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Fabricating Resemblance to Global Commitment: A Critical Discourse Analysis on BP Energy Outlook

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Abstract

As public awareness and concerns for global warming and climate change grow increasingly stronger nowadays, major oil and gas companies have been required to provide their own pathways and commitments to stay in line with international or national goals and plans. The fossil fuel industry appears reluctant in cutting down further exploitation and investment in fossil fuels while proposing their own commitments towards climate goals. This inconsistency raises the question of whether these commitments are once again greenwashing practices. This article performs a critical discourse analysis on the *BP Energy Outlook 2023 Edition* based on Fairclough's *Three-Dimensional-Framework*. It discloses how BP constructs scenarios that seemingly comply with international envision, while in fact dissembling significant modifications from those being claimed as resemblant. The targeted readers by the *Outlook* are then to be deduced, as well as the intention of releasing the *Outlook*. The *Outlook* is possibly a scheme of responsibility-shifting and delaying actions to help BP disguise its continuation of carbon-intensive business mode. As there are more and more investors valuing climate responsibilities, there need to be attention and validation on these claims and commitments, so further unfaithful publicity can be discerned and solid advances towards climate goals can be ensured.

Keywords: Critical discourse analysis, Greenwash, Climate change, Fossil fuel giant, BP energy outlook

1. Introduction

1.1 Research Background

It has been observed and acknowledged that human activities have contributed to global warming and climate change, and there will be more extreme weather and climate-related disasters as results (Horowitz, 2016; IPCC, 2022a, Chapter SPM.B, 2023). One of the key causes is the release of the carbon stored in the crust of the Earth from the extraction and consumption of fossil fuels, which is responsible for over half of anthropogenic greenhouse gas emissions for decades (IPCC, 2022b, sec. SPM.B.1). With the cause recognized, the global community resolves to reduce emissions and the well-known *Paris Agreement* includes pledges to "hold the increase in global average temperature to 'well below' 2 degrees Celsius above pre-industrial levels" (Horowitz, 2016). Researches have shown that current major oil and gas companies need to respond and shift out of their comfort zone to fulfil current global agreements, and there have been a lot more they can do to facilitate humanity to achieve an energy transition (IEA, 2020; IPCC, 2022b, pp. 67–68).

However, the reluctance of the energy industry has been observed, and as one of the vested interests stated by Almiron & Xifra (2019), the energy industry is one of the barriers to effective reactions and may have been involved in the shift in our rhetoric. For such reason, the role of public relations management, and the realm of communication are areas worth focusing on for our resolution to the commitments made and the justice to both the resource-lacking and our future generation on its way.

The concept of "greenwash" came into existence in the 1990s, a time period commented as the "environment decade" (Kangun et al., 1991; Oxford English Dictionary, 2023). This practice has been considered to have significant impacts on human perception towards environmental issues, either those impassioned or those oblivious to this topic. The inability and senselessness caused by climate shame or climate guilt have been regarded as the effects of the popularisation of the concept of "individual carbon footprint" at the beginning of this century, among which BP has taken part in (Fredericks, 2021; Kaufman, 2020; Kurzgesagt, 2021). Driven by this history of BP practice, it's worth examining what BP attempts to achieve in their decade-long annual practice of publishing their *Energy Outlook*, and whether they have greenwashed themselves and how.

1.2 About BP and Its Energy Outlook

BP, formerly called British Petroleum, has formally changed its name to BP since 2000, and branded it as an abbreviation of "*Beyond Petroleum*" to showcase its shift in business focus presumably for improving public images under the raising concerns for climate change. Nevertheless, it has been considered falling short with the company's unvaried focus in investments in the fossil fuel sectors (Beder, 2002; Driessen, 2003; Matejek & Gössling, 2014). One frequently mentioned indicator for this criticism is the investments in renewable energy are so subtle compared with its expansion on fossil fuel industry in terms of its yearly spending of multibillion dollars on oil exploration until 2020 when BP declared to stop looking for oil and gas in new areas (Mufson, 2020).

According to an article endeavoured to quantify historical CO_2 emissions of major producers in the period from 1880 to 2010 (Ekwurzel et al., 2017), BP ranks fourth among the five companies that are responsible for more than 2% of total historical CO_2 emissions, and it has continuously being one of the largest and most profitable private companies in the world, occupying the top tier of the *Fortune Global 500* ranking for revenues and profitability for decades (Fortune, 2023). The recent news have also confirmed that BP has not "moved *Beyond Petroleum*" and still gains massive profits from fossil fuels (Bove, 2022; Mellor, 2022). Considering the current share of direct and indirect emissions from the energy sector, radical actions (Note 1) need to be implemented as stated in the IPCC report (IPCC, 2022b, fig. TS.6, pp. 67-68). However, BP has not included a detailed plan tackling their existing facilities and emissions in its *Outlook.*

According to BP's archive available on its website, the first *BP Energy Outlook* (Note 2) was released in 2011. For the first three years, they were released under the same title "*BP Energy Outlook 2030*" as different editions. In 2014, the title was changed to "*BP Energy Outlook 2035*", so was the 2015 edition in the following year. Since 2016, the year at the time has started to appear in the title. BP is the first fossil fuel giant to start releasing these "Outlook"s (Note 3), and before then the collocation of "energy" and "outlook" was mostly used by the International Energy Agency (IEA) or governmental departments, some of which can date back to the 1990s (*Search Results | OECD iLibrary*, n.d.). This might indicate where the name and the practice came from.

1.3 International Documents Concerning Climate Change

This paper compares *BP Energy Outlook 2023 edition* against a series of documents from the Intergovernmental Panel on Climate Change (IPCC) under the United Nations. IPCC is an organization of governments that are members of the United Nations or the World Meteorological Organization. It was set up in 1988 to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation by the World Meteorological Organization and the United Nations Environment Programme. It provides crucial information for the drafting and amendments of the United Nations Framework Convention on Climate Change (UNFCCC), which includes governmental agreements on global climate policies. The UNFCCC provides a foundation for several important international treaties and commitments on cooperation of climate actions, like the *Kyoto Protocol*, and the *Paris Agreement* targeting on greenhouse gases (GHG) emission control and mitigation (IPCC, 2021).

In this paper, IPCC's Sixth Assessment Reports (AR6) will be used as references, as they're the latest reports synthesizing international scientific findings and the ones BP has mentioned and tries to align with. Three of the AR6 reports are used as major referential materials: *Climate Change 2023: Synthesis Report*, *Climate Change 2022: Mitigation of Climate Change*, and *Climate Change 2022: Impacts, Adaptation and Vulnerability* (Note 4) (IPCC, 2022a, 2022b, 2023). These reports contain separate parts designed to serve respective readers, and use consistent abbreviations to refer to those parts and as prefixes to sections, figures, and tables. For convenience, this paper will follow a scheme to provide locations of

references. The abbreviations and the meaning are as follows: SPM stands for the *Summary for Policymakers*, TS stands for the *Technical Summary*, section labels without these prefixes refer to the longer or comprehensive reports, and prefix A refers to those in its appendix.

1.4 Research Objectives

This study examines the intention and the construction of discourse in the BP *Energy Outlook* and provides an up-to-date analysis of BP's attitude towards an impending crisis for both humanity and their business, targeting their decade-long releases. Through making a thorough comparison of the *Outlook* and the IPCC reports, this study aims to uncover BP's motivation for the routine publication and reveal BP's attitudes at the current time towards climate change. The study conducts a critical analysis of conformity with international expectations of BP's plan for future business in the energy sector presented in the *Outlook*, with the aim to raise public awareness about greenwashing practices and prevent potential investors from being frauded by distorted discourses constructed by companies to attract or ensure investments.

2. Literature Review

2.1 Studies on Greenwashing

"Greenwashing" is not a new practice. In Tom Athanasiou's *The Age of Greenwashing* (1996), similar practices vindicating contentious industries have been sourced back to the early 1930s, a United States' example of the response to a Senate investigation from the gunpowder industry. On the other hand, a study on greenwashing advertisements in magazines in both the US and the UK from Baum (2012) suggests that the energy industries have particular incentives for such participation.

In recent years, due to the rising public concern and the collective notion of the urgency of acting, international commitments were reached, pressures of reducing GHG emissions come from not only impositions of regulations but also from giant investment corporations or banks (e.g., Blackrock, JPMorgan Chase), which indicates that they are going to regard a company's commitment to renewable energy and a plausible detail plan towards it as a prerequisite of investment (Grove & Clouse, 2021). This forces companies to present detailed portfolios of their energy transition pathways. In the study from Grove & Clouse, BP is listed as one of the oil giants which have set clear goals towards net zero by 2050, but continual monitoring and investigations are needed on those commitments, or they could fall as "greenwashing".

The damage of greenwashing covers various aspects. It can either undermine the efforts of corporations who made authentic contributions to respective fields or cause scepticism in the field of environment (Baum, 2012; Naderer et al., 2017). In the Energy sector, it would undermine the efforts of moving away from fossil fuels and the development of sustainable energy or low-carbon energy, which are a key shift and a crucial part preventing us from more climate disasters (IPCC, 2022b, sec. TS.3). Traditional fossil fuel giants have claimed they are undergoing transition but investigations from the press found they frequently claim more credit than they earned, and BP is one among them (Beder, 2002; Cherry & Sneirson, 2012; Driessen, 2003; Li et al., 2022; Mufson, 2020; Roberts, 2020; Westervelt, 2020).

Divestment has been considered, though hard to implement, as the means for humanity to get rid of fossil fuel (Braungardt et al., 2019). When that is the case, the greenwashing campaigns launched by fossil fuel companies are significant factors in that way, as it deflects the nature of the company and might diminish the pivot the finance sector have provided.

2.2 CDA on Environmental Issues

Two features of critical discourse analysis are, according to Van Dijk (1993, p. 252), "Their critical targets are the power elites that enact, sustain, legitimate, condone or ignore social inequality and injustice", "…solidarity with those who need it most. Their problems are real problems, that is, the serious problems that threaten the lives or well-being of many". When in the case of environmental issues, both criteria seem almost always fulfilled, for most of the time it is about the exploitation of resources or degradation of physical space imposed by elites who would benefit, while the whole community needs to bear the consequences. "Greenwashing" by definition is an unreal depiction of the nature of a business model into a "greener" one (Athanasiou, 1996); it is a manoeuvre to legitimating and sustaining the preexisting injustice using discourses. As a result, when this word is used, the attitude of the user is usually sceptical and critical towards such narrations, which makes materials labelled greenwashing carry the potential as sources of critical discourse analysis, as it is an institute trying to use its power to create a discourse to stayed advantaged, according to Foucault's *Orders of Discourses* (1971).

In a discussion of the relationship between discourse and policies in the field of environment, Feindt & Oels (2005) point out that environmental problems are no longer objective. Their representations are now an effect of linguistic regularities, whose constitutions are subject to strategies of power and knowledge. Critical discourse analysis provides us with tools to study the power and the effect concerning environmental discourse. Such exertion of power and knowledge did present during multiple fossil fuel companies' public relations management campaigns, advertisements, and lobbies to counter climate-related policies according to a sequence of research. For example, Barrage et al. (2020) focus on how BP's embellishments on its environmental impacts quell the antagonism after the *Deepwater Horizon oil spill* (Note 5). Li et al. (2022) analyse BP and other three oil giants from the perspectives of discourse, business strategies and investment, providing a picture of decade-long misalignment forged by these giants. Cherry & Sneirson (2011, 2012) review how BP and its counterpart Chevron greenwashed themselves and proposed possible refinement to regulate these greenwashing.

2.3 Summary of Existing Literature

The patterns and possible detriments of greenwashing have been discerned, but its prevalence in current time and the obscurity caused by the asymmetry of information and manoeuvre of language highlight the need for further examinations. Since the fossil fuel industry practising greenwashing is evident viewing from history, recent elevations of requirements on climate actions has made imminent commitments critical, which could induce greenwashing that not going to be implemented therefore requiring monitoring. As the constitutions of discourse concerning environmental issues are usually concerned with institutional power, the

environmental discourse falls into the realm of critical discourse analysis, and there have been relevant analyses focusing on some previous propaganda campaigns from the fossil fuel industries and providing some insights on patterns, extent, and incentives of greenwashing. Albeit such attention on this issue, they mostly focus on analysis after certain momentous events (e.g., the *Deepwater Horizon* oil spill) and on customer-targeted, lacking monitoring of the narratives of these companies towards their shareholders as Grove & Clouse call for, which might play a key role in decision-making during the divestment movement.

3. The Study

This study analyses *BP Energy Outlook 2023* following Fairclough's *Three-Dimensional-Framework* (2013). Fairclough views language, and the cluster of it—discourse, as a form of social practice, and he considers there are three layers of propriety these social practices possess. The first is that language itself is a part of society instead of a mere spectator of it, so linguistic phenomena are social phenomena and vice versa. The second is that discourse is part of social processes, which includes its production and interpretation, and it can serve as the trace of production and the cue for interpretation. The third is that the social process mentioned above is conditioned by other non-linguistic parts of society. Sourcing from these notions, Fairclough developed a corresponding framework for CDA, the *Three-Dimensional-Framework*. The first dimension, description, focuses on the formal properties of the text. The second dimension, interpretation, focuses on the relationship between the discourse and the interactions it performs as part of the social process. The third dimension, explanation, focuses on the interaction between discourse and the social context, and its effects on society.

Accordingly, the study carries out its analysis along three dimensions. First, description—the text of the *Outlook*. The fidelity and selection of the presented information will be verified through comparison with what BP claims to stay aligned with (the IPCC reports), and the significant difference will be summarized. Second, interpretation—the delivery and presumed context of the *Outlook*. In this part, the non-textual arrangement would be analysed, accompanied by other clues, the intended audience, and the presumed interdiscursive context would be conjectured. Third, explanation—the intention of BP would be analysed based on previous research on greenwashing and public relations management practices from BP or other fossil fuel giants. Therefore, the study has the following research questions to address:

1. What discursive strategies has BP applied in *the Outlook* as greenwashing practices?
2. How did BP deliver *the Outlook* to its targeted readers?
3. What are the incentives and goals of BP implicated in the *Outlook*?

4. Findings

4.1 Description—Greenwashing Strategies BP Applied on the Outlook

Fabricating Conformity with Scientific Document

At the heading of page 14 of the *Outlook*, "broadly in line with 'Paris consistent' IPCC scenarios" is used as the modifier for two scenarios *Accelerated* and *Net Zero* proposed by BP. Before digging into the two scenarios BP provides, let's refer to the original documents mentioned, the *Paris Agreement* and the *IPCC Sixth Assessment Report* (IPCC AR6), mainly on the objective set:

> This Agreement … its objective, aims to strengthen the global response to the threat of climate change, … including by:
>
> (a) Holding the increase in the global average temperature to well below 2 ℃ above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 ℃ above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;… (Horowitz, 2016, art. 2)

IPCC has projected sets of pathways estimating the developments of the climate under different extents of mitigation measures, in which the statement for pathways obtaining goals set in the *Paris Agreement* are:

> Mitigation pathways limiting warming to 1.5 ℃ with no or limited overshoot reach 50% CO_2 reductions in the 2030s, relative to 2019, then reduce emissions further to reach net zero CO_2 emissions in the 2050s. Pathways limiting warming to 2 ℃ (>67%) reach 50% reductions in the 2040s and net zero CO_2 by the 2070s (medium confidence). (IPCC, 2022b, sec. TS.4.2)

Compared with pathways set under such premises, BP's scenarios have clear inconsistencies or even flaws in their alignment towards targeted global warming temperature (GWT) goals, though it can be said it's partially consistent if less preferable pathways in the IPCC reports are taken into regard (Note 6). BP's design introduces a series of exemptions that eventually lead to the persistence of fossil fuels as the global GHG emission source.

The setting of scenarios has the following major alterations compared with the respective IPCC pathways (BP, 2023, p. 14,15,97; IPCC, 2022b, tbl. TS.2, TS.3):

- Both scenarios of *Net Zero* and *Accelerated* have a higher carbon emission than IPCC's pathways with the same GWT goals (BP, 2023; IPCC, 2022b, fig. SPM.5), in which the *Net Zero* scenario is not consistent with the statement in the IPCC WGIII report that predicts "global net zero CO_2 emissions are reached in the early 2050s in pathways that limiting warming to 1.5℃ (>50%) with no or limited overshoot…"(IPCC, 2022b, sec. SPM.C.2), rather, it only provides a vision that the global CO_2 emission fall by around 95% by 2050 (BP, 2023).
- The *Net Zero* scenario delays the decline of CO_2 emissions before 2030 and plans a steeper decline afterwards than the IPCC 1.5℃ scenario (BP, 2023; IPCC, 2022b, tbl. TS.2).
- The *Net Zero* scenario plans only a 30% fall in the CO_2 from 'fossil fuels and industrial processes' compared with 40% in the IPCC scenario (BP, 2023, p. 17; IPCC, 2022b, sec. TS.5.1). In other words, it transfers the endeavour of cutting GHG emissions onto other

sectors to fulfil the overall mitigation scheme.

- The fall of coal consumption in the *Net Zero* scenario is altered to "significantly smaller" by 2030 (BP, 2023) but with no mention of the mitigation scheme to abate the consequent emissions. On the contrary, the IPCC report stated that reduction and transfer from coal in the energy sector is a key method to reduce GHG emissions and increase energy efficiency (IPCC, 2022b, sec. TS.3, TS.5).

The *Outlook* also has overt differences in the attitude towards the future of fossil fuels compared with IPCC reports. In the *Outlook*, BP implies continuous investment in the exploration and construction of wells for natural gas and oil, alongside delayed peaks of consumption compared with the depiction from IPCC (BP, 2023, pp. 82–83, 94). Whereas in the IPCC reports, the attitude toward fossil fuels is negative, and assert that the continuation of investment in fossil infrastructures would locked-in the emission from the energy sector, making the goal of staying in conformity with the goal of the *Paris Agreement* harder, and suggesting fulfilling of such goal would "strand fossil-related assets" (IPCC, 2022b, sec. TS.5.1). IPCC also estimates future CO2 emissions from existing fossil fuel infrastructures already exceed the remaining net CO2 budget, and decommissioning and reductions of utilisation of preexisting infrastructures are needed to align future emissions with projections (IPCC, 2022b, p. 68).

BP also makes an unsupported prediction on future technologies and accredit reduction of emission on them. On page 17 of the *Outlook*, the "gain in [energy] efficiency" is anticipated "much quicker than the last two decades in these scenarios", which indicates the possibilities of BP making predictions without sufficient scientific basis, and there's no way of measuring the variability of this "gain", as no explanation or quantitative perimeters are provided for this claim. Furthermore, this claim does not comply with the trend observed by the IPCC based on the past two decades, which shows a decrease in paces of gain in energy efficiency (IPCC, 2022b, sec. TS.5). In addition, the plausibility of *Carbon Capture, Use and Storage* (CCUS) is taken for granted in the future estimation, despite concerns on the trade-offs and impacts to the eco-system and current hardship in large scale implementation (BP, 2023, pp. 13, 74–79; IPCC, 2018, sec. C.3.4, 2022b, sec. SPM.C.11).

Combining these differences (inconsistent setting of scenarios, reduced and delayed reduction of fossil fuel consumptions, opposite attitude towards the future of fossil fuels, and attribution to a prediction against former trends), it is different enough to require a reassessment which BP clearly underplayed. It is very unlikely that BP's prediction could lead to a resemble outcome to their claimed counterparts (the pathways from IPCC). It's more likely a handy and seemingly trustworthy term BP borrows to make their *Outlook* more environmentally friendly and comply with the advocation around the globe.

Shifting Responsibility for Self-interest

In the *Outlook*, the figures for CO_2 emission shown in the body part are approaching the upper limit in the IPCC report (2022b, fig. SPM.5). But even then, one significant factor has not been considered in BP's calculation. BP has not considered CO_2 emissions from other

sectors and other GHG in its projection, as they state in the Annex:

Unless otherwise stated, carbon emissions refer to CO_2 emissions from:

- energy use (i.e., the production and use of energy in the three final end-use sectors: industry, transport, and buildings),
- most non-energy related industrial processes,
- natural gas flaring,
- methane emissions associated with the production, transmission, and distribution of fossil fuels, expressed in CO_2 equivalent terms.

CO_2 emissions from industrial processes refer only to non-energy emissions from cement production. CO_2 emissions associated with the production of hydrogen feedstock for ammonia and methanol are included under hydrogen sector emissions. (BP, 2023)

The most notable absences are Land use and Land use changes and Forestry (LULUCF) and Agriculture, forestry, and other land use (AFOLU), as in the IPCC WGIII report (Note 7), this part of emission takes a nonnegligible portion historically. Though in section TS.5.6.1 of the report, IPCC authors have accredited it with "[AFOLU] …offers significant mitigation opportunities…", in the subsequent part of this chapter, they have also pointed out AFOLU mitigation measures "…hampered by persistent barriers.", "…can provide co-benefits, but there are also risks and trade-offs from inappropriate land management.", "…have been well understood for decades but deployment remains slow, and emissions trends indicate unsatisfactory progress…" (2022b). This suggests in the near future, it's not likely in this sector the mitigation gains can not only offset its own emission impacts but also be productive enough to offset emissions from other sectors, e.g., the extra margin BP grants to the energy sector in its outlook.

In addition, BP's outlook only takes CO_2 into account, as can be seen in the TS.3 of the IPCC WGIII report (IPCC, 2022b), there're still other types of GHG we have been historically emitting, and most of them have a greater *global warming potential* than CO_2, which makes this flaw in accounting even more considerable (IPCC, 2022b, sec. A.II.8).

4.2 Interpretation—The Delivery and the Targeted Readers

General Characteristics of the Outlook

The page design of the *Energy Outlook* is different from standard government or scientific documents. It is not arranged for A4 size. Instead, the digital version of it divided an A4 size page into two A5 size parts; and the page numeral scheme can prove this hypothesis that the Outlook is likely to be printed with A4 paper, and then cut or folded into A5 size brochure. Conjecturing from the margin of the design and the ornament of the colour strips at either top or bottom, the spine of this printing should be at the longer edge of the A5 printing. This abnormality from formal documents might indicate that it is intended to look less formal, and its application would prefer a more compact size, for example, leaflets delivered during a

meeting.

Most pages arranged the texts into three columns, and put figures on individual pages. Pieces of information are delivered as key points, and blocks of short paragraphs, which are resemblances of listing. According to Fairclough (2001, pp. 259–260), listing syntax is not a usual way of making an argument, for it has not connected assertions into an argumentative thread. Rather it's more of a series of assertions, it does not carry the character of dialogical. Another property that shows the *Outlook* is not expecting to argue with the readers or critics is the figures inside it do have exact numbers for the data, which distinguishes it from meticulous argumentation that tries to engage readers to contemplate the intricacy behind it.

Hawking the Margin of Terms

As pointed out in the description part, the alleviated targets and oblivions in multiple aspects proved that the scenarios BP provides are not comprehensive and unbiased enough to serve as a prospect for reference, not even enough for one to apprehend what efforts are needed for the energy sector. "Maintaining temperature rise aligned with IPCC scenarios" has been innocently declared on page 15 in *Outlook*, repeatedly implied as a common ground of discussion. Despite BP's *Accelerated* and *Net Zero* scenarios being "…broadly in line with…", "…do not model all forms of greenhouse gases or all sectors of economy…not possible to map directly between the scenarios and their implications for the carbon budget and the implied increase in average global temperatures by 2100.", they're still claimed to be "…provide an indirect inference … with the ranges of corresponding carbon trajectories taken from the scenarios included in the *IPCC Sixth Assessment Report*…", which seem unpractical after so many alterations as mentioned before emerged from hides of words.

The heading on this page is a straightforward declarative sentence: "*Accelerated* and *Net Zero* are broadly in line with 'Paris consistent' IPCC scenarios", while the clarifications for its deficiency are intricate phrases entangled with sophisticated technical terms scattered all over the page. This difference in narrative strategies could provide some clues about the variance BP has on giving readers throughout apprehension on related subjects. The complexity set in the clarifications not only baffles the readers in comprehension, possibly making those who have glimpsed through into a mirage in which BP's scenarios are in higher coordination with IPCC scenarios than they really are, but also quietly disable those who detect the oddness accusing BP of fabricating unauthentic discourses.

The Targeted Readers of the Outlook

As Fairclough points out (2013, p. 134), producers of discourse and their interpreters would assume the other party is equipped with the same interpretative procedures as themselves, while producers with power would attempt to impose their interpretations. Combining the arbitrary alterations of conditions (See in 4.1) in envisaging and the insincerity in explaining/defending the credibility of information (the assertive narrative instead of the argumentative narrative), the targeted readers of the *Outlook* are those who BP consider as lacking the necessary knowledge or incentives to challenge the fidelity and reliability of the *Outlook*. Therefore, the *Outlook* is not targeting at experts or administrators on the

environment, nor is it aiming to placate environmentalists, as these people are either equipped with sufficient knowledge or the impulse to certify dubious claims. This can be reflected in what has been stated in BP's first attempt at releasing its *Energy Outlook* (2011), in which they stressed they intend to contribute to the energy conversation among "consumers, producers, investors and policy-makers".

Moreover, possibly the most apparent indicator, is the call from major investors' emphasis on environmental responsibility and paths towards renewable energy and reducing GHG emissions (Grove & Clouse, 2021, sec. 2). Therefore, the *Outlook*'s orientation should be people with awareness of managing climate change while do not excel in the area, under which condition BP can hoax with some delicacy.

4.3 Explanation—Incentives and Goals of BP

BP as a Skilled PR Manager

There's a long history of BP applying greenwashing and resembling public campaigns, among which most notably and probably the most successful one is the popularization of the notion of *individual carbon footprint* in 2004. It successfully shifted public attention to the daily individual emissions by overstating the influence of individual actions in abating climate change. While the reality is the infrastructure and system, on which people's daily lives are built, are responsible for most carbon emissions, and it takes collective and systematic effort to introduce a shift to tackle the climate change caused by anthropogenic carbon emission (Kaufman, 2020; Kurzgesagt, 2021; Ritchie et al., 2020). This popularization also benefacts businesses in promoting products labelled green, though it does encourage people to cut their carbon footprint, but for those who are unable to afford "a greener option", the inability contrarily induced carbon shame or guilt which could lead to inaction or even contributed to the rise of climate denial (Kurzgesagt, 2021; Yeager, 2023).

Moving to more recent events, the *Deepwater Horizon oil spill* has proven the effectiveness of BP's "*Beyond Petroleum*" advertising campaign. After the disaster, it was observed gasoline stations of the involved companies soared in their customer numbers and prices, and similar damages were seen in the stock prices too. A quicker recovery was observed in regions with more investment in the previous *Beyond Petroleum* campaign, as well as preceding green marketing campaigns (Barrage et al., 2020). The campaign is considered wildly successful, as it provides an image of BP as a "green" gasoline brand for its general American customers (Cherry & Sneirson, 2011).

The success in public relationship management has proven BP's mastery and awareness of the potential benefits of using propaganda to forge public opinion and of building positive corporate social images.

Goals of BP's Outlook

Under the findings above, the strategy applied and the goal it might like to achieve through the *Outlook* can be assumed as follows:

First, given the authority and prestige of IPCC publishments in guiding future policies, by

creating well-fabricated falsified scenarios claiming as resemblances, BP first rightfully legitimizes their claim of complying with the trend of relevant policies and of having taken account of environmental factors into the development of business. Then, for those lacking adequate information or lacking incentives (aka., the targeted audience) to sight the divergence between discourse from BP and IPCC, a biased notion of a well-behaved, with adequate environmental concern would be created, and the distorted prospects benefit current fossil-fuel-related industries would root in their mind, which might influence their perception on this issue and could defer the responses being called for from the authoritative discourse. Focusing on direct benefits to BP, the popularization of this discourse can prevent investors from divestment and defer the moment their assets get stranded as the fall of fossil fuel consumption is delayed in the *Outlook*. (Gibson & Duram, 2020; Mangat et al., 2018).

Secondly, another notable element featuring the outlook is an attitude of optimism. Optimism has been recognized as key to greenwashing back in the 1990s by Tom Athanasiou (1996). In the *Outlook*, BP makes no comments on the trade-offs between scenarios it proposed, not mentioning between their discourse and the IPCC ones. This neglects the cause for forceful and imminent action is the subsequent losses as consequences of procrastination of the decline of GHG levels in the atmosphere, which IPCC makes a whole individual report (2022a). Besides this oblivion of costs implied, BP also holds an optimistic view on the future development of technologies, such as improvements in energy efficiency, belief in CCUS (See 4.1.1). To sum up, this understatement of risks constitutes a context without impending jeopardy and urgency of eradicating fossil fuels as primary energy sources.

Thirdly, BP expressively emphasizes the importance of fossil fuels in future in the *Outlook*, which significantly deflects from the IPCC attitude, can be seen as an attempt to buy time for its current assets before being stranded, and the mention of further development in the sector might be an attempt of justifying for the current composition in its company. Both of which could provide investors an opportunity and security in the company.

All these three aspects can be regarded as indicators of justifying its lethargy in the transition to greener alternatives. Meanwhile, the release of the *Outlook* complies with the call of environmental responsibility from investors (See 2.1, 4.2.3). With the manoeuvres above, BP can then leverage its cross-sectoral influence and global business distribution, taking advantage of academic resources being too sophisticated to comprehend, to establish their own envision to the public beforehand. The public pressure on its carbon-intensive business mode is therefore diverged. Through frequent publicity, an image of an environment-concerning corporation can be built, decoupling from their role as one of the most significant emitters and the importance of their factual corporation in this global issue (Li et al., 2022; Nosek, 2023, sec. 2.3).

5. Discussion and Conclusion

This article performs a critical discourse analysis on the *BP Energy Outlook 2023 Edition based on* Fairclough's *Three-Dimensional-Framework*. BP's performance in releasing annual *Outlook*s was deemed to be a practice of corporate action in response to environmental concerns, which was designed into a narrative not completely conforming with the general

perception one would get from the literal surface of this publishment. The scenarios inside are at best partly consistent with the less desirable IPCC pathways in some statistical measures. The variations and errors introduced could hardly lead to a similar outcome. The setting and prospects provided by BP hold a completely different attitude to fossil fuels compared with the IPCC assertions, which can be considered an attempt to continue BP's current profits in such field and to stall before those assets get stranded. The targeted group of the *Outlook* is considered mainly investors concerning environmental issues, as well as customers, from which BP tries to take advantage of the asymmetry of information and the sophistication of the scientific publishment to present a furnished discourse favouring their business. Judging from previous successes of BP's public relations management campaigns, the goals of the *Outlook* are considered to be falsifying a benefactive discourse alongside the established scientifically presented one and (or thus) diverge the criticism of indifference or inaction to the international initiatives. As a result, using their existent cross-sectoral and international influence to reach more possible targets before the narrative which could disadvantage them do, BP can persist the profitability of the fossil fuels which they historically profit most from.

Viewing holistically, the *Outlook* fails to provide an authentic, objective, and scientific envisaging. Instead, the depictions provided inside favouring the fossil fuel industry, the one BP gets most of their profits from. Though BP's persistent tradition of providing an analysis of their corporate view is credible, for it provides more information to the public about the corporate assessment of presence and future, the credibility of the *Outlook* makes the practice dubious. In general, it falls into a business-oriented document concerning environmental issues. But the tone carried claiming it could affiliate global reaction on climate change is misleading, it comprised designs falsifying a disadvantaged narrative of international reports into a more advantaged setting to the company. This act categorised this publishment into the act of greenwashing, for this could burnish the company as taking a more active role in environmental issues.

Even if considering BP's *Outlook* a business action, it still fails to provide a reasonable sketch to back the declaimed focus on providing "a wide range of outcomes possible out to 2050" (2023, p. 13). Instead, it obscures alternations to the internationally recognized reports while implicating its accordance which only makes the chief economist's recognition of "the importance of a decisive shift towards a net-zero future" seem feeble and the *Outlook* seem insincere. Frequent reference to IPCC reports and alterations towards the less reactive brink and undercutting the efforts needed from the fossil fuel industry, the *Outlook*'s aim at shifting responsibility and understating the urgency to change divulged itself. After such magnitude of alterations accumulated, the need for assessments on the difference in climate impacts becomes non-negligible, thus causing this *Outlook* as an unreliable reference for investors to consider the prospect of the corporation on climate aspects, which could impair the collective efforts in mitigations and timely responses to climate change.

As one of the biggest oil and gas producers, BP's active participation is indisputably needed during the global transition away from fossil fuels. Imminent actions are needed if humanity wants to obtain goals set at the international level and avoid further, more violent

catastrophes. But from last year's *Outlook*, BP has not shown their willingness to move away from fossil fuel despite years of external calls and requests. Instead, BP proposed a distorted scheme under the name of international scientific reports, trying to manipulate people's perceptions of scientific assertions to its own benefit quietly and attempting to mask themselves as an activist on climate issues among their counterparts. As a bonus, the *Outlook* can also placate environment-concerning investors around their demand of disclosing the GHG emission reduction plan and commitment. BP restate the indispensable role of fossil fuels in a period of the future way longer than what IPCC recommend. After evaluating all pathways proposed, the IPCC authors consider we should emit otherwise less if not no GHG, as it would be ever costly to mitigate the side effects as we linger over removing fossil fuels from our energy sources. It implies that the *Outlook* is at best another placebo BP feed to the world if not another poison. BP still seems to fight for space for its fossil fuel business in the future.

This article only examines a particular edition from one of many heavy greenhouse gas emitters. As the consciousness of global-wise countermeasures against climate change rises, pressures on corporations to devote into mitigation build up, therefore incentives to perform greenwashing as a handy deferral of effective actions would only drive up. More comprehensive monitoring on publicities can be developed to prevent such fabrication, which can function as a precautionary measure to guarantee the fulfilments of pledges and policies. Diachronic and comparative synthesis can further provide generalised patterns of resemble behaviours, so as to prevent a prevalence of such frauds that would hinder the accomplishment of global commitments.

References

Almiron, N., & Xifra, J. (Eds.). (2019). *Climate Change Denial and Public Relations: Strategic Communication and Interest Groups in Climate Inaction* (1st ed.). Routledge. https://doi.org/10.4324/9781351121798

Associated Press business staff. (2010, June 2). BP has another setback as oil slick threatens Florida. *Cleveland*. Retrieved from https://www.cleveland.com/business/2010/06/bp_frees_saw_from_pipe_oil_thr.html

Athanasiou, T. (1996). The Age of Greenwashing. *Capitalism Nature Socialism*, *7*(1), 1-36. https://doi.org/10.1080/10455759609358660

Barrage, L., Chyn, E., & Hastings, J. (2020). Advertising and Environmental Stewardship: Evidence from the BP Oil Spill. *American Economic Journal: Economic Policy*, *12*(1), 33-61. https://doi.org/10.1257/pol.20160555

Baum, L. M. (2012). It's Not Easy Being Green … Or Is It? A Content Analysis of Environmental Claims in Magazine Advertisements from the United States and United Kingdom. *Environmental Communication*, *6*(4), 423-440. https://doi.org/10.1080/17524032.2012.724022

Beder, S. (2002). bp: Beyond Petroleum?. *Faculty of Arts - Papers (Archive)*. Retrieved from

https://ro.uow.edu.au/artspapers/49

Bove, T. (2022, May 6). Fossil fuel companies like Shell and BP are raking in massive profits, and this could be just the beginning. *Fortune*. Retrieved from https://fortune.com/2022/05/05/oil-companies-massive-profits-first-quarter-russia-ukraine/

BP. (2011). *BP Energy Outlook 2030*. BP p.l.c. Retrieved from https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/energy-outlook/bp-energy-outlook-2011.pdf

BP. (2023). *Bp Energy Outlook 2023*. BP p.l.c. Retrieved from https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/energy-outlook/bp-energy-outlook-2023.pdf

Braungardt, S., Van Den Bergh, J., & Dunlop, T. (2019). Fossil fuel divestment and climate change: Reviewing contested arguments. *Energy Research & Social Science*, *50*, 191-200. https://doi.org/10.1016/j.erss.2018.12.004

Cherry, M. A., & Sneirson, J. F. (2011). Beyond Profit: Rethinking Corporate Social Responsibility and Greenwashing after the BP Oil Disaster. *Tulane Law Review*, *85*, 983. https://doi.org/10.2139/ssrn.1670149

Cherry, M. A., & Sneirson, J. F. (2012). Chevron, Greenwashing, and the Myth of 'Green Oil Companies'. *Washington and Lee Journal of Energy, Climate, and the Environment*, *3*(1). Retrieved from https://ssrn.com/abstract=1953329

Driessen, P. K. (2003). BP--back to petroleum. *Review - Institute of Public Affairs*, *55*(1), 13-14. Retrieved from https://www.proquest.com/docview/204102943/abstract/2AD9CB09DE884033PQ/1

Ekwurzel, B., Boneham, J., Dalton, M. W., Heede, R., Mera, R. J., Allen, M. R., & Frumhoff, P. C. (2017). The rise in global atmospheric CO2, surface temperature, and sea level from emissions traced to major carbon producers. *Climatic Change*, *144*(4), 579-590. https://doi.org/10.1007/s10584-017-1978-0

Fairciough, N. (2013). *Language and Power* (2nd ed.). Routledge.

Fairclough, N. (2001). The discourse of New Labour: Critical discourse analysis. In M. Wetherell (Ed.), *Discourse as Data* (pp. 229-266). Sage and the Open University. Retrieved from https://eprints.lancs.ac.uk/id/eprint/8533/

Feindt, P. H., & Oels, A. (2005). Does discourse matter? Discourse analysis in environmental policy making. *Journal of Environmental Policy & Planning*, *7*(3), 161-173. https://doi.org/10.1080/15239080500339638

Fortune. (2023). BP. *Fortune*. Retrieved from https://fortune.com/company/bp/

Foucault, M. (1971). Orders of discourse. *Social Science Information*, *10*(2), 7-30. https://doi.org/10.1177/053901847101000201

Fredericks, S. E. (2021). *Environmental Guilt and Shame: Signals of Individual and Collective Responsibility and the Need for Ritual Responses*. Oxford University Press.

Gibson, D., & Duram, L. A. (2020). Shifting Discourse on Climate and Sustainability: Key Characteristics of the Higher Education Fossil Fuel Divestment Movement. *Sustainability, 12*(23), 10069. https://doi.org/10.3390/su122310069

Grove, H., & Clouse, M. (2021). Renewable energy commitments versus greenwashing: Board responsibilities. *Corporate Ownership and Control*, *18*(3, special issue), 423-437. https://doi.org/10.22495/cocv18i3siart15

Horowitz, C. A. (2016). Paris Agreement. *International Legal Materials*, *55*(4), 740-755. https://doi.org/10.1017/S0020782900004253

IEA. (2020). *The oil and gas industry in energy transitions*. IEA. Retrieved from https://www.iea.org/reports/the-oil-and-gas-industry-in-energy-transitions

IPCC. (2018). 2018: Summary for Policymakers. In *Global Warming of 1.5℃. An IPCC Special Report on the impacts of global warming of 1.5℃ above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]* (pp. 3-24). Cambridge University Press, Cambridge, UK and New York, NY, USA. https://doi.org/10.1017/9781009157940.001

IPCC. (2021, July). *IPCC FACTSHEET What is the IPCC?*. Retrieved from https://www.ipcc.ch/site/assets/uploads/2021/07/AR6_FS_What_is_IPCC.pdf

IPCC. (2022a). *2022: Climate Change 2022: Impacts, Adaptation and Vulnerability* (1st ed.). Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA. https://doi.org/10.1017/9781009325844

IPCC. (2022b). *Climate Change 2022: Mitigation of Climate Change* (P. R. Shukla, J. Skea, R. Slade, R. Fradera, M. Pathak, A. A. Khourdajie, M. Belkacemi, R. van Diemen, A. Hasija, G. Lisboa, S. Luz, J. Malley, D. McCollum, S. Some, & P. Vyas, Eds.; 1st ed.). Intergovernmental Panel on Climate Change. Retrieved from https://www.ipcc.ch/report/ar6/wg3/

IPCC. (2023). *2023: Climate Change 2023: Synthesis Report*. Retrieved from https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_LongerReport.pdf

Jamail, D. (2012, March 4). BP settles while Macondo 'seeps'. *Al Jazeera*. Retrieved from https://www.aljazeera.com/features/2012/3/4/bp-settles-while-macondo-seeps

Kangun, N., Carlson, L., & Grove, S. J. (1991). Environmental Advertising Claims: A Preliminary Investigation. *Journal of Public Policy & Marketing*, *10*(2), 47-58. https://doi.org/10.1177/074391569101000203

Kaufman, M. (2020, July 13). *The devious fossil fuel propaganda we all use* (Raghuram, Nandita, Ed.). Mashable. Retrieved from https://mashable.com/feature/carbon-footprint-pr-campaign-sham

Kurzgesagt. (2021, ca). *Sources What Can You do To Stop Climate Change? And Should You? Sources*. Retrieved from https://sites.google.com/view/sources-climate-how/

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*(2), e0263596. https://doi.org/10.1371/journal.pone.0263596

Mangat, R., Dalby, S., & Paterson, M. (2018). Divestment discourse: War, justice, morality and money. *Environmental Politics*, *27*(2), 187-208. https://doi.org/10.1080/09644016.2017.1413725

Matejek, S., & Gössling, T. (2014). Beyond Legitimacy: A Case Study in BP's "Green Lashing". *Journal of Business Ethics*, *120*(4), 571-584. https://doi.org/10.1007/s10551-013-2006-6

Mellor, S. (2022, August 2). Oil giant's bumper $8.45 billion profits spark cost-of-living crisis backlash. *Fortune Europe*. Retrieved from https://fortune.com/europe/2022/08/02/bp-earnings-by-the-numbers-profit-dividend-payouts-share-buybacks-cost-of-living-crisis-backlash/

Mufson, S. (2020, September 20). Big Oil's green makeover. *Washington Post*. Retrieved from https://www.washingtonpost.com/climate-solutions/2020/09/15/bp-climate-change-transition/

Naderer, B., Schmuck, D., & Matthes, J. (2017). 2.3 Greenwashing: Disinformation through Green Advertising. In G. Siegert, M. B. Rimscha, & S. Grubenmann (Eds.), *Commercial Communication in the Digital Age* (pp. 105-120). De Gruyter. https://doi.org/10.1515/9783110416794-007

National Response Team Response Committee. (2011). *On Scene Coordinator Report—Deepwater Horizon Oil Spill Submitted to the National Response Team*. The National Response Team. Retrieved from https://web.archive.org/web/20120915094912/http://www.uscg.mil/foia/docs/dwh/fosc_dwh_report.pdf

Nosek, G. (2023). *Climate discourse polluted: A cumulative effects analysis of the fossil fuel industry's tactics to influence public discourse.* [PhD Thesis, University of British Columbia]. https://doi.org/10.14288/1.0431101

Oxford English Dictionary. (2023). Greenwash, n. In *Oxford English Dictionary* (3rd ed.). Oxford University Press; Oxford English Dictionary.

https://doi.org/10.1093/OED/4284575249

Ritchie, H., Rosado, P., & Roser, M. (2020). Emissions by sector. *Our World in Data*. Retrieved from https://ourworldindata.org/emissions-by-sector

Roberts, D. (2020, September 25). On climate change, oil and gas companies have a long way to go. *Vox*. Retrieved from https://www.vox.com/energy-and-environment/2020/9/25/21452055/climate-change-exxon-bp-shell-total-chevron-oil-gas

Search Results | OECD iLibrary. (n.d.). Retrieved 28 February 2024, from https://www.oecd-ilibrary.org/search?value1=energy+outlook&option1=title&operator2=AND&value2=&option2=fulltext&operator3=AND&value3=&option3=fulltext&operator4=AND&value4=&option4=fulltext&operator5=AND&value5=&option5=fulltext&operator6=AND&value6=&option6=fulltext&operator7=AND&value7=&option7=fulltext&operator8=AND&value8=&option8=fulltext&operator9=AND&option9=year_from&value9=&operator10=AND&option10=year_to&value10=&option11=pub_imprintId&value11=&option12=dcterms_language&value12=&option15=dcterms_type&option58=contentType&value15=&value15=&option29=pub_themeId&value29=&option30=pub_countryId&value30=&sortField=prism_publicationDate&sortDescending=false&facetOptions=51&facetNames=pub_igoId_facet&operator51=AND&option51=pub_igoId_facet&value51=%27igo%2Foecd%27&publisherId=%2Fcontent%2Figo%2Foecd&searchType=advanced

van Dijk, T. A. (1993). Principles of Critical Discourse Analysis. *Discourse & Society*, *4*(2), 249-283. https://doi.org/10.1177/0957926593004002006

Westervelt, A. (2020, June 20). *Is BP Really Changing? Or Is Its New Climate Message Just "Beyond Petroleum" All Over Again?*. P4F Miami. Retrieved from https://www.parentsforfuturemiami.org/post/is-bp-really-changing-or-is-its-new-climate-message-just-beyond-petroleum-all-over-again

Yeager, B. A. (2023). Collective Shame in Climate Denial: An Ecopsychological Undertaking. *Ecopsychology*, eco.2023.0002. https://doi.org/10.1089/eco.2023.0002

Notes

Note 1. "Decommissioning and reduced utilisation of existing fossil fuel installations in the power sector as well as cancellation of new installations are required to align future CO2 emissions from the power sector with projections in these pathways (high confidence)."—(IPCC, 2022b, p. 68)

Note 2. To avoid redundancy, it would be simply referred as (the) *Outlook* in this article.

Note 3. ExxonMobil starts since 2019, DNV and Total Energies released similar documents with "outlook" in 2023, but none of them have archives on their official sites for retrieval of

possible earlier version.

Note 4. As the latter two reports are released in the same year, they would be identified with their contributing workgroup during narrative citations. *Climate Change 2022: Mitigation of Climate Change* (2022b) is the contribution of the IPCC Working Group III and *Climate Change 2022: Impacts, Adaptation and Vulnerability* (2022a) is the contribution of the IPCC Working Group II.
Example of Use:
Climate Change 2022: Mitigation of Climate Change (2022b) as "IPCC WGIII report(s)";
Climate Change 2022: Impacts, Adaptation and Vulnerability (2022a) as "IPCC WGII report(s)"

Note 5. The *Deepwater Horizon* oil spill was a disaster that on 20th April 2010, in the Gulf of Mexico. *Deepwater Horizon* was a drilling rig operated by BP, which exploded on 20th April 2010. The well remained unsealed until September 2010, and further leakage has been observed till 2012. An estimation of up to 780k m^3 (210m US gal) (±10%) of oil was discharged into the n, making it the world's largest accidental spill. Hundreds of kilometres (125 mi, 201 km) of coastline was contaminated by washed-up oil (Associated Press business staff, 2010; Jamail, 2012; National Response Team Response Committee, 2011).

Note 6. IPCC provides a set of pathways targeting one GWT goal. The difference lies in the curves of mitigation and whether and to what degree *Overshoot* is anticipated, and the implicated consequences (i.e., impacts, losses, etc.) from reconciling to less rigour pathways are emphasized at the initiation of reports. Both "pathway C2: returning warming to 1.5℃ (>50%) after a high overshoot" and "pathway C4: limit warming to 2℃ (>50%)" can be regarded as in line with the *Paris Agreement*, which says "…well below 2℃…, and pursuing to…limit…within 1.5℃". The IPCC WGII report makes separate anticipations for them and emphasizes the clear distinctions. (IPCC, 2022a, sec. SPM.B.6, 2022b, sec. TS.4.2).

Note 7. In Panel (a), Figure TS.3 *Historic anthropogenic CO_2 emission and cumulative CO_2 emissions (1850-2019) as well as remaining carbon budgets for limiting warming to 1.5℃ (>67%) and 2℃ (>67%)* (IPCC, 2022b, fig. TS.4), LULUCF makes up 93%, 68%, 48% and 18% during 1850-1900, 1900-1950, 1950-1990 and 1990-2019 respectively. In Figure TS.6 *Total anthropogenic direct and indirect GHG emissions fort the year 2019 (in $GtCO_2$-eq) by sector and subsector* (IPCC, 2022b), AFOLU makes up 22% of direct and indirect emission, LULUCF is included in AFOLU in this situation.

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