture and storage (CCS) technologies."*
   Royal Dutch Shell PLC, 2013, p.9
4. *"The International Energy Agency says that carbon capture and storage is one of the most promising technologies available today to significantly reduce global carbon dioxide emissions."*
   Royal Dutch Shell PLC, 2013, p.11
5. *"In 2013, we used around 9 billion litres of biofuel in our petrol and diesel blends worldwide."*
   Royal Dutch Shell PLC, 2013, p.29
6. *"At our major facilities in water-scarce areas, we are developing water management plans that include how our operations will **minimize water use and increase water recycling**."*
   Royal Dutch Shell PLC, 2013, p.33
7. *"The printing of this document was carbon neutral: certified carbon-offset projects compensated for the CO_2 emissions."*
   Royal Dutch Shell PLC, 2013, p.41

Lies

1. *"The use of **cleaner-burning natural gas**, especially in power generation, can help to build a **sustainable energy system**."*
   Royal Dutch Shell PLC, 2013, p.14

Corporate responsibility in action

1. *"At Shell, we are working to help build a **more sustainable energy future**."*
   Royal Dutch Shell PLC, 2013, p.4
2. *"Helping to shape a **more sustainable energy future**"*
   Royal Dutch Shell PLC, 2013, p.5

No proof

1. *"At Shell, we are working to help build a **more sustainable energy future**."*
   Royal Dutch Shell PLC, 2013, p.4
2. *"Helping to shape a **more sustainable energy future**"*
   Royal Dutch Shell PLC, 2013, p.5
3. *"The use of **cleaner-burning natural gas**, especially in power generation, can help to build a **sustainable energy system**."*
   Royal Dutch Shell PLC, 2013, p.14

Vagueness

1. *"Shell produces natural gas, the **cleanest-burning fossil fuel**, as well as **low-carbon biofuel**"*
   Royal Dutch Shell PLC, 2013, p.4
2. *"We are helping to provide **cleaner energy**. We produce around as much **cleaner-burning natural gas** as oil and are working on developing advanced biofuels for the future."*
   Royal Dutch Shell PLC, 2013, p.12
3. *"The use of **cleaner-burning natural gas**, especially in power generation, can help to build a **sustainable energy system**."*
   Royal Dutch Shell PLC, 2013, p.14
4. *"LNG is emerging as a **cleaner fuel** for road transport and ships."*
   Royal Dutch Shell PLC, 2013, p.16
5. *"We work with several environmental organisations, including Earthwatch, the International Union for Conservation of Nature (IUCN), The Nature Conservancy and Wetlands International, to find effective ways to address environmental challenges, **including protecting and enhancing the environment around our operations**."*
   Royal Dutch Shell PLC, 2013, p.25

Jargon

1. *"We are one of the first major energy companies to make significant investments in advanced **biofuels**."*
   Royal Dutch Shell PLC, 2013, p.10

Shell's Sustainability report 2014

Selective disclosure

1. *"This includes fossil fuels with technologies that reduce emissions such as carbon capture and storage (CCS)"*
   Royal Dutch Shell PLC, 2014, p.5
2. *"To meet these differing needs and move towards a **lower-carbon future**, we need policy frameworks that support more energy-efficient systems; lower-carbon options such as gas; CCS to reduce CO_2 emissions; and renewables – areas in which Shell is already working."*
   Royal Dutch Shell PLC, 2014, p.5
3. *"Hydrocarbons will be part of this energy transition. The key is to reduce the associated emissions with carbon capture and storage (CCS), energy efficiency and a shift from coal to gas."*
   Royal Dutch Shell PLC, 2014, p.6
4. *"Gas is the **cleanest burning fossil fuel** and can be used as a reliable back-up energy source for solar and wind. Shell currently supplies gas to more countries in the world than any other energy company."*
   Royal Dutch Shell PLC, 2014, p.6
5. *"The world needs CCS as part of its efforts to decarbonise the global energy system. CCS is the process of capturing CO_2 from large industrial sources and permanently storing it deep underground. It is estimated that CCS could remove up to 90% of CO_2 emissions from power generation."*
   Royal Dutch Shell PLC, 2014, p.16
6. *"Natural gas produces significantly lower carbon dioxide (CO_2) emissions than coal for power generation and is the **cleanest-burning fossil fuel**."*
   Royal Dutch Shell PLC, 2014, p.25
7. *"Natural gas can play a **significant role** in reducing CO_2 emissions in the coming decades. It produces around half the greenhouse gas emissions of coal throughout its life cycle, from production to its use as fuel in generating electricity"*
   Royal Dutch Shell PLC, 2014, p.25
8. *"The plant is more energy efficient than an average LNG plant."*
   Royal Dutch Shell PLC, 2014, p.25
9. *"However, theft, sabotage and illegal refining continue to be the main source of environmental damage in the Niger Delta today and result in many thousands of barrels of lost production."*
   Royal Dutch Shell PLC, 2014, p.35
10. *"Quest is expected to capture up to 1 million tonnes of CO_2 a year from the Scotford Upgrader. It will start operating in 2015"*
    Royal Dutch Shell PLC, 2014, p.38

Irrelevant

1. *"For example, we are working to reduce our environmental impact in areas such as water use."*
   Royal Dutch Shell PLC, 2014, p.8

Lies

1. *"Shell FuelSave Diesel is also used in the heavy road transport sector. It can deliver fuel savings of up to 3% across the operational lifetime of heavy-duty vehicles like trucks and help customers reduce carbon dioxide (CO_2) and other emissions."*
   Royal Dutch Shell PLC, 2014, p.40

No proof

1. *1 MILLION Tonnes of CO_2 each year is expected to be captured by the Quest CCS project in Alberta, Canada"*
   Royal Dutch Shell PLC, 2014, p.7
2. *"Quest is expected to capture more than 1 million tonnes of CO_2 a year."*
   Royal Dutch Shell PLC, 2014, p.16
3. *"The plant is more energy efficient than an average LNG plant."*
   Royal Dutch Shell PLC, 2014, p.26
4. *"These products are **biodegradable and less harmful** to the environment."*
   Royal Dutch Shell PLC, 2014, p.40
5. *"The laminate used for the cover is **eco-friendly** and allows the report to be **fully recycled**."*
   Royal Dutch Shell PLC, 2014, p.57

Vagueness

1. *"The decommissioning of retired platforms and infrastructure is also potentially a major source of waste. Where possible, we recycle part of the platforms once they are brought to shore."*
   Royal Dutch Shell PLC, 2014, p.14
2. *"Climate change is a key issue for Shell. The scientific evidence shows that the rising CO_2 levels in the atmosphere is the main cause of climate change. It is the effect of cumulative emissions around the world, rather than being caused by Arctic drilling."*
   Royal Dutch Shell PLC, 2014, p.33
3. *"In partnership with Wetlands International we are working to reduce the impact of our operations on the biodiversity and ecosystems of the marshes and **support restoration of these iconic wetlands**."*
   Royal Dutch Shell PLC, 2014, p.34

Jargon

1. *"These products are **biodegradable and less harmful** to the environment."*
   Royal Dutch Shell PLC, 2014, p.40

Shell's Sustainability report 2015

Selective disclosure

1. *"One possible solution to meet energy demand is to have a hybrid system of both renewable energy sources and **lower-carbon oil and gas**. This combination would give people access to a full suite of energy products until the technological challenges to achieving a lower-carbon energy system are solved."*
   Royal Dutch Shell PLC, 2015, p.12
2. *"Within Shell, we can best help to decarbonise the existing hydrocarbon energy system by promoting the use of **cleaner-burning natural gas** and by advancing CCS technology."*
   Royal Dutch Shell PLC, 2015, p.12
3. *"Shell supports long-term climate goals that address environmental pressures and provide development opportunities for communities."*
   Royal Dutch Shell PLC, 2015, p.13
4. *"ways to reduce or offset CO_2 emissions, such as **reforestation** and carbon capture and storage (CCS)"*
   Royal Dutch Shell PLC, 2015, p.13
5. *"Over the past decade we have invested in **cleaner-burning natural gas** and sugarcane ethanol, a low-carbon biofuel."*
   Royal Dutch Shell PLC, 2015, p.14
6. *"The International Energy Agency estimates that without CCS the cost of achieving a 2°C scenario could be around 138% higher. Over time, CCS could capture enough CO_2 to deliver a 13% reduction in overall emissions needed by 2050 to limit the rise in global temperature to 2 °C. CCS is currently the only technology that can capture industrial CO_2 emissions."*
   Royal Dutch Shell PLC, 2015, p.14
7. *"Natural gas can also be used in combination with carbon capture and storage (CCS) to reduce CO_2 emissions. CCS could remove up to 90% of CO_2 emissions from power generation and play a key role in supporting the shift to a lower-carbon future. (See page 19)."*
   Royal Dutch Shell PLC, 2015, p.16
8. *"At Shell, we believe the world will need CCS to achieve the ambition of net-zero emissions."*
   Royal Dutch Shell PLC, 2015, p.19
9. *"In 2015, we used around 9.5 billion litres of biofuels in the petrol and diesel we sold worldwide – making us one of the largest blenders and distributors of biofuels globally."*
   Royal Dutch Shell PLC, 2015, p.20

10. *"Shell FuelSave Diesel has helped reduce the carbon footprint of business customers in the bus, coach, construction and trucking sectors."*
    Royal Dutch Shell PLC, 2015, p.20
11. *"Overall, we have reduced our energy intensity by 8%."*
    Royal Dutch Shell PLC, 2015, p.29

Irrelevant

1. *"Whenever we plan new projects, we carry out detailed assessments of the potential environmental, social and health impacts."*
   Royal Dutch Shell PLC, 2015, p.34

No proof

1. *"Governments can also make choices that enable the transition: we support energy policies that incentivise businesses and consumers to choose low-carbon options."*
   Royal Dutch Shell PLC, 2015, p.1

Vagueness

1. *"Within Shell, we can best help to decarbonise the existing hydrocarbon energy system by promoting the use of* ***cleaner-burning natural gas*** *and by advancing CCS technology."*
   Royal Dutch Shell PLC, 2015, p.12
2. *"Over the past decade we have invested in* ***cleaner-burning natural gas*** *and sugarcane ethanol, a low-carbon biofuel."*
   Royal Dutch Shell PLC, 2015, p.14
3. *"They are a cost-effective way to reduce CO_2 emissions in the transport sector, as long as their production is managed* ***in a responsible way****."*
   Royal Dutch Shell PLC, 2015, p.20
4. *"We use advanced, proven technologies, including hydraulic fracturing, and follow our global operating principles to unlock these resources* ***safely and responsibly****."*
   Royal Dutch Shell PLC, 2015, p.26
5. *"We look forward to continuing our partnership towards a* ***more sustainable energy future****."*
   Royal Dutch Shell PLC, 2015, p.28
6. *"We* ***carefully manage*** *our tailings to prevent contamination of local surface-water courses and groundwater."*
   Royal Dutch Shell PLC, 2015, p.29

Shell's Sustainability report 2016

Selective disclosure

1. *"We achieved this partly by reducing flaring in our operations and through our Quest project in Canada, where we safely captured and stored deep underground more than*

1 million tonnes of carbon dioxide (CO_2) from our oil sands operations. The sale of some of our businesses also contributed to the reduction."
Royal Dutch Shell PLC, 2016, p.4

2. *"1 Million Tonnes of CO_2 captured by Quest"*
Royal Dutch Shell PLC, 2016, p.15
3. *"In a net-zero world, emissions in some sectors are* ***offset by efforts to remove carbon dioxide*** *(CO_2) from the atmosphere, including reforestation and large-scale industrial facilities built to capture and store CO_2."*
Royal Dutch Shell PLC, 2016, p.16
4. *"The power sector, for example, must evolve into a combination of more renewable sources of energy, nuclear, and* ***natural gas – the cleanest-burning hydrocarbon*** *– with carbon capture and storage (CCS) technology."*
Royal Dutch Shell PLC, 2016, p.16
5. *"Replacing metal car parts with lighter plastics, for example, helps lower fuel consumption and therefore reduces emissions."*
Royal Dutch Shell PLC, 2016, p.17
6. *"Other policies should focus on city and transport planning to improve energy efficiency; accelerating the switch from coal to gas to reduce power-sector emissions; sustaining the rapid growth of renewables; and establishing the widespread use of CCS, which can significantly reduce emissions from industrial sectors by safely storing CO_2 deep underground."*
Royal Dutch Shell PLC, 2016, p.17
7. *"Natural gas,* ***the cleanest-burning hydrocarbon****, produces around half the carbon dioxide (CO_2) and just one-tenth of the air pollutants compared to coal when used for power generation."*
Royal Dutch Shell PLC, 2016, p.18
8. *"The indirect GHG emissions from the energy that we purchased (electricity, heat and steam) increased to 11 million tonnes on a CO_2-equivalent basis in 2016, from 9 million tonnes in 2015, mainly due to the inclusion of former BG facilities in our portfolio."*
Royal Dutch Shell PLC, 2016, p.20
9. *"Natural gas –* ***the cleanest-burning hydrocarbon*** *– comprises about half of Shell's total production"*
Royal Dutch Shell PLC, 2016, p.24
10. *"In water-scarce areas, we develop water management plans."*
Royal Dutch Shell PLC, 2016, p.45
11. *"In 2016, the overall energy intensity for the production of oil and gas in our Upstream and Integrated Gas businesses (excluding liquefied natural gas and gas-to-liquids) worsened compared with 2015,* ***mainly due to*** *inclusion of former BG assets in our portfolio."*
Royal Dutch Shell PLC, 2016, p.47
12. *"Our nitrogen oxides emissions increased from 104 thousand tonnes in 2015 to 122 thousand tonnes in 2016. The increase was* ***primarily driven by*** *the inclusion of former BG facilities in our portfolio."*
Royal Dutch Shell PLC, 2016, p.47
13. *"Our emissions of volatile organic compounds (VOCs) increased to 146 thousand tonnes in 2016 compared with 125 thousand tonnes in 2015. This was* ***mostly due***

to *an increase of venting at our facilities in Majnoon, Iraq."*
Royal Dutch Shell PLC, 2016, p.47

14. *"Increase in NOx emissions in 2016 was* ***primarily driven by*** *inclusion of former BG assets in our portfolio as of February 1st, 2016."*
Royal Dutch Shell PLC, 2016, p.68
15. *"All spill volumes and numbers are for* ***spills over 100 kilograms****. Due to the rounding of numbers, spill volumes for Nigeria and the rest of the world might not add up to the exact total volume of spills."*
Royal Dutch Shell PLC, 2016, p.68

No proof

1. *"1 MILLION TONNES Amount of CO_2 captured by Quest"*
Royal Dutch Shell PLC, 2016, p.15
2. *"Replacing metal car parts with lighter plastics, for example, helps lower fuel consumption and therefore reduces emissions."*
Royal Dutch Shell PLC, 2016, p.17
3. *"Other policies should focus on city and transport planning to improve energy efficiency; accelerating the switch from coal to gas to reduce power-sector emissions; sustaining the rapid growth of renewables; and establishing the widespread use of CCS, which can significantly reduce emissions from industrial sectors* ***by safely storing CO_2 deep underground****."*
Royal Dutch Shell PLC, 2016, p.17

Shell's Sustainability report 2017

Selective disclosure

1. *"These projects can generate* ***carbon credits*** *which are used to compensate for emissions elsewhere as part of a 'biological bridge' to a lower carbon future."*
Royal Dutch Shell PLC, 2017, p.49
2. *"In less than two years and ahead of schedule, Quest has captured and safely stored more than 2 million tonnes of CO_2."*
Royal Dutch Shell PLC, 2017, p.22
3. *"****Some of the ways*** *Shell improved energy efficiency include making our equipment more reliable through regular maintenance, by smart scheduling of maintenance activities or by installing more energy-efficient equipment."*
Royal Dutch Shell PLC, 2017, p.55
4. *"The decrease was* ***mainly due to*** *the change in oil sands mining reporting boundary and changes in calculation methodologies at some of our facilities (for example in Australia to align with regulatory methodologies)."*
Royal Dutch Shell PLC, 2017, p.56
5. *"This was* ***mostly due to*** *a decrease of venting at our facilities in Majnoon, Iraq. We expect our VOC emissions to further decrease in the coming years as a result of our efforts to reduce flaring and venting."*
Royal Dutch Shell PLC, 2017, p.56

6. *"The increase is **mainly due to** the inclusion of former Motiva refineries and a rise in production at our QGC facilities in Australia."*
   Royal Dutch Shell PLC, 2017, p.57
7. *"In 2017, we announced our ambition to cut the net carbon footprint of the energy products we provide by around half by 2050 in step with society's drive to align with the goals of the Paris Agreement."*
   Royal Dutch Shell PLC, 2017, p.3
8. *"Natural gas is a **critical component** of the world's transition to a lower-carbon energy system."*
   Royal Dutch Shell PLC, 2017, p.20
9. *"CCS will be essential for meeting the goal of limiting global warming to well below 2°C."*
   Royal Dutch Shell PLC, 2017, p.22
10. *"To minimise the environmental impact, we placed the radio tower on the ridge during frozen ground conditions, using track equipment and solar panels."*
    Royal Dutch Shell PLC, 2017, p.35

Empty claims

1. *"In our projects and operations, **our primary aim** is to avoid impacts on biodiversity and ecosystem services."*
   Royal Dutch Shell PLC, 2017, p.52
2. *"Shell's purpose is to power progress together with more and **cleaner energy solutions**."*
   Royal Dutch Shell PLC, 2017, p.10
3. *"Over the next few decades, we plan to show leadership in the oil and gas industry, while responding in many different ways to society's need for more and cleaner energy", page 19 AND "Continued investment in oil and gas to meet growing demand"*
   Royal Dutch Shell PLC, 2017, p.19

Lies

1. *"Energies business pursues two main areas of opportunities: new fuels for transport, such as advanced biofuels, hydrogen, and charging for battery-electric vehicles; and power, **including low-carbon sources such as wind and solar as well as natural gas**"*
   Royal Dutch Shell PLC, 2017, p.9
2. *"In our projects and operations, **our primary aim** is to avoid impacts on biodiversity and ecosystem services."*
   Royal Dutch Shell PLC, 2017, p.52

Just not credible

1. *"Sustainability at Shell means providing energy in a responsible manner, **respecting people, their safety and the environment**."*
   Royal Dutch Shell PLC, 2017, p.10

2. *"CCS will be **essential** for meeting the goal of limiting global warming to well below 2°C."*
   Royal Dutch Shell PLC, 2017, p.22
3. *"We estimate that the CO_2 emissions from the use of our refinery and natural gas products by others were around 579 million tonnes in 2017, which represents **less than 2%** of the world's emissions."*
   Royal Dutch Shell PLC, 2017, p.57

Corporate responsibility in action

1. *"Over the past 20 years, we have funded around 270 projects with our conservation partners in the USA, including the National Fish and Wildlife Foundation, to support the protection, restoration and management of habitats in the Gulf of Mexico. This approach includes using wetlands, reefs, marshes and outer island barriers to reduce coastal erosion."*
   Royal Dutch Shell PLC, 2017, p.49

No proof

1. *"In pursuit of this goal, we also support the vision of a transition towards a net-zero emissions energy system."*
   Royal Dutch Shell PLC, 2017, p.17

Vagueness

1. *"Energies business pursues two main areas of opportunities: new fuels for transport, such as advanced biofuels, hydrogen, and charging for battery-electric vehicles; and power, **including low-carbon sources such as wind and solar as well as natural gas**"*
   Royal Dutch Shell PLC, 2017, p.9
2. *"Shell's purpose is to power progress together with more and **cleaner energy solutions**."*
   Royal Dutch Shell PLC, 2017, p.10
3. *"By 2020, we aim to have 100% of the sugar-cane ethanol and South American soy biodiesel used in Shell blended biofuels **certified as sustainable**."*
   Royal Dutch Shell PLC, 2017, p.24
4. *"For the long term, we aim to quickly acquire deeper insights into the science and engineering that underpins new energy technologies that can help create a **lower-carbon future**."*
   Royal Dutch Shell PLC, 2017, p.27
5. *"In June 2017, we joined the Global Industry Alliance, a public-private partnership of the International Maritime Organisation, which brings together maritime industry leaders to support the development of more energy efficient and **lower-carbon shipping**."*
   Royal Dutch Shell PLC, 2017, p.51

Shell's Sustainability report 2018

Selective disclosure

1. *"Shell's ambition is to reduce the Net Carbon Footprint of the* ***energy products we sell by around half by the middle of the century in step with society*** *as it moves towards meeting the aims of Paris. We were the first international oil and gas company to set an ambition using a measure which includes our customers' emissions when they use the energy products we sell, as well as emissions from our operations and supply chains that bring these products to market. This also includes those emissions generated by third parties who supply energy and finished products to us.* ***In 2018, we also announced we would set short-term Net Carbon Footprint targets.*** *We linked a Net Carbon Footprint target and other measures to our executive remuneration starting in 2019, one year earlier than planned. To achieve our 2050 ambition, we will adapt and evolve over time the range of products we offer in line with our customers' needs, increase the lower and zero emission energy products we offer, including natural gas, biofuels and renewable power."*
   Royal Dutch Shell PLC, 2018, p.4
2. *"We aim to cut the Net Carbon Footprint of the energy products we sell* ***by around half by 2050****, in step with society's progress to align with the goals of the Paris Agreement."*
   Royal Dutch Shell PLC, 2018, p.10
3. *"Most plastics use fewer resources and have a lower carbon footprint than the glass, paper and metal they have replaced. For instance, efficient plastic insulation and lightweight plastic parts in cars and planes save energy, which helps to avoid* CO_2 *emissions."*
   Royal Dutch Shell PLC, 2018, p.36
4. *"Our nitrogen oxide emissions increased from 107 thousand tonnes in 2017 to 111 thousand tonnes in 2018,* ***primarily the result of*** *additional vessels joining our shipping fleet."*
   Royal Dutch Shell PLC, 2018, p.39
5. *"To play our part in a cleaner energy future, we will offer customers more low-carbon products and services, including lower-carbon fuels for drivers, and* ***solutions such as forests and wetlands to act as natural carbon sinks****."*
   Royal Dutch Shell PLC, 2018, p.46
6. *"Nature-based projects typically involve the protection or redevelopment of natural ecosystems such as forests and wetlands,* ***allowing those ecosystems to capture and store more carbon on our behalf****. These projects, which also support local communities and conserve biodiversity, generate carbon-emission rights –* ***each right representing one tonne of carbon dioxide not emitted – that then can be bought by energy consumers around the world. We offer carbon offsetting to our business customers in some countries*** *including Belgium, France, Germany, Luxembourg, the Netherlands and Hong Kong."*
   Royal Dutch Shell PLC, 2018, p.53
7. *"Natural gas –* ***the cleanest-burning hydrocarbon****."*
   Royal Dutch Shell PLC, 2018, p.55

Lies

1. *"Second, to deliver energy products that people need and want – and do this responsibly to help shape a more sustainable energy future."*
   Royal Dutch Shell PLC, 2018, p.3
2. *"We have set clear ambitions, goals and targets that address our key sustainability challenges. Sustainability is core to our project planning and operational activities."*
   Royal Dutch Shell PLC, 2018, p.10
3. *"Most plastics use fewer resources and have a lower carbon footprint than the glass, paper and metal they have replaced. For instance, efficient plastic insulation and lightweight plastic parts in cars and planes save energy, which helps to avoid CO_2 emissions."*
   Royal Dutch Shell PLC, 2018, p.36
4. *"We **fully support the Paris Agreement** and we are driving our business strategy in the context of the energy transition and climate-related risks and opportunities."*
   Royal Dutch Shell PLC, 2018, p.46

Just not credible

1. *"We also work with a carefully selected group of environmental project developers around the world to offer our customers **voluntary carbon credits**."*
   Royal Dutch Shell PLC, 2018, p.54

No proof

1. *"Second, to deliver energy products that people need and want – and do this responsibly to **help shape a more sustainable energy future**."*
   Royal Dutch Shell PLC, 2018, p.3

Vagueness

1. *"To play our part in **a cleaner energy future**, we will offer customers more low-carbon products and services, **including lower-carbon fuels for drivers**, and solutions such as forests and wetlands to act as natural carbon sinks."*
   Royal Dutch Shell PLC, 2018, p.46

Jargon

1. *"We also work with a carefully selected group of environmental project developers around the world to offer our customers **voluntary carbon credits**."*
   Royal Dutch Shell PLC, 2018, p.54

Shell's Sustainability report 2019

Selective disclosure

1. *"We aim to reduce the Net Carbon Footprint of the energy products we sell by around 50% by 2050, and 20% by 2035 compared to our 2016 levels, in step with society's progress to align with the goals of the Paris Agreement."*
   Royal Dutch Shell PLC, 2019, p.11
2. *"We fully support the Paris Agreement's goal to keep the rise in global average temperature this century to well below two degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius."*
   Royal Dutch Shell PLC, 2019, p.11
3. *"We also aim to invest more in natural ecosystems to help drivers and businesses* ***offset their carbon emissions****."*
   Royal Dutch Shell PLC, 2019, p.13
4. *"These plans help drive our emissions performance through various actions. This includes using more energy-efficient equipment, installing power from renewable sources and considering carbon capture and storage in the design of our new and largest projects."*
   Royal Dutch Shell PLC, 2019, p.43
5. *"We invest in projects to* ***capture and store carbon dioxide*** *(CO_2) and we are exploring new ways of using CO_2 once it has been captured. These are crucial steps to help us achieve our ambition to reduce the Net Carbon Footprint of the energy products we sell by around half by 2050, in step with society's drive to reduce greenhouse gas emissions as it moves towards the goals of the Paris Agreement."*
   Royal Dutch Shell PLC, 2019, p.45
6. *"Shell's ambition is to expand the role of natural gas as a* ***cleaner burning fuel****. In 2019, we continued to take steps around the world to achieve this."*
   Royal Dutch Shell PLC, 2019, p.47
7. *"In 2019, we announced that we will support SkyNRG to develop Europe's first dedicated* ***sustainable aviation fuel*** *production plant by bringing our technical and commercial expertise to the development of the plant."*
   Royal Dutch Shell PLC, 2019, p.51
8. *"We are increasing our investment in protecting or developing natural ecosystems, such as forests, grasslands and wetlands, to capture more carbon from the atmosphere and* ***help our customers offset their emissions using carbon credits****."*
   Royal Dutch Shell PLC, 2019, p.79
9. *"In 2019, we started to offer customers nature-based carbon credits to offset the CO_2 emissions generated by the extraction, refining, distribution and use of the Shell fuel they buy. We launched the programme at around 400 service stations in the Netherlands and about 1,000 service stations in the UK."*
   Royal Dutch Shell PLC, 2019, p.80
10. *"We used* ***nature-based carbon credits*** *to compensate the CO_2 emissions generated from exploration and production to use by the consumer."*
    Royal Dutch Shell PLC, 2019, p.80

11. *"Gas is the **cleanest-burning hydrocarbon** and is an abundant, secure and readily available source of energy."*
    Royal Dutch Shell PLC, 2019, p.83

Empty claims

1. *"Shell's purpose is to power progress together by providing more and **cleaner energy solutions**."*
   Royal Dutch Shell PLC, 2019, p.9

Lies

1. *"We can only do this by keeping our approach to **sustainability at the heart of the way we do business**."*
   Royal Dutch Shell PLC, 2019, p.5
2. *"Sustainability at Shell means providing more and cleaner energy solutions in a responsible manner – in a way that balances short- and long-term interests, and that integrates economic, environmental and social considerations into decision-making."*
   Royal Dutch Shell PLC, 2019, p.11
3. *"Gas is the **cleanest-burning hydrocarbon** and is an abundant, secure and readily available source of energy."*
   Royal Dutch Shell PLC, 2019, p.83

Just not credible

1. *"This includes using nature-based solutions that protect or redevelop ecosystems and help us offer our customers the opportunity to **offset their emissions using carbon credits**."*
   Royal Dutch Shell PLC, 2019, p.84

Corporate responsibility in action

1. *"We **fully support** the Paris Agreement's goal to keep the rise in global average temperature this century to well below two degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius."*
   Royal Dutch Shell PLC, 2019, p.11

No proof

1. *"We aim to reduce the Net Carbon Footprint of the energy products we sell by around 50% by 2050, and 20% by 2035 compared to our 2016 levels, in step with society's progress to align with the goals of the Paris Agreement."*
   Royal Dutch Shell PLC, 2019, p.11

2. *"We also seek to reduce, reuse and recycle packaging across our supply chains and are exploring different and **more sustainable packaging solutions**."*
   Royal Dutch Shell PLC, 2019, p.34

Vagueness

1. *"That is why we are taking action to **provide lower-carbon products** to help customers reduce their emissions."*
   Royal Dutch Shell PLC, 2019, p.5
2. *"Shell's purpose is to power progress together by providing more and **cleaner energy solutions**."*
   Royal Dutch Shell PLC, 2019, p.9
3. *"Shell GTL (gas-to-liquids) fuel is a **cleaner-burning alternative** to diesel which can be used in existing diesel engines without the need for modifications."*
   Royal Dutch Shell PLC, 2019, p.34
4. *"Shell's ambition is to expand the role of natural gas as a **cleaner burning fuel**. In 2019, we continued to take steps around the world to achieve this."*
   Royal Dutch Shell PLC, 2019, p.47
5. *"We are working to support this goal by providing more and **cleaner energy**."*
   Royal Dutch Shell PLC, 2019, p.50

Shell's Sustainability report 2020

Selective disclosure

1. *"There were 69 operational spills of **more than 100 kilograms** in 2020 compared with 67 in 2019."*
   Royal Dutch Shell PLC, 2020, p.30
2. *"We are also **investing in ways to mitigate emissions** through capturing and storing CO_2 safely underground, or by planting and protecting natural ecosystems"*
   Royal Dutch Shell PLC, 2020, p.38
3. *"In 2020, we increased the number of drivers and business customers who use our **nature-based carbon credits to offset the life-cycle CO_2-equivalent emissions generated by their use of the Shell fuel they buy**."*
   Royal Dutch Shell PLC, 2020, p.46
4. *"We have made **carbon-neutral driving** available to our fleet customers in 12 countries and to retail customers at more than 4,600 service stations in Austria, Canada, Denmark, Germany, the Netherlands, Switzerland and the UK. We also offer a range of products with **nature-based carbon credits**, including home energy in the UK, liquefied natural gas in Asia (see Natural gas), bitumen in Europe and selected lubricants."*
   Royal Dutch Shell PLC, 2020, p.46
5. *"We have a global portfolio of nature-based projects, for example, the Katingan Peatland Restoration and Conservation Project in Indonesia, through which we can help our customers to offset their CO_2 emitted from their use of fuels they buy from us"*
   Royal Dutch Shell PLC, 2020, p.46

6. *"We are delivering liquefied natural gas (LNG) to business customers in Asia that has had the **carbon dioxide-equivalent emissions associated with its production, delivery and usage offset with carbon credits originating from projects that protect or develop natural ecosystems. We made the world's first deliveries of carbon-neutral LNG** in 2019 to Tokyo Gas in Japan and GS Energy in South Korea. In 2020, we secured new customers such as China National Offshore Oil Corporation (CNOOC) and CPC Corporation Taiwan. Since 2019, we have delivered seven cargoes, providing enough carbon-neutral LNG to power nearly 1 million homes for a year."*
   Royal Dutch Shell PLC, 2020, p.48
7. *"There we recently launched a range of carbon-neutral energy tariffs to meet growing interest from households for energy with a lower-carbon footprint. The Go Further tariffs offset the life-cycle CO_2-equivalent emissions associated with the production, distribution and use of renewable electricity and gas in the home. This is managed by buying equivalent **certified carbon credits** from projects that protect or enhance forests."*
   Royal Dutch Shell PLC, 2020, p.51
8. *"Where water is scarce, we minimise our use of fresh water or aim to use alternatives such as recycled water, processed sewage water, and desalinated water."*
   Royal Dutch Shell PLC, 2020, p.61
9. *"This was **mainly due to** an increase in the amount of oil discharged to water at the Pulau Bukom site in Singapore and some Shell facilities in the UK."*
   Royal Dutch Shell PLC, 2020, p.62

Just not credible

1. *"In the road freight sector, we offer **nature-based carbon credits** to business customers operating heavy- and light-duty fleets in 10 countries across Europe and Asia"*
   Royal Dutch Shell PLC, 2020, p.40

Dubious certifications & labels

Figure A.1. Self-made, unverified by a third party label, Royal Dutch Shell PLC, 2020, p.2

Vagueness

1. *"Shell continues to look for solutions to help improve air quality, including through the development of* ***cleaner fuels****."*
   Royal Dutch Shell PLC, 2020, p.65

Misleading symbols

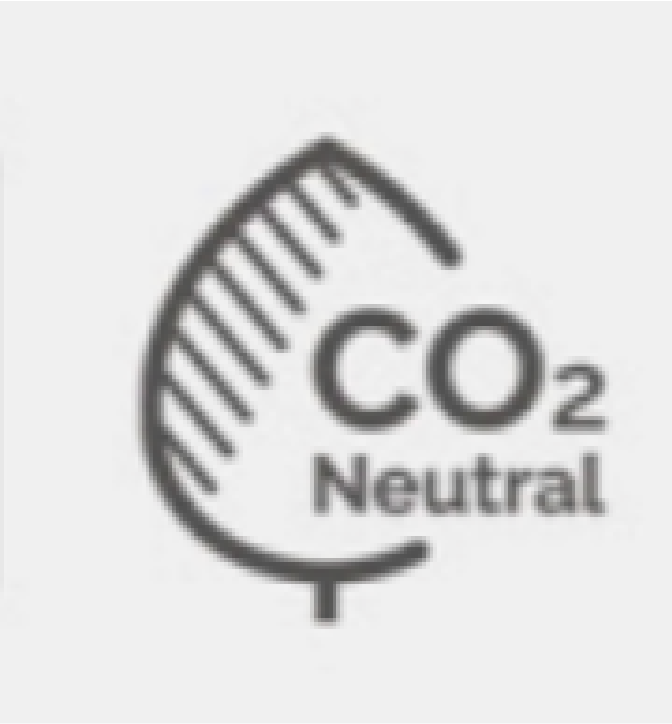


Figure A.2. Self-made, unverified by a third party label, Royal Dutch Shell PLC, 2020, p.2

Shell's Sustainability report 2021

Selective disclosure

1. *"We have programmes in place across our operations to reduce the number of operational spills. The volume of operational* ***spills of oil and oil products of more than 100 kilograms*** *to the environment (land or water) in 2021 was 0.05 thousand tonnes, a significant decrease from 0.4 thousand tonnes reported for 2020."*
   Royal Dutch Shell PLC, 2021, p.17
2. *"Chemical steam cracker energy intensity in 2021 was 18.1 gigajoules per tonne (GJ/tonne) of high-value chemical (HVC) production, down from 18.7 GJ/tonne HVC in 2020,* ***in part due to*** *good reliability and high utilisation at our Bukom chemical plant in Singapore and Deer Park in the USA."*
   Royal Dutch Shell PLC, 2021, p.26
3. *"Carbon credits generated from NBS projects can be used by Shell to* ***compensate for our own emissions and to allow our customers to offset their emissions***

in line with the mitigation hierarchy of avoid, minimise and offset."
Royal Dutch Shell PLC, 2021, p.30

4. *"Our ambition is to have a* ***positive impact on biodiversity****."*
   Royal Dutch Shell PLC, 2021, p.42
5. *"The reduction was* ***mainly a result of*** *the conversion of the Tabangao refinery in the Philippines to a terminal and decreased water use at Shell Energy and Chemicals Park Singapore, following improvements to water-based cooling systems and the decommissioning of some processing units."*
   Royal Dutch Shell PLC, 2021, p.45
6. *"In 2021, our overall intake of fresh water decreased to 166 million cubic metres, compared with 171 million in 2020,* ***mainly driven by*** *the shutdown of the Shell Convent Refinery (USA) in late 2020."*
   Royal Dutch Shell PLC, 2021, p.45
7. *"The majority of the reduction was the result of improvements made by the Shell Petroleum Development Company of Nigeria Ltd (SPDC) and an ongoing programme at Shell Energy and Chemicals Park Singapore to minimise oil discharges."*
   Royal Dutch Shell PLC, 2021, p.46
8. *"This was* ***mainly due to*** *reduced produced water discharges at SPDC (Nigeria)."*
   Royal Dutch Shell PLC, 2021, p.46
9. *"This was* ***mainly because of*** *lower emissions from our Shell Energy and Chemicals Park in Singapore as a result of maintenance and permanent shutdown of some units and reduced flaring of acid gas at our Pearl GTL plant in Qatar."*
   Royal Dutch Shell PLC, 2021, p.47
10. *"Our nitrogen oxide (NOx) emissions decreased from 118 thousand tonnes in 2020 to 105 thousand tonnes in 2021,* ***in part because of*** *fewer ships operated by Shell and lower contractor transport emissions in Nigeria."*
    Royal Dutch Shell PLC, 2021, p.47
11. *"Reductions were* ***in part due to*** *reduced emissions from SMDS (Malaysia), divestments in Canada and the USA, and the fact that Shell no longer operates two facilities in Malaysia."*
    Royal Dutch Shell PLC, 2021, p.47
12. *"We require projects and facilities that we operate to have a greenhouse gas (GHG) and energy management plan in place if they are expected to produce, at peak,* ***more than 50,000 tonnes of carbon dioxide*** *equivalent emissions."*
    Royal Dutch Shell PLC, 2021, p.61

Corporate responsibility in action

1. *"Respecting nature: protecting the environment, reducing waste and making a positive contribution to biodiversity."*
   Royal Dutch Shell PLC, 2021, p.5
2. *"Shell businesses focus first on emissions that can be avoided or reduced and only then, compensate the remaining emissions."*
   Royal Dutch Shell PLC, 2021, p.90

Vagueness

1. *"Powering Progress, launched in 2021, has four main goals in support of our purpose – to power progress together by providing **more and cleaner energy solutions**:"*
   Royal Dutch Shell PLC, 2021, p.5
2. *"Because emissions resulting from customer use of our energy products make up the greatest percentage of Shell's carbon emissions, this is where we can make the greatest contribution to the energy transition, by increasing sales of **low-carbon energy products and services**."*
   Royal Dutch Shell PLC, 2021, p.21
3. *"The JV announced the implementation of a package that includes greenhouse gas offset credits and investment in **lower-carbon projects** to compensate for the shortfall."*
   Royal Dutch Shell PLC, 2021, p.30
4. *"We believe Shell can become a leading provider of **clean power**."*
   Royal Dutch Shell PLC, 2021, p.32

Shell's Sustainability report 2022

Selective disclosure

1. *"The energy and cost of living crises have highlighted the need for a balanced energy transition: one in which **the world achieves net-zero emissions**, while still providing a secure and affordable supply of energy. We expect that **LNG will play an important role in such a transition**. It provides a critical supply of energy today, and it produces fewer greenhouse gas emissions than coal when used to generate electricity."*
   Royal Dutch Shell PLC, 2022, p.4
2. *"In 2022, we made significant investments to increase production of LNG and reduce emissions from the process. We joined two major projects in Qatar, for example. Both will use **carbon capture and storage**, helping us to offer customers LNG with a lower carbon footprint."*
   Royal Dutch Shell PLC, 2022, p.4
3. *"The volume of operational **spills of oil and oil products of more than 100 kilograms** to the environment (land or water) in 2022 was 0.06 thousand tonnes, an increase from 0.05 thousand tonnes reported for 2021."*
   Royal Dutch Shell PLC, 2022, p.20
4. *"We offer customers the opportunity to purchase high-quality **carbon credits** with the Shell fuel they buy to help compensate for the CO_2 emissions generated by the extraction, refining, distribution and use of the product"*
   Royal Dutch Shell PLC, 2022, p.32
5. *"In 2022, our overall intake of fresh water decreased to 156 million cubic metres, compared with 166 million cubic metres in 2021. **This reduction was mainly the result of** divestments and the shutdown of some units at the Shell Energy and Chemicals Park Singapore and Jurong Island Singapore."*
   Royal Dutch Shell PLC, 2022, p.44

6. *"In 2022, we disposed of 58 million cubic metres of produced water, which represents a decrease of 28% from 81 million cubic metres in 2021. This reduction was* ***mainly due to*** *the divestment of Permian assets in the USA and the shutdown of facilities, including offshore production platforms in the UK."*
   Royal Dutch Shell PLC, 2022, p.45
7. *"Our emissions of volatile organic compounds decreased to 38 thousand tonnes in 2022 from 45 thousand tonnes in 2021.* ***The reductions were, in part, due to*** *the divestment of Permian assets in the USA, the shutdown of the Trans Niger Pipeline and handover of operations in OML 11 in Nigeria, and reduced flaring in upstream assets in the UK."*
   Royal Dutch Shell PLC, 2022, p.46

Empty claims

1. *"Due to market factors, such as lack of available feedstock and progress in technology development,* ***Shell's ability to profitably meet its 1 million tonne plastic waste ambition by 2025 is unfeasible****. Consequently, we expect to provide further insights later in 2023."*
   Royal Dutch Shell PLC, 2022, p.43

Instagram Greenwashing claims

Below is the complete list of Greenwashing claims gathered by the students from Shell's official Instagram account during the years 2013 - 2023. Some claims were deemed relevant to two types of Greenwashing; therefore, these examples are marked with an asterisk (*) at the end. In addition, some Greenwashing claims are marked with **bold** text, since this part of the quote is considered to be misleading.

Instagram posts - 2013

Vagueness

1. *"The world's population is estimated to surpass 9 billion in 2050.* ***We are working on smarter ways to handle increasing energy demand.*** *#energy #innovation #city"*
   Royal Dutch Shell, 2023, pp. 7/11/2013

No Proof

1. *"We are working on making biofuels* ***more sustainable*** *through improving our production processes. Featured is an aerial shot of farmland in Turkey. #biofuels #energy #future"*
   Royal Dutch Shell, 2023, pp. 5/12/2013

Instagram posts - 2014

Selective Disclosure

1. *"Engineered by scientists, geobacter microbes can generate electricity from oil-based pollutants and radioactive material – cleaning the planet as they power it. #Shell#Shellideas360 #ShellCareers"* *
   Royal Dutch Shell, 2023, pp. 27/3/2014

2. *"An environmentally-friendly building alternative. Ignite your thinking. #Shell #Shell-Careers #ShellIdeas360" Photo text: "What if... bottles could be bricks?"* *
   Royal Dutch Shell, 2023, pp. 2/4/2014

3. *"The Scotford Upgrader is home to the world's first carbon capture facility for an oil sands operation. Beginning in 2015,* ***the site will capture more than 1 million tonnes of CO2 each year.****"*
   Royal Dutch Shell, 2023, pp. 24/9/2014

Empty claims

1. *"Engineered by scientists, geobacter microbes can generate electricity from oil-based pollutants and radioactive material – cleaning the planet as they power it. #Shell#Shellideas360 #ShellCareers"* *

Royal Dutch Shell, 2023, pp. 27/3/2014

No proof

1. *"An environmentally-friendly building alternative. Ignite your thinking. #Shell #Shell-Careers #ShellIdeas360" Photo text: "What if... bottles could be bricks?"*
   Royal Dutch Shell, 2023, pp. 2/4/2014 *

2. *"What if we could create #energy by recycling CO2 through heat and ice? Check out the #ShellIdeas360 finalists. Ignite your #innovation. #Shell #ShellCareers"*
   Royal Dutch Shell, 2023, pp. 29/4/2014

3. *"An **environmentally friendly and renewable solution.** Ignite your thinking. #Shell #ShellCareers #Shellideas360" Photo text: "What if... we built cars from potatoes?"*
   Royal Dutch Shell, 2023, pp. 1/5/2014

Vagueness

1. *"Purifying water with #innovation and pedal-power. Ignite your thinking. #Shell #ShellCareers #Shellideas360" Photo text: "What if... bikes re-cycled water?"*
   Royal Dutch Shell, 2023, pp. 9/4/2014 *

2. *"Shell is on a quest for **cleaner #energy.** From 2015 we plan to capture up to 1 million tonnes of CO2 in #Canada."*
   Royal Dutch Shell, 2023, pp. 31/5/2014

Instagram posts - 2015

Selective Disclosure

1. *"With responsibility comes #sustainability. Shell researchers work with NGOs to install engineered oyster reefs in Louisiana to help keep the shorelines and adjacent marshland thriving."*
   Royal Dutch Shell, 2023, pp. 7/7/2015

2. *"Ready...set...dive in. Shell funds various projects to help protect #marinelife and their homes in areas close to operations."*
   Royal Dutch Shell, 2023, pp. 3/8/2015

3. *"We're developing technologies to capture and store CO2, safely underground. See how we support bright energy ideas #makethefuture"*
   Royal Dutch Shell, 2023, pp. 18/11/2015

Misleading symbol

1. *"Adopt the pace of nature: her secret is patience" -Ralph Waldo Emerson. Sometimes the best advice is to slow down. Don't always be in a hurry to get where you're going; take time to enjoy getting there. #Inspiration #Travel #Journey"*
   Royal Dutch Shell, 2023, pp. 28/2/2015

Just not credible

1. *""When burnt for power, gas produces around half the CO2 and one-tenth of the air pollutants that coal does.* ***A switch saves lives today and ensures a sustainable energy system tomorrow****" -Ben van Beurden, CEO. #Energy #WGCParis2015 #naturalgas"*
   Royal Dutch Shell, 2023, pp. 2/6/2015

Vagueness

1. *"Like the referee says, keep it clean. Pearl GTL is the world's largest plant to turn #naturalgas into* ***cleaner-burning fuels****. Together we can help meet the world's growing demand for cleaner #energy." **
   Royal Dutch Shell, 2023, pp. 21/8/2015

No proof

1. *"Like the referee says, keep it clean. Pearl GTL is the world's largest plant to turn #naturalgas into* ***cleaner-burning fuels****. Together we can help meet the world's growing demand for cleaner #energy." **
   Royal Dutch Shell, 2023, pp. 21/8/2015

Corporate responsibility in action

1. *"The poster may be from 1923, but the message is still the same.* ***Let's keep leading the way towards an efficient, #cleaner tomorrow.*** *#TBT #progress"*
   Royal Dutch Shell, 2023, pp. 27/8/2015

Instagram posts - 2016

Selective Disclosure

1. *"#DidYouKnow Shell Canada's Scotford Refinery will capture more than 1 million tons of CO2 this year? The refinery began operations in 1984 and continues to be at the forefront of carbon capture operations."*
   Royal Dutch Shell, 2023, pp. 6/1/2016

2. *"#DidYouKnow sperm whales are listed as a vulnerable species? Shell is involved in several research programs to help increase understanding of marine mammals, their*

behavior, and how to prevent them from being disturbed."
Royal Dutch Shell, 2023, pp. 3/2/2016

Vagueness

1. *"The Bonga North West project is part of Shell's long-standing commitment to developing deep-water engineering skills in Nigeria and made use of existing infrastructure, limiting its environmental impact. #innovation"* *
Royal Dutch Shell, 2023, pp. 12/2/2016

No proof

1. *"The Bonga North West project is part of Shell's long-standing commitment to developing deep-water engineering skills in Nigeria and made use of existing infrastructure, limiting its environmental impact. #innovation"* *
Royal Dutch Shell, 2023, pp. 12/2/2016

Instagram posts - 2017

There were no Greenwashing claims found in posts that were uploaded in 2017.

Instagram posts - 2018

Selective Disclosure

1. *"Scaling new heights! This maintenance crew member works on a turbine hub 81 meters up at our onshore Mount Storm wind farm in West Virginia. Shell is now also entering offshore wind generation in the USA, where our joint ventures intend to develop wind farms off New Jersey and Massachusetts. Another example of how we're building our renewable power business. #renewableenergy #windfarm #windmill #windturbine #wind"*
Royal Dutch Shell, 2023, pp. 20/12/2018

Instagram posts - 2019

Selective Disclosure

1. *"5 million trees over 12 years. Together with staatsbosbeheer we're planting millions of trees in the Netherlands, as part of our nature-based solutions efforts. Nature can play a big role in the fight against climate change. So we are now investing in nature as part of our broad drive to tackle CO2 emissions. #nature #forest #bos #planten #netherlands"*

Royal Dutch Shell, 2023, pp. 10/4/2019

2. *"More trees? Together with landlifecompany, we're planting over 300,000 trees until the end of 2019 in the region of Castilla y León in Spain. This initiative is part of our nature-based solutions programme. Nature can play a vital role in tackling climate change. So Shell is investing in nature as part of our broad drive to reduce CO2 emissions. #nature #trees #landlife #reforestation"*
   Royal Dutch Shell, 2023, pp. 15/4/2019

3. *"1 million trees over 5 years. Together with forestryandlandscot we're planting one million trees in Scotland, as part of our nature-based solutions initiatives. The partnership will create new woodland, helping the Sottish local ecosystem and forests. Starting from October,* ***drivers that fill up at Shell can also go carbon neutral at 1,000 stations no extra cost. We're investing in nature as part of our broad drive to reduce CO2 emissions.*** *#nature #trees #reforestation #climatechange" **
   Royal Dutch Shell, 2023, pp. 10/10/2019

Vagueness

1. *"Switching on the gas. Striking view of our new liquefied natural gas terminal in Gibraltar.* ***The new facility is powering homes and businesses with natural gas, reducing emissions and improving air quality around the Rock of Gibraltar.*** *#natgas #naturalgas #LNG #Gibraltar"*
   Royal Dutch Shell, 2023, pp. 7/5/2019

Lies

1. *"1 million trees over 5 years. Together with forestryandlandscot we're planting one million trees in Scotland, as part of our nature-based solutions initiatives. The partnership will create new woodland, helping the Sottish local ecosystem and forests. Starting from October,* ***drivers that fill up at Shell can also go carbon neutral at 1,000 stations no extra cost. We're investing in nature as part of our broad drive to reduce CO2 emissions.*** *#nature #trees #reforestation #climatechange" **
   Royal Dutch Shell, 2023, pp. 10/10/2019

Instagram posts - 2020

There were no Greenwashing claims found in posts that were uploaded in 2020.

Instagram posts - 2021

No proof

1. *"Innovating on and off the track, Shell and ScuderiaFerrari have renewed their long-standing partnership. As part of this new chapter, Shell will keep providing the iconic motorsport team with fuels and lubricants and* ***we will help them to reduce their carbon footprint.*** *#formula1 #racing #f1 #ferrari shellmotorsport"*
   Royal Dutch Shell, 2023, pp. 28/2/2021

Instagram posts - 2022

Selective Disclosure

1. *"Steel has helped build our modern world. But producing it generates around 7% of global CO2 emissions. See how we are using solar power to help cut carbon emissions from steel. #PoweringProgress #steel #decarbonization"*
   Royal Dutch Shell, 2023, pp. 25/11/2022

2. *"Together with Eneco, we will build a new offshore wind farm in the Netherlands. The project will have installed capacity of 760 MW. That's enough to decarbonise about 3% of the current Dutch electricity demand. http://go.shell.com/3FQz2EO #PoweringProgress #wind #energytransition"*
   Royal Dutch Shell, 2023, pp. 22/12/2022

Instagram posts - 2023

There were no Greenwashing claims found in posts that were uploaded in 2023.