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Corporate Carbon Neutrality Claims and the Legal Effects of Double Counting

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Abstract:

This thesis in law examines the legal effects that companies may face if they use carbon dioxide (CO_2) offset as a basis for their carbon neutrality claim and this offset is in later scrutiny revealed as double counted. Double counting renders the carbon neutrality claim void, as the offset is also counted for elsewhere and therefore does not deliver climate change mitigation outcome for the company. Avoiding double counting is one of the established quality criterions of carbon offset, however it is not straightforward to assess the criterion ex-ante as the practise occurs ex-post. Double counting can occur unintentionally but also intentionally by fraud. This thesis examines the topic in relation to EU law and draws examples from national legislations of the Member States, notably from Finland.

Companies can purchase carbon offset from the voluntary carbon market. They can purchase it for varied reasons related to corporate social responsibility. However, most often offset is purchased to claim carbon neutrality. Carbon neutrality is a voluntary goal for companies. It can be achieved by reducing CO_2 emissions that can be reduced and then compensating the residual emissions by purchasing offset. Carbon offset is a commodity - one kiloton of CO_2 emissions equivalent is valued as a one carbon credit. Carbon credits are constructed under different schemes, and as such are based on different standards and have different prices. The market is international in nature, and in many cases the actors are in different countries.

The voluntary carbon market is not regulated by substantive law and therefore, the market remains regulated by self-regulation. This creates issues in quality assurance and also the problem of lack of oversight and enforcement. The differently constructed commodities are also difficult to compare, and the market includes information asymmetry and integrity risks.

The legal effects of double counting in relation to carbon neutrality claims is a phenomenon currently related also to the Paris Agreement, as both offset project host country and a company might claim the same emissions reductions. This current state of affairs makes it probable that the corporate offset is double counted. If the corporate claims are rendered void, it has negative effect on climate change mitigation but also to the company's reputation which can in turn can lead to significant monetary losses. In relation to 'green' consumer products, companies may face accusations of misleading marketing practices or greenwashing, if it is revealed that compensation was purchased from a poor-quality offset project. Also, the rise of human rights consciousness in relation to emissions reductions under the Paris Agreement may play part in the risk of environmental litigation for companies.

Table of contents

Abbreviations

CDR	carbon dioxide removal
CMP	carbon management practice(s)
CO2	carbon dioxide
CRCR	Carbon Removals Certification Regulation
CSDDD	Corporate Sustainability Due Diligence Directive
CSR	corporate social responsibility
CSRD	Corporate Sustainability Reporting Directive
ECHR	European Convention on Human Rights
ECJ	European Court of Justice
ESG	Environmental – Social - Governance
ETS	emissions trading system
EU	European Union
EUA	EU emissions allowance
GHG	greenhouse gas
IFF	Institute of international Finance
IPCC	Intergovernmental Panel on Climate Change
LULUCF	land use, land use change and forestry
MS	Member State
NDC	Nationally Determined Contribution
NFRD	Non-Financial Reporting Directive
NGO	Non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the United Nations High Commissioner for Human Rights
SBT	Science based target
UNFCCC	United Nations Framework Convention on Climate Change
UPCD	Unfair Commercial Practices Directive
VCM	voluntary carbon market

1 Chapter 1: Introduction

This thesis in law is part of the University of Helsinki Institute of Sustainability Science (HELSUS) multidisciplinary thesis programme 2022-2023, and made for the energy company Helen Oy's challenge 'What is a sustainable and just energy transition like?'.

In context of law, sustainable and just energy transition refers to laws and regulations that support companies' transition to environmentally sustainable economy. This thesis concentrates on European Union (EU) law and corporate carbon neutrality. The purpose is to examine the legal effects when companies' carbon neutrality claims turn out to be incorrect because of erroneous sustainability information. The issue is more precisely researched in the context of the voluntary carbon market and double counted carbon offset.

1.1 Thesis Topic and Background

Carbon neutrality is a topical issue and important for companies for several reasons. Climate ambition has risen in the wake of the United Nation's Framework Convention on Climate Change (UNFCCC) adoption of the Paris Agreement (2015). After the coming into force of the Agreement in 2016, and from 2020 onwards when the nationally determined contributions (NDCs) started, there has been a growing interest by companies to align their functions with carbon neutrality. Post-2020 has seen a significant rise in climate change mitigation ambition, both by governments and companies.[1] As all companies produce GHG emissions in their value chains, there is a need to rethink their activities, business models and corporate strategies. Corporations' actions in relation to climate change, are in essence actions to either to adapt or to mitigate the effects of climate change.[2] However, mere emissions reductions are not sufficient, as they cannot keep the global warming under 1,5 Celsius degrees in line with the Paris Agreement.[3] In order to decrease the global CO2 emissions, business models will need to

[1] University of Oxford 2022.
[2] Sullivan 2008, 3–4.
[3] Silfverberg 2022, 16–17.

evolve to embrace low carbon and zero carbon technologies, improve energy efficiency and promote the circular economy to eliminate waste. Especially the energy sector will need to decarbonise, meaning massive deployment of clean technologies, supported by cost-effective storage, and business models that drive greater energy efficiency.[4] The size of the business and the industry where a company operates, reflects the content of carbon neutrality and appropriate carbon management practices (CMP) to reach it.[5] The private sector activities are crucial for climate change mitigation. In fact, one of the key objectives of climate change law is to regulate them, and to drive investment towards climate-friendly technologies and activities.[6]

Corporate carbon neutrality means that company's operations, products and/or serves are net carbon dioxide (CO2) neutral.[7] Companies produce the largest amount of greenhouse gases (GHG) into the atmosphere, and therefore it is essential in combating climate change that companies reduce their emissions.[8] GHG absorb and re-emit infrared radiation, which promotes to global warming. The most prominent of these gases is CO2.[9] It is the single most important GHG in the atmosphere, accounting for approximately 66% of the warming effect on the climate.[10]

Carbon neutrality can have several positive effects on business. First, the general societal and environmental interest in mitigating climate change and taking part in the green transition. Secondly, established carbon management practices can attract investors and new business partnerships. And thirdly, carbon neutrality also attracts customers.[11] The growing importance of 'green' production and environmentally conscious consumption can be, in addition to the Paris Agreement, attributed to the United Nations acknowledging it as a crucial matter in its sustainable development goals in 2018. Sustainability has become a significant topic in consumerism, with many debates centred on how sustainable consumption can help to mitigate negative environmental effects, as well as what motivates consumers to gravitate toward green consumption, resulting in green consumer behaviour.[12]

Carbon neutrality can be achieved by reducing CO2 emissions and then offsetting any residual emissions that cannot be by other means reduced. Offsetting can be done by different means,

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4 Finnish Innovation Fund (Sitra) 2015, 4.
5 Alhola et. al., 2015, 31.
6 Kulovesi 2013, 58.
7 University of Oxford 2020, 1.
8 United Nations 1992, 3.
9 European Commission 2015, 12.
10 United Nations Framework Convention on Climate Change (UNFCCC) 25 October 2021.
11 Finnish Innovation Fund (Sitra) 2015, 2.
12 Haba et al. 2023, 1.

but in the context of this thesis, purchasing carbon credits from the voluntary carbon market is examined. One offsetting unit, a carbon credit, offsets one tonne of CO2 emissions from the atmosphere. Credits are generated from CO2 compensation projects which mainly either reduce or remove CO2 from atmosphere.[13] Most CO2 offsets currently available are CO2 reduction offsets.[14] The voluntary carbon market can play a role in the just energy transition by providing a mechanism for companies to offset their emissions and support projects that reduce emissions in a way that is socially, economically, and environmentally just.[15]

Companies' primary target in carbon neutrality aspirations is to reduce their own value chain emissions, and then remove the residual emissions where it is most cost-effective.[16] Carbon credits are most commonly produced in CO2 reduction projects in developing countries, where it may be beneficial to develop nature preservation projects.[17] Credits can be bought from the voluntary carbon market (VCM). It is not a marketplace as such, but a nexus of national and international traders offering their services in climate change mitigation by CO2 compensation. These traders can include, but are not limited to, offset project developer, project auditor, verifier, and seller. Auditors and verifiers are needed as the regulation in the voluntary carbon market is based on self-regulation and not by specific law.[18]

The voluntary carbon market is an emerging market, as global ambition in decarbonization accelerates.[19] The voluntary climate targets from companies are currently in fact the main force behind the increasing demand for carbon credits.[20] Carbon markets embody a new form of climate capitalism, where economic activity is seen not only as the source of but can also be the solution to climate change.[21] The Ecosystem Marketplace (2020) estimates that around 612 million carbon credits were issued between 2007 and 2019, from programmes that targeted mainly the voluntary market. The main buyers in 2020 were multinational, private, for-profit companies that have bought offset as part of their broader environmental sustainability strategy.[22]

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[13] Institute of International Finance 2021, 8.
[14] Oxford of University 2020, 1.
[15] Inamdar 7 November 2022.
[16] Tamme 2021, 10.
[17] Wemaëre 2021, 150.
[18] Karassin & Perez 2018, 108.
[19] Institute of International Finance 2021, 4.
[20] The World Bank 2022, 40.
[21] Knox-Hayes 2018, 684.
[22] Doda et al. 2021, 19.

The role of emission reductions and removals in the mitigation of climate change will change over time. Carbon reductions are necessary, but not sufficient in achieving net zero in the long run.[23] Carbon removals will replace carbon reductions in the second half of the century.[24] Climate change mitigation pathways[25] show, that starting from the 2030's, carbon removal will become the main global climate change mitigation driver of net negative emissions. In order to have policies and incentives in place for 2030's, the preparatory work will have to take place in 2020's. Carbon removal will balance out residual emissions from sectors, where it is not possible to drive the emissions down to zero, such as construction, heavy industry, and heavy transport.[26] Therefore, users of offsets should increase the portion of their offsets that come from CO2 removals, rather than from emission reductions, ultimately reaching 100% carbon removals by mid-century to ensure compatibility with the Paris Agreement goals.[27]

The demand for carbon offsetting derives from a range of compliance obligations, as well as voluntary commitments adopted by companies, governments, and other organizations.[28] The 2020's has seen a rise in more ambitious climate change mitigation legislation. Alongside the Paris Agreement, the European Union Green Deal (2019) and Climate Law (2021) have pushed more stringent regulative framework that also extends to companies in EU. There are several legislative processes related to environment, sustainability, and climate change mitigation under way in EU. In relation to CO2 offset, the Commission published the Proposal for Carbon Removals Certification Regulation (CRCR), establishing a Union-wide certification framework for CO2 removals. When in force, it will be the first legislative instrument to regulate CO2 offset produced in carbon removal projects.[29]

Carbon offset double counting means, that the credit(s) generated from carbon offsetting projects are double counted towards climate change mitigation. It can occur in multiple ways, depending on the counterparties and the use of the offset. For instance, double claiming of the offset can occur when a company purchases CO2 offset from an offshore project and the

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[23] University of Oxford 2020, 1.
[24] Tamme 2021, 3.
[25] Mitigation pathways describe future emissions that keep global warming below 1,5 Celsius degrees in line with the Paris Agreement. Such mitigation pathways are characterized by energy-demand reductions, decarbonization of electricity and other fuels, electrification of energy end use, deep reductions in agricultural emissions, and some form of CO2 removals with carbon storage on land or sequestration in geological reservoirs. Low energy demand and low demand for land- and GHG-intensive consumption goods facilitate limiting warming to as close as possible to 1.5°C. (Rogelj et al. 2018, 95).
[26] Tamme 2021, 9.
[27] University of Oxford 2020, 1; Tamme 2021, 9.
[28] The World Bank 2022, 35.
[29] European Commission 2022. Public Initiatives. Certification of carbon removals – EU rules.

mitigation effort is counted towards the company's national country's NDC, but also towards the project's host country's NDC under the Paris Agreement.[30] Double counting can also happen intentionally and fraudulently, by selling the same carbon credits multiple times.[31] Avoiding double counting is one of the offset quality criteria.[32]

This topic is relevant, as energy infrastructure is in the heart of EU. The Union was first established as European Coal and Steel Community in 1952. The then Member States chose energy as one of the initial focus areas for economic and political integration, recognizing the role of energy as a strategic backbone for an industrialized society. Several international high profile climate negotiations have also promoted the multilateral and rule-based approach to global governance prominent in the European Union. Climate and energy policies are a unifying agenda in the Europe.[33]

The topic of this thesis, carbon offset double counting and its possible legal effects on companies, is examined in this thesis in seven Chapters. The first Chapter lays down the research methods and explains the legal framework. The second Chapter on corporate emissions reductions is an introductory Chapter, as it aims to situate the topic on the wider discussion of corporate carbon management practices in relation to climate change. The Chapters from three to five examine corporate carbon neutrality, how it could be achieved by carbon offsetting and what is carbon offset double counting. The third Chapter deals specifically with EU law, whereas the other two Chapters deal mostly with self-regulation. The sixth Chapter discusses the legal problems that could arise because of double counted offset used in carbon neutrality claims, and references case law in relation to the topic. The Discussion elaborates on the issues that have risen during the research and gives conclusions.

[30] Laininen et. al. 2022, 43.
[31] Interpol Environmental Crime Programme 2013, 15.
[32] Institute of International Finance 2021, 19-21.
[33] Mehling et. al. 2013, 519–520.

1.2 Research Questions

The topic of this thesis is the problem of carbon offset double counting and its effects on companies who claim carbon neutrality. This thesis has one main research question which is examined through four sub research questions. The main research question is very specific and requires knowledge on corporate social responsibility (CSR), corporate carbon neutrality, and the voluntary carbon market where carbon offset is traded.

The problem of carbon offset double counting has become more prominent only after 2020, and due to the newness of the issue, there is much uncertainty about its implications. Also, there is not any case law on double counting itself. Based on these premises, this thesis is explorative in nature. As it is explorative, it requires wider information around the topic; to examine if the surrounding matters could have relation to the research question, because there is not a ready answer in the referenced materials and case law has not yet formed an interpretation of the existing law. The examined situations are compared in parallel, not to same but similar, situations where companies have had troubles in claiming carbon neutrality, and therefore the reasoning remains hypothetical.

The research question of this thesis is:

1) *What legal effects companies may face when they claim carbon neutrality via purchasing carbon dioxide offset which is later revealed as double counted?*

The research question is examined by sub questions:

i) What is corporate carbon neutrality?
ii) How does EU law regulate corporate carbon neutrality claims or matters related to it?
iii) What is carbon dioxide offsetting?
iv) What is double counting and how is it relevant to companies' carbon neutrality claims?

The four sub questions are examined first in this thesis as they form the basis for the main research question.

1.3 Legal Framework

This thesis is situated in the general legal framework of environmental law. Environmental law is a broad sphere of law that extends permeably to other areas of law. Although most of the regulation in environmental law is public law, there are also elements of environmental law in private law. Environmental law also extends to penetrate multiple areas of substantive laws. As a branch of law, it is interdisciplinary in nature as environmental issues affect society as a whole.[34] Regulation in environmental law can be divided into five levels: regulation based on international law; regulation based on EU law; national state legislation and other official regulation; regulation produced by municipalities and provincial/regional governments; and self-regulation by various actors affecting the environment, such as companies, alone or jointly with other actors, such as industrial organisations.[35] International and regional soft law instruments such as recommendations, guidelines and standards are important regulatory instruments in environmental regulation.[36]

Environmental law in this thesis is examined in the more specific context of climate change. Climate change law refers to a body of legal principles, regulations, and policies aimed at mitigating the harmful effects of human-induced climate change. Climate change law encompasses different legal instruments which include international treaties, national legislation, and judicial decisions.[37] According to Grantham Research Institute (2022), most laws and policies related to climate change focus on energy, transport, economy-wide issues, and land use, land use change and forestry (LULUCF). In addition, there is growing coverage of other legislation with links to climate change: social development and the just transition to a low-carbon economy, gender and equality, human rights, and food security. Climate change law is a rapidly evolving field of law, that is shaped by ongoing scientific research, public opinion, and political debate.[38]

Climate change law and companies are entwined as public law poses environmental obligations to companies and gives economic incentives to mitigate climate change. Sullivan (2008) has described corporate actions in greenhouse gas reductions to be based on i) regulation, ii) self-

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[34] Kokko 2017a, 58.
[35] Kokko 2017a, 31.
[36] Kulovesi 2013, 83.
[37] Mehling 2013, 11–14.
[38] Grantham Research Institute on Climate Change and the Environment 2022. What is climate change legislation?

regulation, and iii) economic incentives. This tripart division also reflects the practical framework of this thesis: EU law, industry and company self-regulation, and carbon neutrality as an economic incentive for companies. The division resonates also to other sources discussing on the general intersection of environment law and business, as law regulates and gives incentives for sustainable corporate practices. For instance, Hollo (2009) has described how environmental regulation affects companies by incentivising them to act sustainable for economic gain.[39] In addition, Kokko (2017) has described how the post-modern competition state ideology affects business as it removes barriers to trade. The ideology also encourages companies to engage in self-regulation, in cases where there is no specific legal regulation.[40] To conclude, environmental regulation related to companies is based on multi-level governance structure that both obliges and incentives companies for sustainable practices.

1.4 Methodology and Delimitations

The main research method in this thesis is legal dogmatic method. The method examines existing law and legal texts. The different sources of law form a self-contained reference system, where the validity of norms is justified by reference to the system itself and its hierarchy. Doctrinal analysis has three main goals: description, prescription and justification. Description means that the analysis describes current law (*lex lata*) on the topic. Prescription and justification are found within the system of existing laws, here the European Union law, subsequent national laws of the referenced Member States, and applicable case law. The analysis of this system of different sources of law forms answers to the research questions. Doctrinal analysis considers the normative complexity of the system's inner rules and their application. As a method, doctrinal analysis acknowledges the natural plurality of laws, and it aims to rationalize and stabilize conflicting arguments to make the law coherent. The methodology becomes visible in this thesis by the choices that are made to conduct the analysis; what references are used and what kind of analysis applied.[41]

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[39] Hollo 2009, 37.
[40] Kokko 2017a, 21.
[41] Smith 2017, 213–226.

Regulation theory is used as a secondary research method in this thesis. Regulation theory in environmental law considers the plurality and interaction of compulsory and voluntary norms that guide actions. These norms include both hard law and soft law such as: legislation, other official regulation, industry self-regulation and other established instruments such as environmental standards. Regulation theory in environmental law has been used to research, for instance effectiveness, cost-effectiveness, and equality in environmental regulation.[42] It could be argued, that regulation theory is the main research method in this thesis because the topic covers both legislation and forms of self-regulation. However, the main research is done inside law and case law. The self-regulation of the voluntary market is explored to find norms and standards, that guide the activities outside law. It is not an in-depth analysis but explanatory research; regulation theory only explains the main findings done by legal dogmatic research. The hierarchy of these two research methods of this thesis is open to discussion, but nevertheless a conceptual choice done in this thesis.

The main source of legal regulation used in this thesis is EU law. This delimitation is done because EU law effects the operations of both national and multinational companies inside the EU internal market. This thesis is not situated in a certain industry sector, as there would not be enough material on what to research. Finnish law is used as an example of national implementation throughout the thesis. As EU Directives are implemented into domestic laws of the EU Member States (MS), these laws are referenced when discussing national case law (Chapter 6). Although international law is the first in the hierarchy of legal norms, it is not used as the main source, as it does not give direct and applicable primary law obligations to companies[43] under this topic. However, international law obligations on climate change are present in EU law and MSs national laws, which direct the activities of legal persons in their jurisdiction.

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[42] Kokko 2017b, 1061, 1067.

[43] "In order for a corporate obligation under international law to be affirmed, three conditions have to be met: the obligation must be provided for in an international law rule, regulating corporate conduct directly, that is without prior recourse to municipal legislation; corporate conduct attributable to the corporation and amounting to a violation of the obligation should engage the responsibility of the corporation under international law; and the responsibility of the corporation should be enforced via the application of international law". (Karavias 2013, 6).

The referenced primary sources of law include international treaties, EU Regulations and Directives, and national laws. The main source of primary law remains EU law. Secondary sources of law include official sources that explain and interpret the law; here, EU texts as well as publications of international bodies such as the United Nations. Theory on corporate social responsibility, self-regulation and economic incentives are researched from legal books and articles. Books on environmental regulation and climate change age fast, as the issue is so topical and in constant movement. Therefore, many sources in this thesis are internet sources (official sources, articles) that are up to date. As the voluntary carbon market is at the moment unregulated by special law, soft law instruments such as industry self-regulatory guidelines are also examined. Also, many news articles and internet articles discuss on the topical issues of corporate social responsibility, carbon neutrality and the quality of CO2 offset. These are used as examples of the evolving topic. All the internet articles and news articles are grouped in the References under category 'Other', if they are not by an official body. This category is visible from the footnotes, as they most often have a specific release date, for instance 'Cahill 19 January 2022'.

Lastly, it is to be noted that in this thesis, 'sustainability statement' refers to the obligation based on EU sustainability law, for the company to publish a statement that includes sustainability information (non-financial information disclosure). In practise, these statements are often called by companies as 'sustainability reports'. These sustainability reports will be referred to as sustainability statements throughout this thesis, to note that those are the statements regulated by law. Voluntary claims made by the companies on achieving sustainability goals, are called 'sustainability claims' or 'carbon neutrality claims'. These are in some cases called as 'sustainability statements' in certain referenced sources, for instance that 'company X made a sustainability statement in its product that it is carbon neutral'. However, not to mix this kind of voluntary statement with regulated sustainability statements, these are called 'claims' throughout the thesis.

2 Chapter 2: Corporate Climate Actions in Emissions Reductions

This Chapter is introductory in nature and aims to situate the topic of this thesis in a wider discussion of corporate climate action.

Corporate climate action in greenhouse gas (GHG) emissions reductions can be roughly divided into mandatory actions regulated by law and voluntary actions that corporations take for other reasons. The corporate actions can be further divided in various manner. Sullivan (2008) divides the emissions reduction actions to be based on: i) regulation, ii) self-regulation, and iii) economic incentives.[44] In his view, companies commit to emissions reductions first by what is obliged by law and then through voluntary actions. These voluntarily actions include self-regulation and economic incentives.[45] Corporate actions can also be dualistically viewed as based on market-based and non-market-based actions. The latter refers to policies or regulations that do not rely on market mechanisms, and that aim to address environmental issues through government intervention and regulations (such as taxation). Market-based mechanisms use the market to find cost-effective solutions, such as carbon pricing, emissions trading, and other economic incentives.[46] Yet another grouping of corporate climate actions in emissions reductions is by the Institute of International Finance (2021). The IFF outlines these actions into three main categories: i) reduction, ii) reporting and iii) offsetting of GHG emissions.[47] These examples show how corporate actions in emissions reductions can be grouped differently, but they all portray the division into actions mandated by law and to voluntary actions.

Legislation is the most robust tool to steer climate change policy implementation, as law provides a normative and institutional framework for climate change management.[48] Climate change mitigation is essential at global level and therefore there is a need for international agreements aimed at protecting the environment across borders. Environmental legislation is

[44] Kokko 2017a, 31.
[45] Sullivan 2008.
[46] UNFCCC 2023. What are Market and Non-Market Mechanisms?
[47] Institute of International Finance 2021, 1.
[48] Figueres 2013, vii.

done at many levels; in international law, EU law and national laws.[49] In the European Union, the most prominent tool to combat corporate GHG emissions is the EU Emissions Trading System (EU ETS). It is the EU's primary policy to combat climate change and it aligns with the Paris Agreement obligations. It is mandatory for certain sized installations to take part in the system, and it encourages those companies to reduce their GHG emissions. The EU ETS and its functions are regulated by EU primary law that is applicable to all the Member States.[50]

The emissions trading system regulates EU emissions allowances (EUA's), that are permits to emit certain GHG emissions. The system also regulates the amount that is distributed between Member States and further to installations (companies) that take part in the system. It thus regulates the amount that is permitted to emit GHG inside the internal market. The overall amount of EUA's is reduced year by year and thus the overall emissions decrease. EU Emissions Trading Directive (2003/87/EC) directs on the system, but Member States legislate nationally on applicable domestic actions.[51] In Finland, the emissions trading is regulated by the Emissions Trading Act (311/2011) and in the Act on Aviation Emissions Trading (34/2010). Nationally, the Ministry of Economic Affairs and Employment is responsible for steering the emissions trading system. In 2022, the mandatory emissions trading in Finland covered slightly less than half of GHG emissions. The system does not cover all sectors, but targets the largest emitters.[52]

Another law-based obligation related to GHG emissions in EU, is corporate social responsibility (CSR) legislation. The current legislation in force is the Non-Fiduciary Reporting Directive (2013/34/EU), which has been lastly amended in 2017. The NFRD has sometimes been called as the corporate social responsibility directive.[53] It obliges companies to report on social, employee and environmental matters, human rights, bribery, and corruption.[54] However, due to current and pressing climate change mitigation needs, EU has introduced two new corporate social responsibility directives; the Corporate Sustainability Due Diligence Directive (CSDDD) and Corporate Sustainability Reporting Directive (CSRD).[55]. These new Directives

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[49] Kokko 2017a, 31.
[50] European Commission 2022. EU Emissions Trading System (EU ETS).
[51] European Commission 2015, 20.
[52] Ministry of Economic Affairs and Employment 2022. Päästökauppa.
[53] Saenger 2017, 262.
[54] European Commission 2022. Corporate Sustainability Reporting.
[55] European Council 28 November 2022. Press Release. Council gives final green light to corporate sustainability reporting directive.

will strengthen the corporate obligations to disclose information on their environmental impact.[56] They will be further discussed in Chapter 3.4.

Legislation alone is not sufficient in reducing the total GHG emissions produced by companies. This has led companies to develop and adopt voluntary carbon management practices (CMP) in addition to their legal obligations. Companies have adopted different voluntary practices, as they have been called by governments, investors, non-governmental organizations, and consumers to adopt GHG reduction policies. Stakeholders have urged to monitor and measure their emissions, assign responsibility for emissions to managers, and to report these actions and outcomes to stakeholders.[57] As part of voluntary actions, companies can commit to self-regulation in regards of environmental responsibility. Environmental self-regulation includes the principles of good corporate governance and environmental protection, as well as the environmental responsibility provisions of current legislation. These responsibilities are present both in companies' internal and external relationships.[58] Self-regulation can also provide companies with flexibility in choosing the most cost-effective and efficient ways to reduce their emissions, and it can help to encourage innovation and the development of new technologies and approaches to emissions reduction.[59]

Companies may wish to produce voluntary sustainability performance reports for the benefits of investors and other capital market actors. These reports should provide users of financial statement information with relevant information about the company's sustainability risks and opportunities, so that financial statement and sustainability reporting regulation would be as consistent as possible.[60] However, the voluntarily provided data is often incomparable between companies. This is largely due to the fact, that some companies do not report certain sustainability information, and on the other hand, many of those that do report, do not report all the information relevant to users. In addition, information is often difficult to find.[61]

Self-regulation can be seen as a way for companies to proactively manage risk and enhance their reputation, by demonstrating their commitment to responsible and sustainable business

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[56] European Commission 2022. A European Green Deal.
[57] Doda et al. 2016, 257–258.
[58] Kokko 2017a, 370.
[59] Kokko 2017a, 21.
[60] Mähönen 2022, 139.
[61] Mähönen 2022, 134.

practices. Self-regulation is not a substitute for government regulation, and it may not be sufficient to ensure compliance with all the legal and social standards. In addition, there is often no enforcement mechanism to ensure that companies follow through on their commitments.[62] Self-regulatory instruments neither rarely contain transparent assessment methods. This can make it difficult for stakeholders to understand the details of corporate self-regulation and hold companies accountable. Common issues around self-regulation include ambiguous targets and monitoring results, the unavailability of monitoring data, the lack of suitability of reported information, and the absence of interim targets. These information gaps make it difficult to assess companies' performance or the effectiveness of the voluntary approach.[63]

Voluntary reductions of GHG emissions can help companies to improve their reputation and build trust with stakeholders, such as customers, employees, and investors.[64] Companies also respond to increasing market pressure to act sustainably, as it helps them avoid unwanted reputational risks vis-à-vis consumers and investors that are becoming increasingly aware of sustainability aspects.[65] Those that can demonstrate their commitment to sustainability, may be able to gain a competitive advantage in the market. This is especially important as customers and investors increasingly seek out companies that are taking action to address climate change.[66] Climate change mitigation can thus also be an economic incentive for companies.[67]

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[62] Sullivan 2008, 323.
[63] Sullivan 2008, 322–323.
[64] Ditlev-Simonsen 2021, 98.
[65] EUROPEAN COMMISSION Brussels, 23.2.2022. COM(2022) 71 final. 2022/0051(COD). Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 (Text with EEA relevance), p. 3.
[66] Kokko 2017a, 21.
[67] Ditlev-Simonsen 2021, 98.

3 Chapter 3: Corporate Carbon Neutrality

This Chapter is about corporate carbon neutrality - why companies aspire to be carbon neutral and how it is reflected in their operations. It is a voluntary goal for companies, as law does not require companies to be carbon neutral. However, the use of certain ecolabels is regulated by law, and if companies make carbon neutrality claims in consumer products, those claims have to be factual under consumer law.

Corporate carbon neutrality could be viewed narrowly to only include the actions that companies take to become carbon neutral. However, here it is examined as part of a wider sphere of corporate social responsibility (CSR). Corporate social responsibility is regulated by law in the European Union. The applicable directives are introduced in Chapter 3.4, and they will be elaborated more in the coming Chapters. This viewpoint makes it possible to make an argument, that if companies make voluntary carbon neutrality claims as part of their mandatory sustainability statements, these claims become regulated under the CSR law of the European Union.

In practise, carbon neutrality means that company's actions add up to net zero carbon emissions in that specific function, that they claim to be carbon neutral. Emissions reductions can be done by a combination of actions such as reducing energy consumption or switching to renewable energy sources. Offsetting the hard to abate residual emissions is possible in different ways. In this thesis, the purchasing of offset from projects that reduce/remove carbon from atmosphere, is examined.[68] Carbon neutrality is a goal that can be achieved (for instance) by offsetting, but it becomes void if the offset is double counted. To understand how this might affect companies, different aspects of corporate carbon neutrality is introduced here.

[68] Oxford University 2020.

3.1 Carbon Neutrality Plans

Carbon neutrality plans are a form a voluntary corporate self-regulation. The first step to become carbon neutral, is to first calculate the company's carbon footprint. Carbon footprint includes all the carbon dioxide (CO2) emissions produced as a result of the company's activities: transportation, energy consumption, and waste disposal among others. Once the carbon footprint is calculated, steps can be taken to reduce emissions through energy efficiency measures, for instance to switch to renewable energy sources. Company carbon footprint can be measurement by using a standard to create a carbon neutrality plan. This plan guides the company's overall organizational transformation to carbon neutrality. The plans often include a public claim/pledge on carbon neutrality and a time frame to achieve it, specific reduction targets and information on how the residual emissions will be offsetted.[69]

Carbon neutrality plan makes visible, how the company plans to achieve carbon neutrality, and as such they are plans to succeed in a future goal. For instance, the Finnish energy company Helen plans to achieve carbon neutrality by 2030 in four phases allocated to different years, each containing specific CO2 reduction actions. Helen commits to reduction of CO2 emissions in accordance with the Science Based Targets (SBT) initiative (Scope 1-3) and investments in carbon-neutral production.[70] Another Finnish example is the elevator and escalator company KONE. It has set a target for becoming carbon neutral also by 2030. KONE's targets have also been validated against the latest climate science by the SBT initiative. KONE plans to commit to a 50% cut in the emissions from its own operations (scope 1 and 2 emissions) by 2030, compared to a 2018 baseline. This target is in line with limiting global warming to 1.5°C. In addition, KONE targets a 40% reduction in the emissions related to its products' materials and lifetime energy use (scope 3 emissions) over the same target period, relative to orders received.[71]

Carbon neutrality plans are often dynamic, as best practices and knowledge develops along the way. Therefore, the measurement practices and goals may change depending on the acquired new knowledge. As the plan is evolving, the review and follow-up practices should also be systematic and transparent. Carbon neutrality approach has provided companies with deeper

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[69] Alhola et. al. 2015, 10–15
[70] Helen 2021. Helenin hiilineutraaliusohjelma. https://www.helen.fi/helen-oy/vastuullisuus/vastuullisuus-helenissa/hiilineutraalisuusohjelma
[71] European Round Table for Industry (ERT) 2023.

understanding on the operations of the supply chain, i.e., the origin and sustainability of resources.[72]

3.2 Carbon Neutrality Claims

Carbon neutrality claims are pledges made by companies, organizations, or governments that they have achieved net zero CO2 emissions. Carbon neutrality claims can be made at different levels of functions. A company can claim to be carbon neutral at the organizational level, operational level, or for a specific product.[73] It's also important to note, that carbon neutrality claims are not regulated by law and there is no universally agreed standard for verifying them. Some organizations have developed their own standards and certifications for carbon neutrality claims, but they are not mandatory.[74] Corporate carbon neutrality claims are also often matched with the notion that they are 'Paris aligned' referring to the Paris Agreement and its goal to keep global warming under 1,5 Celsius degrees.[75]

There are several institutions and organizations that provide guidance for companies to set and achieve GHG emissions reduction targets, such as the international ISO 14064-1 standard on developing organizational inventories or the Greenhouse Gas (GHG) Protocol. These are not per ce carbon neutrality standards, but standards on reporting GHG emissions. The GHG Protocol is an internationally acknowledged approach, developed by World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD).[76]

The GHG Protocol groups emissions into three different scopes:

1. Scope 1 (*direct emissions*): activities that release emissions straight into the atmosphere.

2. Scope 2 (*energy indirect*): activities which occur at sources not owned or controlled, such as emissions being released into the atmosphere associated with consumption of purchased electricity, heat, steam, and cooling.

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[72] Alhola et. al. 2015, 17, 28.
[73] Oxford University 2020.
[74] Alhola et. al. 2015, 10.
[75] Oxford University: Oxford Net Zero, 2022. What is Net Zero?
[76] Alhola et. al. 2015, 10–15.

3. Scope 3 (*other indirect*): all other activities that release emission into the atmosphere because of actions taken, which occur at sources that are not owned or controlled, and which are not classed as scope 2 emissions. These activities include, for instance business travel, waste disposal and use of sold products or services.[77]

For instance, Finnish companies such as Helen[78], Stockmann[79] and Kone[80] use the GHG protocol in their sustainability statements. The corporate sustainability statement is mandatory to make alongside the management report, according to the EU Directive on Non-Fiduciary Reporting (2013/34/EU) article 19a (1) and (4). Both reports are to be made public, but the sustainability statement can be released later, but no later than six months after the management report. In Finland these obligations are implemented into the national Accounting Act (1336/1997) Chapter 3a.

Companies can use carbon neutrality claims in their internal or external relations. Internal use does not require verification or standards in the same manner as external use. When companies want to make carbon neutrality claims in external use about their products, services, or organisation (in marketing and advertising), these should be verified by independent third party. A variety of private companies and non-profit organizations operate in the markets of corporate carbon neutrality claims. These companies and organizations are specialized in calculating companies' carbon footprint, advising for carbon reductions, and allocating compensation of remaining emissions to different - third party verified and validated - projects that promote renewable energy production. The verifier issues a certificate indicating the achieved carbon neutrality for the company.[81] The verifiability of such claims is further discussed in Chapter 6, where the problem of unverifiable of false sustainability information is examined.

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[77] The Greenhouse Gas Protocol 2015.
[78] Helen 2022. Vastuullisuusraportti 2021. https://www.helen.fi/globalassets/helen-oy/vastuullisuus/vastuullisuusraportit-pdf-2021/helen_oy_vastuullisuusraportti_2021.pdf
[79] Stockmann 2022. Vastuullisuuskatsaus 2021. https://vuosi2021.stockmanngroup.com/pdf/Stockmann_yhteiskuntavastuu_2021.pdf
[80] Kone 2022. Yritysvastuuraportti 2021. https://www.kone.com/fi/Images/KONE_Yritysvastuuraportti_2021_tcm18-115554.pdf
[81] Alhola et. al. 2015, 15–16.

3.3 Green Consumer Products

The recent Global Sustainability Study (2021) has indicated that there is a substantial global shift on to how consumers regard pro-environmental products and their willingness to buy them. Consumers expect sustainability from companies, and feel that environmental sustainability is important, and they want to live more sustainable lives themselves.[82] Conscious consumers engage in behaviours that improve social and environmental outcomes, while also boosting consumer well-being. Consumers wish to adapt to green consumption practices, that are compatible with environmental conservation for present and future generations. These environmentally friendly behaviours include using organic products, clean and renewable energy, and items manufactured by companies with positive environmental effects.[83]

'Green' consumer products are products that are designed and produced with the goal of minimizing their environmental impact. These products often use sustainable materials, energy-efficient production processes, and eco-friendly packaging. A variety of products can be made sustainably, including products like clothing and apparel, cleaning products, personal care products, electronics, etc. There is a growing consumer interest in the market for sustainable products.[84] Examples of low-carbon consumer products include carbon compensated products, such as private cars powered with renewable low-carbon fuels and ecolabelled electricity. Ecolabelling products is voluntary, but the use of certain labels is regulated by law.[85]

A study made in the UK in 2018 found, that 38 per cent of respondents who have given up animal-based foods, had made the decision based on environmental reasons. In an older report from 2008, some 70 per cent of UK consumers wished to gain more knowledge in the climate impacts of their foods to make more informed choices. Also, consumers are increasingly interested in buying energy efficient appliances. The sale of energy efficiency labelled appliances has increased three times faster than appliances without labels. These are for instance refrigerators marked with energy efficiency labels (A+++ etc.).[86] Concerning energy efficiency labels, the Energy Labelling Directive (2010/30/EU) regulates their use in EU. Member States

[82] Simon-Kucher & Partners 2021, 4.
[83] Haba et. al. 2023, 1.
[84] Ditlev-Simonsen 2021, 98.
[85] Finnish Environment Institute 2017, 24.
[86] Carmichael 2019, 61.

have implemented it by national laws and in Finland, the Directive was implemented as the Ecodesign Act 1005/2008.

Companies can stand out from similar companies, or products of other companies, with different environmental certificates. The idea of various consumer product environmental labels is to add information about the most environmentally friendly products, so that they stand out and gain an advantage in the competition through consumer choice.[87] The terms 'carbon free', 'low carbon' or 'bioeconomy' are sometimes used to describe the shift from current practices to concepts that are based on renewable energy and carbon free solutions. Especially in the energy sector, low carbon targets and their implementation can be vital for the companies' future business.[88] Sustainability also attracts customers, and companies with strong positive reputation attract more customers than their competitors. Those customers are often loyal and buy a broader range of products and services.[89]

The international ISO-standard divides ecolabels into three groups. The groups will be presented here in this order 1.) positive environmental labels that are used to indicate products with the least burden on the environment in their product group, 2.) environmental statements that provide quantitative environmental information based on life cycle assessment and 3.) self-claimed environmental claims.[90]

Examples of the first group include the EU Ecolabel[91] (so-called 'EU flower') and the Nordic Swan Ecolabel[92]. These labels are called type I environmental labels as they are based on the standard ISO 14024. For a product to be allowed to use this category label, it must meet specific conditions related to environmental aspects. The Type 1 label is issued by a third party on

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87 Kokko 2017a, 21.
88 Finnish Environment Institute 2015, 26.
89 OECD 2020, 10.
90 Valtioneuvoston kanslia 2008, Tuotteiden ilmastovaikutuksista kertovat merkit. Selvitys Vanhasen II hallituksen
tulevaisuusselontekoa varten, p. 17.
91 EU established the EU Ecolabel (1992), which is recognised across Europe and worldwide. The EU Ecolabel certifies products with a guaranteed, independently verified low environmental impact. To be awarded the EU Ecolabel, goods and services should meet high environmental standards throughout their entire life cycle: from raw material extraction through production and distribution to disposal. The label also encourages companies to develop innovative products that are durable, easy to repair and recyclable. There are currently 87 485 products and services that have been awarded with the label. (European Commission 2022. EU Ecolabel).
92 More information on Nordic Swan Ecolabel https://www.nordic-ecolabel.org/

application, i.e., the 'environmental labelling system'. Since the mark is voluntary, there may also be unmarked products on the market that would meet the environmental requirements of the mark.[93]

Although acquiring the EU Ecolabel is voluntary, the use of the label is regulated by law as the EU Eco Label Directive (2009/125/EC).[94] The EU Ecolabel criteria varies for indifferent industries. For example, regarding the manufacture of pulp and paper, the criteria are based on 8 criterions: emissions to water and air; energy use; fibres: sustainable forest management; excluded or limited substances and mixtures; waste management; fitness for use; information on the packaging; information appearing on the ecolabel. For instance, the criterion 1(c) on carbon dioxide emissions includes that the emissions shall be expressed as kg CO2 per air-dry tonne (90 % dry) pulp and paper and added up for the whole process of pulp and paper production. Also, detailed information has to be provided of all CO2 emissions derived from a period of 12 month during the production of the final product. The information must include all sources of non-renewable fuels, as well as the purchased electricity used for the production of the pulp and/or paper.[95] The requirements for ecolabels are specific, and there might also be products who conform with the requirements, but the company has not applied for the label due to, for instance, the administrative burden.[96]

Figure 1. EU Ecolabel.[97]

The Ecolabel Directive 2009/125/EC is currently in force, but the Commission has on 30 March 2022 made a proposal for a Regulation to repeal the Directive, because of including more

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93 Valtioneuvoston kanslia 2008, Tuotteiden ilmastovaikutuksista kertovat merkit. Selvitys Vanhasen II hallituksen
tulevaisuusselontekoa varten, p. 17.
94 Eur-lex 2023. EU Ecolabel. https://eur-lex.europa.eu/EN/legal-content/summary/ecolabel.html
95 EU Ecolabel user handbook for the application for copying and graphic paper 2012, 17-18.
96 Valtioneuvoston kanslia 2008, Tuotteiden ilmastovaikutuksista kertovat merkit. Selvitys Vanhasen II hallituksen
tulevaisuusselontekoa varten, p. 17.
97 Retrieved from: EU Ecolabel https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home_en

specific regulation related to circular economy[98]. The proposal extends the scope of the Ecodesign framework to cover the broadest possible range of products. It foresees setting minimum criteria for energy efficiency, circularity, and an overall reduction of the environmental and climate footprint of products.[99]

The difference between a positive environmental label and an environmental statement, is that the latter does not claim any information about the product superiority compared to other products. Environmental reports are called as type III environmental labels, as they follow the standard ISO 14025. The last group, the self-claimed environmental friendliness labels are freeform, and the claim is made by the manufacturer, importer, or shop, and not verified by an independent third party. These arbitrary statements are also called type II as environmental labels. They are covered by the standard ISO 14021, where instructions are given of 17 different claims, which concern, among other things, lower energy consumption, longer service life and reusability.[100]

As the labels and claims are based on varied standards, it is difficult for consumers, companies, and other market actors to differentiate between them. There are some 200 ecolabels used in the European internal market, and more than 450 worldwide. There are also more than 80 widely used reporting initiatives and methods for carbon emissions only. Some of these methods and initiatives are reliable, and some to a lesser extent. However, EU wishes to tackle the issue of unreliable environmental claims by making it mandatory to substantiate the claims by standard methodology and environmental impact assessment.[101] The Proposal for a 'Regulation on Environmental performance of products & businesses – substantiating claims', is expected to be published in March 2023. The initiative will require companies to substantiate the claims they make about the environmental footprint of their products/services by using

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[98] Circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended (European Parliament 22 February 2023: Circular economy: definition, importance and benefits. Available at: https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits)

[99] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a framework for setting ecodesign requirements for sustainable products and repealing Directive 2009/125/EC.

[100] Valtioneuvoston kanslia 2008, Tuotteiden ilmastovaikutuksista kertovat merkit. Selvitys Vanhasen II hallituksen
tulevaisuusselontekoa varten, p. 17.

[101] European Commission 2023. Initiative on substantiating green claims.

standard methods for quantifying them. These standards are the EU Product Environmental Footprint and Organisation Environmental Footprint (PEF and OEF) methods, developed by the Commission's Joint Research Centre[102]. The aim of the Regulation is to make these claims reliable, comparable, and verifiable across the internal market and to reduce greenwashing (companies giving a false impression of their environmental impact).[103] This new Regulation is needed, as the current problems of the market is reflected in misleading marketing practices related to consumer law (see Chapter 6.3).

3.4 Corporate Social Responsibility and Sustainability in EU

Corporate social responsibility combines both legislation-based obligations and self-regulation by companies. In EU, corporate social responsibility (CSR) is defined by the Commission as 'the responsibility of enterprises for their impacts on society'.[104] As a branch of law, it is legalizing at a fast pace, as is evidenced also by the number of relevant regulatory projects currently underway in the EU.[105] This Chapter describes the applicable EU legislation on corporate social responsibility that relates in general to carbon neutrality (excluding sector specific regulation such as regulation concerning aviation). Carbon neutrality is not required by law, but there are elements in CSR law that deal with emissions reductions. It could become a problem, if carbon neutrality is claimed in official sustainability statements by offsetting, and the offset is later revealed as double counted. It would make the mitigation effort void and in retrospect nullify the carbon neutrality claim.

The general idea of corporate social responsibility considers company's overall impact on society and the environment, and may include a wide range of activities such as philanthropy, environmental and sustainability reporting, stakeholder engagement. CSR includes the notion

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[102] European Parliament 20 January 2023. Legislative Train. Substantiating green claims In "A European Green Deal".
[103]European Commission 2023. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12511-Environmental-performance-of-products-businesses-substantiating-claims_en
[104] EUROPEAN COMMISSION, Brussels, 25.10.2011. COM(2011) 681 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. A renewed EU strategy 2011-14 for Corporate Social Responsibility, p. 6.
[105] Vanhala et al. 2022, 75.

of complying with regulations but also requires a comprehensive understanding of company's own social impacts and an effort to prevent and reduce negative impacts. Company's CSR operations are also related to the concept of due diligence.[106] This is because company's actions may be actualized as a liability for compensation, or as company's obligation to pay administrative fees due to the violation of competition rules or community fines due to the criminal activity.[107] Corporate social responsibility is also perceived to include company's reputation.[108]

The current EU legislation advices on environmental related reporting, but stringent obligations are yet to come with new directives that include obligations to disclose specially on GHG emissions and how they are to be reduced by the company in line with the Paris Agreement goals to keep global warming under 1,5 Celsius degrees. The new CSR legislation will also broaden the sphere of companies who are obliged to disclose sustainability statement alongside their management report.[109] In Finland, the Government Programme 2019-2023 included an entry on preparation of a report on the possibility of enacting national law on corporate social responsibility. However, the Ministry of Economic Affairs and Employment's assessment memorandum on 18 March 2022 concluded that the goals could be better achieved by EU law, as stricter national obligations would impede the competitiveness of domestic companies.[110]

3.4.1 Non-Financial Reporting

The currently applicable due diligence reporting obligations in relation to CSR in EU, are laid down in the Non-Financial Reporting Directive (2013/34/EU). The NFRD has been amended several times and latest in 2017. The Directive requires certain large companies to report on social, employee and environmental matters, human rights, bribery, and corruption.[111] The NFRD has been referred to as the CSR Directive.[112]

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[106] Ristaniemi 2022, 25, 29.
[107] Mähönen 2022, 128.
[108] Stuart et al. 2021, 2.
[109] European Commission 2022. A European Green Deal.
[110] The Ministry of Economic Affairs and Employment 18 March 2022.
[111] European Commission 2022. Corporate Sustainability Reporting.
[112] Saenger 2017, 262.

The requirement for environmental reporting is stipulated in the articles 19a and 29a that require to include environmental matters in management report, non-financial statement and consolidated non-financial statement.[113] The reporting method has been left open, as the Directive does not require companies to use a common reporting framework or standard, and it does not prevent undertakings from choosing not to use any reporting framework or standard.[114] Some of the referenced voluntary reporting standards include OECD guidelines for multinational enterprises and industry self-regulative standards such as CDP (previously Carbon Disclosure Project), Eco-Management and Audit Scheme (EMAS), Global Reporting Initiative (GRI) and International Integrated Reporting Council (IIRC).[115]

The requirements for environmental reporting in NFRD have been deemed insufficient in the light of the rapid progression of climate change. On 20 June 2019 the Commission published a legally non-binding supplement document to NFRD: 'Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01)'. This supplement advice specifically on climate related disclosure. It was published due to the Special Report of IPCC (October 2018), the Paris Agreement (2015) and the United Nations' Sustainable Development Goals, that all call for accelerated and decisive action to reduce greenhouse gas emissions and to create a low-carbon and climate-resilient economy.[116]

The new supplement advices on how to include climate change risks in reporting, for instance to include risks of negative impacts on the climate by the company actions and risk of negative impact on the company by climate change. It also advices on the description of company policies related to climate, including climate change mitigation or adaptation policy. The document contains advice specifically on GHG emissions under section 3.5. The section includes four different indicators on GHG emissions: direct GHG emissions; indirect GHG emissions from the generation of acquired and consumed electricity, steam, heat, or cooling; all other indirect GHG emissions that occur in the value chain of the reporting company; and GHG absolute emissions target. The direct GHG emissions are controlled by the EU Emissions

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[113] DIRECTIVE 2013/34/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 June 2013
on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC

[114] DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting. Brussels, 16 November 2022, Recital (37).

[115] Mähönen 2022, 132.

[116] European Commission 2019. Communication From the Commission. Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01), p. 3.

Trading System (ETS) and the EU 2030 climate & energy framework. Companies are advised to disclose, if possible, a breakdown of direct GHG emissions by State or region, by business activity, and by subsidiary. Companies should provide information on all their direct GHG emissions, whether they are accurate or estimated. The supplement will also prepare companies for the future implementation of the new corporate sustainability reporting directive (CSRD), which came into force on 5 January 2023[117] (see next Chapter 3.4.2) but has not yet been implemented into the national laws of the Member States.[118]

In Finland, the NFRD's previous amendments have been implemented into Finnish law on 26 December 2016, when the national Accounting Act (1336/1997) was amended to include these EU law obligations. The reporting obligation applies to the companies as listed in the NFRD. The amendment to national law obliges the companies to report on the issues specified in the directive: their own policies regarding the environment, employees and social issues, human rights and the fight against corruption and bribery. The approach of the national legislation is in line with the NFRD, as it does not pose more stringent obligations to companies.[119] This was due to the Government Programme (2015-2019) at the time, that stipulated that the burden of companies' administration should not be unjustifiably increased.[120]

The sustainability reporting obligations are included in the national Accounting Act as a separate Chapter 3a. Although the legislation requires the presentation of certain information, the companies themselves can choose in which form they present that information. Consequently, the legislation does not specify exactly which information or figures related to different subject areas the companies should present, and it does not indicate a specific reporting guideline that the companies should use. This is intended to make the legislation as functional as possible for different industries, which can have very different challenges related to responsibility.[121] Under the Chapter 3a section 3 in the Accounting Act, it is stated that '*When preparing the statement, the reporting entity may rely on national, Union-based or international frameworks. If it does so, it shall specify which frameworks it has relied upon'*

[117] European Commission 2023. Corporate Sustainability Reporting.
[118] European Commission 2019. Communication From the Commission. Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01), p. 6-7, 13-15.
[119] Työ- ja elinkeinoministeriö 2022. Vastuullisuusraportointi velvoittavaksi – mitä vaaditaan ja keneltä?
[120] Talousvaliokunta 2016. Valiokunnan mietintö TaVM 33/2016 vp ─ HE 208/2016 vp, p. 2.
[121] Työ- ja elinkeinoministeriö 18 March 2022. Vastuullisuusraportointi velvoittavaksi – mitä vaaditaan ja keneltä?

[same text as in the NFRD].[122] The new CRSD requirements on reporting are probably implemented into the national Accounting Act, as was done previously with the NFRD.[123]

3.4.2 Corporate Sustainability Reporting

In line with the European Green Deal legislative package (2021) and Sustainable Finance Agenda, the new Corporate Sustainability Reporting Directive (CSRD) was accepted on 28 November 2022 and came into force on 5 January 2023. It lists a broader set of large companies, as well as listed small and medium size enterprises (SME's), who will be now required to report on sustainability. These requirements will affect approximately 50 000 companies in the EU internal market. The first companies will have to apply the new rules for the first time in financial year of 2024, for reports published in 2025.[124]

Member States are required to implement it within 18 months. The implementation will take place in four stages between the years 2024-2029. CSRD introduces more detailed reporting requirements, than were previously in place. The Directive ensures that companies are required to report on sustainability matters such as environmental rights, social rights, human rights, and governance factors. Companies subject to the CSRD will have to report according to European Sustainability Reporting Standards (ESRS). The Commission should adopt the first set of these standards by mid-2023, based on the draft standards published earlier in November 2022.[125]

The CRSD strengthens the existing rules on non-financial reporting and amends the Non-Fiduciary Reporting Directive (NFRD). Many stakeholders consider the term 'non-financial' to be inaccurate, as it implies that the information required by the NFRD has no financial relevance. Increasingly, however, such information does have financial relevance. Many organisations, initiatives, and practitioners in the field of sustainability reporting refer the information as 'sustainability information'.[126]

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[122] Accounting Act 1337/1997. Unofficial translation – Ministry of Economic Affairs and Employment 2017.
[123] Vanhanen et al. 2022, 79.
[124] European Commission 2022. Corporate Sustainability Reporting.
[125] European Council 28 November 2022. Press Release. Council gives final green light to corporate sustainability reporting directive.
[126] 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

The new CSRD is closely related to corporate ESG practice, as it requires companies to report on a range of ESG indicators. ESG refers to the environmental, social, and governance performance of companies and organizations, and is increasingly being used by investors, customers, and other stakeholders to assess the sustainability of businesses. [127] Traditional financial analysis has always considered a variety of factors, like revenues, liabilities, cash, inventory machinery competitors, and so on. ESG are additional sustainability factors that are included in the evaluation, to reduce risks and or improve financial results.[128] ESG include:

- Environment: climate change, natural resources, pollution and waste management, environmental business
- Social: employees, product liability, stakeholders, promotion
- Governance: administration, procedures.[129]

ESG has been previously used in company and industry self-regulation, but the new CSRD will enhance the use of the ESG indicators in mandatory sustainability reporting. The CSRD amends the NFRD and adds that certain large companies need to have a plan to ensure that their business strategy is compatible with limiting global warming to 1.5 °C in line with the Paris Agreement.[130] The amended NFRD Article 19a shall include the new text:

> *'the plans of the undertaking, including implementing actions and related financial and investment plans, to ensure that its business model and strategy are compatible with the transition to a sustainable economy and with the limiting of global warming to 1,5 °C in line with the Paris Agreement under the United Nations Framework Convention on Climate Change adopted on 12 December 2015 (the 'Paris Agreement') and the objective of achieving climate neutrality by 2050 as established in Regulation (EU) 2021/1119 of the European Parliament and of the Council*, and, where relevant, the exposure of the undertaking to coal-, oil- and gas-related activities'*[131]

2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting (Text with EEA relevance), Recital (8).
[127] Ristaniemi 2022, 22.
[128] Ditlev-Simonsen 2021, 202.
[129] Ristaniemi 2022, 22.
[130] European Commission 23 February 2022. Fact Sheet. Just and sustainable economy: Companies to respect human rights and environment in global value chains.
[131] DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting. Brussels, 16 November 2022, p. 92.

The NFRD Article 29 shall also be inserted with a new chapter 29b 'Sustainability reporting standards', which includes sustainability reporting also on GHG emissions, on paragraph 2(a): "The sustainability reporting standards shall, taking into account the subject matter of particular sustainability reporting standard: (…) (i) climate change mitigation, including as regards scope 1, scope 2 and, where relevant, scope 3 greenhouse gas emissions".[132] This classification of scope 1-3 emissions is used in the GHG Protocol, which is widely used by different companies to report on their emissions.[133]

3.4.3 Corporate Sustainability Due Diligence

As also a part of the European Green Deal package, the Proposal for Corporate Sustainability Due Diligence Directive was published on 23 February 2022. A unifying law on corporate sustainability due diligence was deemed necessary, as voluntary actions by companies have not resulted in large scale improvements.[134] The Corporate Sustainability Due Diligence Directive (CSDDD) will amend, among other directives, also the NFRD.

The CSDDD's goal is that sustainable development is better embedded in the corporate governance system by company policies. Companies will take better into account the environmental impact as well as the social, human, and economic impact in their business decisions and focus on creating sustainable value in the long term rather than purely financial value in the short term[135]. The new rules will ensure that businesses address adverse impacts in their domestic and international value chains, also outside Europe.[136] Companies will be required to identify, prevent, end or mitigate adverse impacts of their activities on human rights and the environment. The Directive brings more transparency to consumers and investors, and legal certainty to companies. The CSDDD will advance the green transition and protect human

[132] Ibid, 118-119.
[133] The Greenhouse Gas Protocol 2015.
[134] European Commission 23 February 2022. Questions and Answers: Proposal for a Directive on corporate sustainability due diligence.
[135] Vanhala et al. 2022, 77.
[136] European Commission 2023. Corporate Sustainability Due Diligence. Fostering sustainability in corporate governance and management systems.

rights in Europe and beyond.[137] The benefits for companies are, that the Directive harmonizes national practices inside EU and thus prevents legal fragmentation.[138]

The Directive is designed to prevent and remove obstacles to free movement and distortions of competition by harmonising the requirements for companies to carry out due diligence actions in their own operation, subsidiaries and value chains and related directors' duties.[139] In order to comply with the Directive, companies need to:

- integrate due diligence into policies;
- identify actual or potential adverse human rights and environmental impacts;
- prevent or mitigate potential impacts;
- bring to an end or minimise actual impacts;
- establish and maintain a complaints procedure; monitor the effectiveness of the due diligence policy and measures;
- and publicly communicate on due diligence. [140]

The Commission will set an EU level body, European Network of Supervisory Authorities, to ensure a coordinated approach to CSDD Directive. On national level, Member States will be obliged to supervise that companies comply with their new due diligence obligations. Member States could impose fines to companies, or issue orders requiring the company to comply with the stipulated due diligence obligations.[141]

Under the Article 9 of the CSDDD, a complaints procedure is established. It is a civil liability mechanism. The complaints procedure has been received with controversy, as for instance the Office of the United Nations High Commissioner for Human Rights (OHCHR) has noted in

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[137] European Commission 23 February 2022. Press Release. Just and sustainable economy: Commission lays down rules for companies to respect human rights and environment in global value chains.
[138] European Commission 23 February 2022. Questions and Answers: Proposal for a Directive on corporate sustainability due diligence.
[139] EUROPEAN COMMISSION Brussels, 23.2.2022. COM(2022) 71 final. 2022/0051(COD). Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 (Text with EEA relevance), p. 12.
[140] European Commission 23 February 2022. Press Release. Just and sustainable economy: Commission lays down rules for companies to respect human rights and environment in global value chains.
[141] European Commission 23 February 2022. Questions and Answers: Proposal for a Directive on corporate sustainability due diligence.

May 2022, that the procedure lacks stakeholder engagement and does not include best practice advice from the OHCHR benchmark projects. It also remains unclear, how the procedure is to be initiated by the affected parties and on what grounds.[142] The complaints procedure is introduced here, as it could play part in discussion between a company and a stakeholder in relation to misleading or false sustainability information released by the company in their external relations. In relation to double counted offset, the reasoning could be that an informed stakeholder could ask the company to cease to buy offset from a low-quality project (offset projects and their quality issues are more explained in the Chapters 4 and 5).

Box 1. Article 9 of the Proposed Corporate Due Diligence Directive (2022).

Article 9

Complaints procedure

1. Member States shall ensure that companies provide the possibility for persons and organisations listed in paragraph 2 to submit complaints to them where they have legitimate concerns regarding actual or potential adverse human rights impacts and adverse environmental impacts with respect to their own operations, the operations of their subsidiaries and their value chains.

2. Member States shall ensure that the complaints may be submitted by:

(a) persons who are affected or have reasonable grounds to believe that they might be affected by an adverse impact,

(b) trade unions and other workers' representatives representing individuals working in the value chain concerned,

(c) civil society organisations active in the areas related to the value chain concerned.

3. Member States shall ensure that the companies establish a procedure for dealing with complaints referred to in paragraph 1, including a procedure when the company considers the complaint to be unfounded, and inform the relevant workers and trade unions of those procedures. Member States shall ensure that where the complaint is well-founded, the adverse impact that is the subject matter of the complaint is deemed to be identified within the meaning of Article 6.

4. Member States shall ensure that complainants are entitled

(a) to request appropriate follow-up on the complaint from the company with which they have filed a complaint pursuant to paragraph 1, and

(b) to meet with the company's representatives at an appropriate level to discuss potential or actual severe adverse impacts that are the subject matter of the complaint.[1]

According to the CSDDD Proposal, Articles 9 and 22 set out the obligation for Member States to ensure that companies provide for the possibility to submit complaints to the company in case of legitimate concerns regarding those potential or actual adverse impacts on human rights

[142] Office of the United Nations High Commissioner for Human Rights (OHCHR) 23 May 2022.

and environment. Companies are required to grant this possibility to persons who are affected or have reasonable grounds to believe that they might be affected by such an adverse impact (Article 9.2.a), to trade unions and other workers' representatives representing individuals working in the value chain concerned (Article 9.2.b), and to civil society organizations active in the area concerned (Article 9.2.c). The companies are obliged to establish operations to handle these complaints. The complainants are also given the right to request appropriate follow-up and to meet company representatives. If the complaint is well founded and the adverse event is identified, then the company must prevent it, mitigate it, or bring it to an end, in line with Articles 7 and 8 of the CSDDD.[143] Under the Article 8, companies need to end any actual harmful actions regarding human rights and environmental issues, or mitigate them if ceasing is not possible. The Article 8(3)c also obliges to seek contractual assurances from a direct partner with whom it has an established business relationship, that it will ensure compliance with the code of conduct and, as necessary, a corrective action plan, including by seeking corresponding contractual assurances from its partners to the extent that they are part of the value chain (contractual cascading).[144]

Under the Article 22 of the CSDDD, corporate civil liability extends also to companies in their value chain, perhaps due to the *Lungowe v Vedanta* from 2019 (see Chapter 6.2). The UK case established corporate liability to extend to non-EU subsidiaries in the value chain. According to UN Guiding Principles on Business and Human Rights (2011), corporate non-judicial grievance procedures should be legitimate, accessible, predictable, equitable, transparent, rights-compatible and a source of continuous learning. Also, the mechanism should be based on stakeholder engagement and dialogue. In disputes between companies and affected stakeholders, the latter frequently has less access to information and expert resources, and often lacks the financial resources to pay for them. This imbalance should, according to UN, be addressed to arrive at durable solution between the parties.[145]

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[143] EUROPEAN COMMISSION Brussels, 23.2.2022. COM(2022) 71 final 2022/0051(COD) Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937.
[144] Ibid, Article 8.
[145] United Nations 2011, 33-35.

4 Chapter 4: Voluntary Carbon Offsetting

In this Chapter, carbon offsetting and the functioning of the voluntary carbon market are examined. There are two carbon markets, the compliance market, and the voluntary market, and although they sound similar, they are quite different. Therefore, it is essential to understand how the voluntary market functions differently and what implications it has, that the market is unregulated by law. This lack of binding rules poses variety of risks for companies when they buy carbon offset. One prominent risk is the quality risk, of which one is double counted offset.

The compliance market refers to carbon markets where the actors are obliged by law to engage. The traded commodity there is emissions allowances, permits to emit certain amount of emissions. This compliance market in EU is the EU ETS, where the commodity and trading is heavily regulated by law. The voluntary market on the other hand, is a global trading place of different players engaging in the purchase and sale of carbon offset (often valued as carbon credits). Companies can buy carbon offset from the voluntary market to compensate their residual carbon emissions. Compensation can be done to achieve carbon neutrality, but also to meet some other corporate sustainability goal. However, compensation does not replace the need to first reduce value chain emissions in line with science.[146]

The Ecosystem Marketplace estimated in 2020, that around 612 million carbon credits were issued between 2007 and 2019 from programmes that targeted mainly the voluntary carbon market. The main buyers in 2020 were multinational, private, for-profit companies that have bought offset as part of a broader environmental sustainability strategy.[147] The voluntary carbon market is on the rise, and the volume of carbon credits transacted in the voluntary market rose 92% in 2021 from the 2020.[148] In this Chapter, carbon dioxide (CO2) emissions are called as carbon for reasons of readability, as there are many acronyms related to the topic.

[146] Institute for International Finance 2021, 26.
[147] Doda et al. 2021, 18–19.
[148] The World bank 2022, 38.

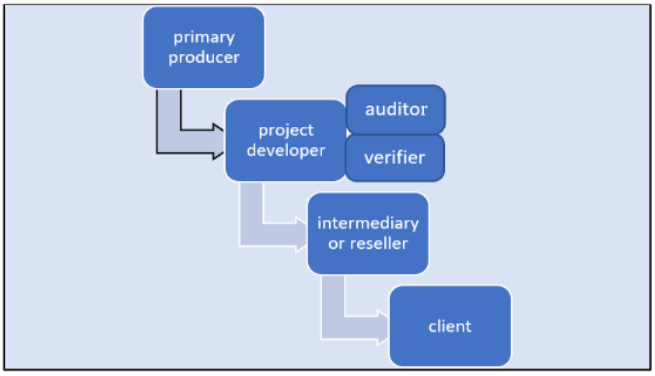
4.1 Overview of the Voluntary Carbon Market

The voluntary carbon market (VCM) is a trading place for carbon offset. The offset unit is measured as one kiloton of carbon dioxide, and one such unit is often called a 'carbon credit'. The credits can be divided into reduction or removal credits, which are constructed differently. Both are means to offset company's residual carbon emissions but the projects that generate them, employ different means. Reduction projects reduce the future amount of the carbon in the atmosphere, these projects include such as forest planting projects. Carbon removal on the other hand, removes carbon dioxide straight from the atmosphere.[149]

As the market is self-regulated, the project quality is examined and verified by companies that offer project validation and verification services. They also maintain their own standards. This is very different from the compliance carbon market, where there is only one standard per regulated unit, as they are regulated by specific law(s). It may be burdensome for purchasers to assess and compare different offset products from the voluntary market, as they are constructed differently and credited under different verification schemes.[150]

The functioning of the voluntary carbon market can be illustrated in the value chain of the carbon credit. Carbon credit is the end-product that is sold in the market. The actors in the carbon credit value chain may include the primary producer (of the offsetting project, such as a forest owner), project developer, intermediary, reseller, and the client. In the middle are the third-party auditor and verifier of the project. The chain can also be simpler and include the developer as the seller who directly sells the product to the client.[151]

Figure 2. The Value Chain of Carbon Credits.[152]



[149] Institute of International Finance 2021, 8.
[150] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6.
[151] Laininen 2020, 97.
[152] Simplified adaptation from Laininen 2020, 97.

In November 2021, the total value of the voluntary carbon market exceeded more than USD 1 billion. This rapid increase in value reflects both rising prices and rising demand from corporate buyers, leading to higher transacted volumes. Global average carbon credit prices moved from USD 2.49/tCO2e in 2020 to USD 3.82/tCO2e in 2021, while the volume of credits transacted in the voluntary market exceeded 362 million credits, which is 92% more than in 2020.[153] According to the World Bank (2022, 38), the voluntary climate targets from the corporate world are still the main force behind the increasing demand for carbon credits. These climate targets should commit to ambitious decarbonization in the company's own value chain, while also compensating or neutralizing possible residual emissions. The plans for achieving these targets, however, vary in terms of scope, coverage, timelines, and intended use of carbon credits.[154]

The voluntary market has an important role to play in the mitigation of global GHG emissions. Voluntary offsetting is a valuable energy transition solution because it allows additional investment in emission reductions and makes those reductions where they can be made fastest and at the lowest cost.[155] The international carbon market can thus deliver more cost-effective mitigation, while leveraging climate finance from the private sector. Climate change mitigation projects can also increase the level of climate ambition in developing countries where abatement costs are lower. Therefore, although voluntary, the VCM is an important means to reduce GHG emissions, promote low-carbon energy transition and climate-resilient global economy.[156] Carbon offsetting can ensure that the 'polluter pays' principle is realized, and can provide an incentive for more reductions of emissions.[157] However, there is challenge and uncertainty in the market, as there is uncertainty of the rules as well as the enforcement of rules. Central to these challenges is the constructed nature of carbon credits as inverse commodities - carbon markets value absence rather than existence - in this case, the absence of GHG emissions.[158,159]

[153] The World Bank 2022, 38.
[154] Ibid, 38-40.
[155] Sullivan 2008, 148.
[156] Wemaëre 2021, 150.
[157] Alhola et. al., 2015, 16.
[158] Knox-Hayes 2018, 685.
[159] Ministry of Environment 2021, 21.

4.2 Offsetting Mechanisms

Carbon dioxide (CO2) offsetting can basically be done with either CO2 reductions or CO2 removals. The calculation in reduction projects is done by comparing the difference between: (a) baseline emissions (i.e., the emissions that would have occurred without project); and (b) actual emissions (i.e., the emissions that occurred with the project). Thus, the carbon emissions are avoided by not engaging in a practise that would in a business-as-usual (BAU) situation create emissions. This baseline value is used to calculate the subsequent reduction. Reduction projects may include such as renewable energy farms, energy efficiency measures in industrial plants, or protecting forests from being cut down. These projects reduce the flow of carbon emissions into the atmosphere. The difference between reductions and the removal of emissions is important from the perspective of atmospheric accounting.[160]

Currently carbon reduction projects are more common, but in the future, they will be insufficient in keeping the global warming under the 1,5 Celsius degrees. Therefore, there is a need to develop carbon removal techniques and increase their use as offsetting projects.[161]

Carbon removal extracts emissions from the atmosphere. Carbon dioxide removal (CDR) is a set of technologies and practices that are used to remove carbon from the atmosphere and also to store it in a safe and stable form. The main goal of CDR is to mitigate the effects of climate change by reducing the concentration of CO2 in the atmosphere, which is the main driver of global warming.[162] Intergovernmental Panel on Climate Change (IPCC, 2021) defines carbon dioxide removal (CDR) as:

> "*Anthropogenic activities removing carbon dioxide (CO_2) from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological or geochemical CO_2 sinks and direct air carbon dioxide capture and storage (DACCS) but excludes natural CO_2 uptake not directly caused by human activities*".[163]

CDR can be achieved through natural and technological approaches. Certain approaches like biochar and bioenergy with carbon capture and storage can be considered as a mix of natural and technological approaches. Other methods include afforestation, agricultural practices that

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[160] Grantham Research Institute on Climate Change and Environment 2022. What are carbon offsets?
[161] Tamme 2021, 3.
[162] Institute of International Finance 2021, 8.
[163] IPCC 2021(b), 2221.

sequester carbon in soils, bioenergy with carbon capture and storage, ocean fertilization, enhanced weathering, and direct air capture when combined with storage.[164]

Direct carbon capture and storage (CCS) is a process where carbon is captured from industrial and energy-related point sources and transported to a storage location for long-term isolation from the atmosphere.[165] CCS is a technology-based CDR method, that includes both direct air capture (DACS) and biochar and bioenergy with carbon capture and storage (BECCS). DACS and BECCS can be considered as a mix of natural and technological approaches. CCS technologies have a dual role in climate change mitigation, as they can reduce emissions from energy intensive industries and power generation and secondly, the technologies can be used for carbon removal from the atmosphere. Technological approaches can offer advantages over nature-based solutions, because of their better verifiability, performance, and invulnerability to weather conditions.[166]

All the approaches have different limitations and challenges, whether be it related to scalability, permanence, cost, impact on land use change and/or biodiversity, or other aspects.[167] Each offset category has also different advantages and disadvantages that make them best matched to different buyers.[168] To assess whether net negative carbon emissions are achieved by a particular process, comprehensive life cycle analysis (LCA) of the process must be performed.[169] It is a method to evaluate the environmental impact of a product through its life cycle encompassing extraction and processing of the raw materials, manufacturing, distribution, use, recycling, and final disposal.[170]

The certification of carbon removals is less common than that of emissions reductions. It also involves more complex methodological challenges, as the removals often require new technology. Carbon removals are very heterogeneous in terms of their maturity, cost-effectiveness, and related monitoring costs, and further pose challenges for certification.[171] These issues are expected to be addressed in the EU by the upcoming Carbon Removals Certification Regulation (see Chapter 4.5).

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[164] Tamme 2021, 4.
[165] IPCC 2021(b), 2221.
[166] Tamme 2021, 4–6.
[167] Ibid, 4.
[168] Institute of International Finance 2021, 56.
[169] Oxford University: Oxford Net Zero, 2022. What is Net Zero?
[170] Ilgin & Gupta 2010, 566.
[171] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 7.

4.3 Offset Quality Criteria

Criteria helps to ensure that carbon offsetting projects are not fraudulent or otherwise unreliable, and that they are not used to launder carbon credits. Criteria also aims to ensure that carbon credits are not overstated or double counted, and that they are based on sound scientific and technical methods. The criteria provide assurance to buyers of carbon credits that the emissions reductions or removals are credible.[172] These standards complement the compliance regime of the UNFCCC and Paris Agreement and create agreed upon standards.[173]

Institutions and companies that operate in the voluntary carbon market, may have their own criteria or they may follow a criterion established by another body. Several criteria may be used in a given offset project, as the project may employ specific mechanisms or practices that all require different criteria to fulfil specific standards. There is not a one universally agreed on criterion on quality, although there are established criteria.[174]

The Institute of International Finance (IIF) has published in 2021 the Core Carbon Principles (CCP) which include the minimum criteria. This is an established and general criterion on offset in the voluntary carbon market. The criterion states, that an independent standard must publish accounting standards and methodologies that ensure that offsets, both reduction and removals units, are:

- REAL: Measured, monitored, and verified ex-post to have actually occurred.
- ADDITIONAL: Beyond GHG reductions or removals that would otherwise occur. Projects demonstrate a conservative business-as-usual (BAU) scenario and must be surplus to regulatory requirements. Jurisdictional programs demonstrate additional reductions below the historical reference level.
- BASED ON REALISTIC AND CREDIBLE BASELINES: Credited only beyond performance against a defensible, conservative baseline estimate of emissions that assumes the business-as-usual trajectory in the absence of the activity. Baselines should be recalculated on a regular, conservative timeframe.
- MONITORED, REPORTED, AND VERIFIED: Calculated in a conservative and transparent manner, based on accurate measurements and quantification methods.

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[172] Institute of International Finance 2021, 19-21.
[173] Karassian & Perez 2018, 108.
[174] UNDP Climate and Forests Programme 2020, 21.

Must be verified by an accredited, third-party entity. This should be conducted at specified intervals.

- PERMANENT: Only issued for GHG reductions or removals that are permanent or, if they have a reversal risk, must have requirements for a multi-decadal term and a comprehensive risk mitigation and compensation mechanism in place, with a means to replace any units lost.
- LEAKAGE ACCOUNTED FOR AND MINIMIZED: Assessed, mitigated, and calculated considering any potential increase in emissions outside of the boundary, including taking appropriate deductions.
- ONLY COUNTED ONCE: Not double-issued or sold.[175]

This CCP criterion is used by many offset verifiers, such as Verra and Gold Standard.[176] The upcoming European Union Carbon Removals Certification Regulation (CRCR) also defines carbon *removal* projects quality criteria for carbon removal projects in EU. The proposal also sets out requirements for third party verification and certification of carbon removals.[177] This quality criteria is like IIF's criteria, but its superior benefit is the legally binding nature. In stakeholder consultation, most respondents agreed that establishing a robust and credible certification system for carbon removals was the first essential steppingstone towards achieving a net contribution from carbon removals in line with the EU climate-neutrality objective.[178]

4.4 Standards and Verifications

The integrity and credibility of the voluntary carbon market is maintained through self-regulation. Although self-regulation is not binding or enforceable such as law, it can create international standards that could not be achieved by law.[179]

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[175] Institute of International Finance 2021, 77.
[176] Nordic Council of Ministers 2021, 39.
[177] European Commission 2022. Sustainable carbon cycles. Carbon Removal Certification.
[178] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6.
[179] Karassin & Perez 2018, 108.

‘Standard’ is a set of requirements established by a recognized authority, industry, or organization to ensure consistency, quality, safety, and compatibility of products, services, processes, or systems. Standards include criteria that must be met to achieve a particular level of quality. Carbon credit standards define what constitutes a valid carbon credit. These standards specify the types of emissions reductions that can be credited, the methods that can be used to measure and verify emissions reductions, and the rules for tracking and accounting for carbon credits. A certain standard may cover only some elements, for example criteria and calculation methods. If the standard includes a register, the applicable national legislation is determined in the terms of use, often according to the domicile of the registry service provider.[180]

The offset projects are examined against the criteria of the standard before the start of operations (validation) and after the start of operations (verification). Neutral third parties are used as auditors of the fulfilment of the criteria. If the implementation of the project meets the criteria of the standard, the emission reduction units produced by the project will be granted through the standard to be sold on the voluntary carbon market. In addition, a register is usually maintained through the standard, through which approved emission reduction units are accounted, launched, transferred between operations, and invalidated after use.[181] Verifiers also issue certificates or other documents attesting to the validity of the credits.[182]

Carbon projects verification ensures that carbon credits represent real, measurable emissions reductions, and that they are not double-counted or otherwise misused. Carbon credit verification is important for maintaining the voluntary carbon market and the offset programs, and for ensuring that carbon credits represent real emissions reductions.[183] International standards are mostly managed by the private sector.[184] Most of the voluntary offsetting has occurred through ‘baseline-and-credit’ programmes such as the Gold Standard and the Verified Carbon Standard (VCS).[185] More than 90 percent of carbon credits adhere to the most common standards for verification: Verra’s VCS Program, the Gold Standard, American Carbon Registry, and the Climate Action Reserve.[186]

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[180] Ministry of the Environment 2021:26, 31.
[181] Ibid, 24.
[182] Verra 2023. Validation and verification.
[183] United Nations Development Programme (UNDP), Climate and Forests Programme 2020, 12, 19.
[184] Ministry of the Environment 2021:26, 33.
[185] Doda et. al. 2021, 16.
[186] Institute of International Finance 2021, 44.

4.5 EU Carbon Removals Certification

The absence of a uniform EU standard for identifying activities that effectively remove carbon from the atmosphere, is one of the main obstacles in increasing carbon removal on a larger scale. While various public and private programs, such as those in voluntary carbon markets, certify carbon farming practices, they use different approaches to determine their climate benefits. Industrial carbon removal is seldom addressed. Carbon removal practices may have both trade-offs and synergies with biodiversity and other sustainability objectives. Carbon removal certification encounters several technical challenges, including the risk of uncontrolled re-emissions and difficulties in measuring and monitoring practices that sequester carbon in natural ecosystems. Furthermore, different methodologies and standards may be necessary for industrial carbon removal and ecosystem removal because of their distinct characteristics.[187]

European Commission has announced in the Circular Economy Action Plan from March 2020, that it will develop an effective carbon removals certification framework to incentivise the uptake of carbon removal and to increase circularity of carbon, in respect of the biodiversity and the zero-pollution objectives.[188] Carbon removals in natural ecosystems have been decreasing in recent years and no significant industrial carbon removals are currently taking place in the EU.[189]

On 30 November 2022, Commission published the Proposal for Carbon Removals Certification Regulation (CRCR), establishing a Union certification framework for carbon removals.[190] The Proposal is also part of the European Green Deal, in which carbon removal certification is seen crucial to achieve the EU's long-term climate objectives under the Paris Agreement.[191]

The CRCR supports existing EU climate and energy policies, and it aims to scale up corporate carbon removal activities and fight greenwashing in EU.[192] The choice of instrument was based on the notion, that the objectives of the proposal can be best pursued through a Regulation as it

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[187] European Commission 7 February 2022. Call for evidence for an impact assessment - Ares(2022)869812, 1-2.
[188] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 2.
[189] European Commission 7 February 2022. Call for evidence for an impact assessment - Ares(2022)869812, 1.
[190] European Commission 2022. Public Initiatives. Certification of carbon removals – EU rules.
[191]European Commission 30 November 2022. Press Release. European Green Deal: Commission proposes certification of carbon removals to help reach net zero emissions.
[192] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6.

will ensure direct and uniform applicability of the provisions in the Union at the same time. The Regulation is needed, as there is currently no uniform standard for assessing the effectiveness and reliability of carbon removal activities in the EU. The Regulation will develop the necessary rules to monitor, report and verify the authenticity of the carbon removals.[193]

The Proposal sets out a voluntary internal market framework to certify carbon removals generated in Europe.[194] In order to receive certification, carbon removals will need to comply with the four -part QU-A-L-ITY criteria: be correctly quantified (QU), deliver additional climate benefits (A), strive to store carbon for a long time (L) and contribute to sustainability (ITY). The proposal also sets out requirements for third party verification and certification of carbon removals. This is to harmonise the EU-wide certification process, ensure environmental integrity and to build public trust in carbon removal activities.[195] The Impact Assessment of the Proposal identifies a number of best practices for each QU.A.L.ITY criteria, while recognising that to guarantee the quality of all carbon removals certified in the EU through certification methodologies, that they are tailored to the specific circumstances of different carbon removal activities.[196]

The problem of double counting can be assessed in each of the four QU-A-LI-TY criteria. Firstly, as the first criterion deals with quantification, the removals units must be correctly quantified. The Article 4 of the proposed Regulation sets a formula that net 'carbon removal (CR) benefit' is the same as $CR_{baseline} - CR_{total} - GHG_{increase} > 0$. These carbon removals are to be quantified in a relevant, accurate, complete, consistent, comparable. and transparent manner. As accounting is considered as the main practise to avoid double counting, the quantifications should be based on reliable measurements. The second criterion, under the proposed Article 5, is that the carbon removal activity shall meet both of the following criteria: (a) it goes beyond Union and national statutory requirements; (b) it takes place due to the incentive effect of the certification. The additionality is a criterion for the removals unit to be a real mitigation unit. In relation to double counting, the Article establishes that it goes beyond the EU and national requirements – it would not fulfil this criterion if it was used already elsewhere or in a different

[193] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6.
[194] European Commission 30 November 2022. Press Release. European Green Deal: Commission proposes certification of carbon removals to help reach net zero emissions.
[195] European Commission 2022. Sustainable carbon cycles. Carbon Removal Certification.
[196] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6-7.

context (see Chapter 5.1 on ways of double counting). The third criterion of long-term storage does not per ce relate to double counting. The fourth criterion is sustainability, under proposed Article 7. The 7(1) states "*A carbon removal activity shall have a neutral impact on or generate co-benefits for all the following sustainability objectives (…)*" and in point (a) that "*climate change mitigation beyond the net carbon removal benefit referred to in Article 4(1)*", where it re-iterates the fact that the removals unit must have a real climate change mitigation impact.

Although not yet in force, the publication of the Proposal creates anticipations for the voluntary carbon market and may guide current market practices. Carbon removal certification has been generally well received by stakeholders, as it provides a way for companies to demonstrate their commitment through transparent practices.[197] As the certification is currently based on self-regulation, the Regulation will create first directly applicable and binding EU-level rules on a standard in offset that use carbon removals.[198]

[197] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6.
[198] European Commission 2022. Sustainable carbon cycles. Carbon Removal Certification.

5 Chapter 5: Double Counting of Carbon Offset

This Chapter examines what is double counting of carbon offset, and how it might occur unintentionally or fraudulently. Avoiding double counting is one of the offset quality criteria, established both in the IFF criteria and the EU CRCR. 'Double counting' is often used as an umbrella term for several ways to double count carbon offset. The specific nature of double counting varies depending on the purpose to which the company has used the carbon offset. In its simplest form, it means that a carbon credit is counted more than once towards mitigating climate change. Carbon credits should be once retired and not re-counted for in another context.[199]

5.1 Four Ways of Double Counting

Double counting can occur, when for example, a company purchases carbon credits from a carbon offset project in country A and uses them to offset its emissions in another country B – when in fact the same credits may have been used by the project host country A to mitigate its emissions. This results in the same emissions reductions being counted multiple times. The practise undermines the integrity and effectiveness of the offset.[200] However, part of the challenge in the voluntary carbon market is, that producers and purchasers do not necessarily have information or expertise to assess to what extent the mitigation results are counted, and they do not always have information about double counting at all.[201]

According to Schneider et. al. (2014, 5-6), there are four basic forms of double counting: double issuance, double claiming, double use/selling and double purpose. These forms are all applicable in relation to countries as counterparties - for instance developed counties buying offset from projects and developing countries hosting/producing these projects in their jurisdiction. Regarding voluntary offsetting by companies, the *double claiming* is the most

[199] Doda et al. 2021, 28.
[200] Laininen et. al. 2022, 18.
[201] Ibid, 43.

relevant. All the forms by Schneider et. al. are described here as they display the complexity of the issue of double counting:

1. **Double issuance** occurs if more than one unit is issued for the same emissions or emission reductions. This can occur, for example, if the same project is registered under two different crediting mechanisms or if two different entities (e.g., the producer and user of a biofuel), request units for the same reductions.
2. **Double claiming** occurs if the same emission reductions are accounted twice towards attaining mitigation pledges: by the country where the reductions occur, through reporting of its reduced GHG emissions, and by the country/company using the unit issued for these reductions, for instance a company offsetting its residual emissions.
3. **Double use** refers to the situation where one issued unit is used twice to attain mitigation pledges, either by the same country or by two different countries, thereby leading to double counting of the emission reductions represented by that unit. This form of double counting is also referred to as "double selling". It could, for example, occur if a unit is duplicated in registries or otherwise transferred twice to another country, or if one country uses the same unit in two different years to attain mitigation pledges.
4. **Double purpose** refers to the situation where a unit is not only used for attaining a mitigation pledge under the UNFCCC, but the financial (or technology) transfers associated with the issuance of that unit are also counted towards financial or technology pledges, such as climate finance or activities implemented under a technology mechanism. This form of double counting does not directly affect global GHG emissions, but is nevertheless of concern because many mitigation pledges by developing countries are conditional upon financial or technological support by developed countries.[202]

These four forms of double counting can occur in different, and rather indirect, ways which are not always straightforward to identify and address.[203] The nature of carbon credits as commodities is also vague – the carbon credits are derived from a claim that emissions did not occur. Therefore, the reality of emissions *reduction* through carbon markets cannot be proven, only presented.[204] In addition, the crediting mechanisms often issue carbon credits without

[202] Schneider et. al. 2014, 6–7.
[203] Ibid, 6–7.
[204] Knox-Hayes 2018, 685–686.

knowing precisely where and when the reductions in real life occur. This creates a risk that these emissions are also addressed by another mechanism.[205]

5.2 Market Integrity Risk

Offset bought from the voluntary carbon market may carry integrity risks due to uncertainty in quality assurance, for instance in the establishment of additionality and crediting baselines.[206] These insecurities may jeopardize the integrity of the market.[207] Double counting can contribute to a certain extent of market failure by distorting the market's ability to accurately reflect the true supply and demand of carbon credits, if they are double counted in the way of double selling. Furthermore, double counting can lead to a lack of trust in the carbon market, as companies and countries may doubt the overall validity of the credits being traded.[208]

Double counting distorts data and creates a false sense of mitigation progress in combatting climate change. If emission reductions are double counted, the actual global GHG emissions could be higher than the sum of what individual countries report. As a result, countries could appear to meet their NDCs under the Paris Agreement - while in reality the total emissions exceed these levels. The unreal mitigation does not either give expected pro climate results. Double counting of emission reductions would also make mitigation efforts less comparable and could discourage the use of market-based approaches, if they are deemed unreliable.[209]

The integrity risk of double counting depends on the jurisdiction and the nature of the offset.[210] There is also a present debate, on whether double counting needs to be avoided when companies buy offset. Some feel, that it is not a problem that both companies and countries use the same reductions towards their individual targets, as long as the country does not reduce its targets as a counteraction.[211] However, if the host country and the company account for the same emission reductions, the voluntary market provides no additional mitigation beyond what was pledged

[205] Schneider et. al. 2014, 12.
[206] Doda et. al. 2021, 12.
[207] Interpol Environmental Crime Programme 2013, 15.
[208] Schneider et. al. 2019, 181.
[209] Schneider et. al. 2014, 4.
[210] Doda et. al. 2021, 29.
[211] Schneider et. al. 2019, 181.

by the country.[212] In some cases, the companies' mitigation outcomes are not exported from the host State to the jurisdiction in which the corporate buyer is based. In these cases, the corporate GHG emission are not reported, only the project host country reports the reductions to the UNFCCC under its NDC.[213] However it is not always the case, and it is unclear when the company GHG reductions/removals will show in a country's national greenhouse gas registries and when not.[214]

Double counting can occur by error, but also by fraud.[215] Carbon credits can be intentionally double counted by companies that engage in exploitation of the market. Many common types of financial fraud, well-known in other sectors, are also finding their way into the voluntary carbon market. Inadequate legal regulation, together with the lack of any tangible asset behind the traded credits, makes this market perhaps even easier to manipulate than others. The market is also rapidly growing and financed, while regulation and oversight remain at an immature stage. All these make the market vulnerable to exploitation.[216] Also the fragmentation of the market attracts criminal activity and fraudulent practise. For instance, there may arise potential conflict of interest issues between the project developer and auditor, and there have also been known cases of fraudulent practise in double sale of carbon credits.[217]

The voluntary market is international, as the producer, seller and final purchaser may all be in different counties. The more countries are involved, the harder it is to trace the carbon credit and actors in the value chain. However, it makes it easier for criminals to take advantage of any legal loopholes or inconsistent regulations between different national legislation. Law enforcement and regulators are often limited in their ability to work outside their domestic legal jurisdiction. It makes enforcement of international carbon markets complicated and difficult without a proper global enforcement response.[218] The criminal actions related to the market may include:

1.) Fraudulent manipulation of measurements to claim more carbon credits from a project than were actually obtained;

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[212] Schneider et. al. 2014, 20.
[213] Kreibich & Hermwille 2020, 949.
[214] Laininen et. al. 2022, 47.
[215] International Institute of Finance 2021, 27.
[216] Interpol Environmental Crime Programme 2013, 17.
[217] Institute of International Finance 2021, 27.
[218] Interpol Environmental Crime Programme 2013, 17.

2.) Sale of carbon credits that either do not exist or belong to someone else;
3.) False or misleading claims with respect to the environmental or financial benefits of carbon market investments;
4.) Exploitation of weak regulations in the carbon market to commit financial crimes, such as money laundering, securities fraud or tax fraud;
5.) Computer hacking/ phishing to steal carbon credits and theft of personal information.[219]

Some of these fraudulent practices can be a form of intentional double counting. The example number one is double issuance whereas the second example is double use/selling and the third can be a form of double purpose.[220]

5.3 Double Counting and the Paris Agreement

One part of the double counting problem is surprisingly the Paris Agreement. It establishes Nationally Determined Contributions (NDC's) to Parties of the Agreement, which started from 2020 onwards. In their NDCs, Parties need to set every 5-year the contributions they will make to reduce their GHG emissions to reach the goals set in the Paris Agreement.[221] These communicated actions are to be reported back to UN, but there is no mechanism under the Agreement to sanction their unfulfillment. Countries also have much freedom to choose individually what kind of actions they choose, as these are not stipulated as different options under the Agreements (as it was in the previous Kyoto Protocol commitment periods from 2008 to 2020).[222] ‘

The Article 6(5) states that double counting is forbidden between the Parties ‘*Emission reductions resulting from the mechanism referred to in paragraph 4 of this Article shall not be used to demonstrate achievement of the host Party's nationally determined contribution if used by another Party to demonstrate achievement of its nationally determined contribution'*. This

[219] Interpol Environmental Crime Programme 2013, 14.
[220] Interpol Environmental Crime Programme 2013, 14.
[221] United Nations 2022. Climate Action. The Paris Agreement.
[222] Kreibich & Hermwille 2020, 944.

paragraph concerns only the State Parties to the Agreement, and does not consider corporate emissions reductions aspirations.

EU is a signatory to the Agreement as an entity, and Member States are also signatories individually. The EU's joint NDC under the Paris Agreement was the commitment to reduce GHG emissions by at least 40% by 2030 compared to 1990, under its wider 2030 climate and energy framework.[223] The European Climate Law (2021) makes it legally binding for the EU to achieve a balance between GHG emissions and removals by 2050, and to achieve negative emissions thereafter.[224] On 14 July 2021, the European Commission adopted a series of legislative proposals (the Green Deal), setting out how EU intends to achieve climate neutrality by 2050. This package included the intermediate, more stringent, target on the GHG emissions is at least 55% net reduction in the emissions by 2030 ('Fit for 55').[225] EU together with the Member States is expected to report to UN annually on their GHG emissions ('national greenhouse gas inventories') and regularly report on their climate policies and measures and progress towards the Paris targets. EU reports on these national registries jointly. The EU has independently committed to an enhanced NDC and legally more binding climate goals, in comparison to the Paris Agreement.[226] The UN maintains a public registry of the Parties' NDC's. EU has submitted its initial NDC on 14 November 2016 and updated it on 18 December 2020. Finland belongs to this joint NDC together with the EU member states.[227]

Box 2. Finland and Nationally Determined Contribution.

In Finland, the new national Climate Act of 2022 implements the obligations of the EU legislation and the Paris Agreement.[228] The Climate Act (234/2022) stipulates the goals and framework for planning Finland's national climate policy and monitoring its implementation. The Section 2 (2) stipulates that the combined emissions of GHG into the atmosphere from the EU burden-sharing and emissions trading sector will be reduced by at least 60 percent by 2030 and by at least 80 percent by 2040 compared to 1990. The law also states that Finland will be climate neutral by 2035.[229] The Ministry of Economic Affairs and Employment is responsible for the long-term energy and climate strategy in Finland. The long-term climate policy plan includes key long-term policy measures for the emissions trading sector and the non-emissions trading sector to achieve the goals of the climate policy. The first such policy plan in accordance with the new Climate Act is yet to be published.[230]

[223] European Commission 2022. The Paris Agreement.
[224] European Commission 30 November 2022. Press Release. European Green Deal: Commission proposes certification of carbon removals to help reach net zero emissions.
[225] European Commission 2022. Fit for 55.
[226] European Commission 2022. Emissions monitoring & reporting.
[227] United Nations 2023. NDC Registry.
[228] Government Proposal HE 27/2022 vp, 4.
[229] The Climate Act 234/2022, sections 1-3.
[230] Ministry of Environment 2022. Suomen kansallinen ilmastopolitiikka.

The Paris Agreement Article 4 (14) encourages the Parties to make such long-term emissions reduction plans in conjunction with the NDCs, but these are not mandatory.[231]

Several countries are currently setting ambitious GHG reduction targets under their NDCs. Many of them have announced their intent to achieve net-zero emissions between 2030 and 2050, including through the purchase of emission reductions from other countries.[232] Simultaneously companies carbon neutrality claims are on the rise. This increasing multilevel climate ambition creates possibilities for overlaps between the accounting of mitigation outcomes in countries and in companies towards their climate targets.[233] This can occur because the emission reductions from projects are typically automatically reflected in the national GHG inventories that countries use to track progress towards the implementation and achievement of their NDCs.[234] As there is currently absence of binding international rules on offsetting, the same reduction outcome can be double counted; for instance, first in the country of origin and then by the recipient entity (country or company). This kind of double counting is called *double claiming*. The Environmental Defence Fund (2018, 2) has noted, that double claiming could eliminate the entire climate benefit of all the NDCs.[235] However, the issue is not new, as there was the risk of double counting in form of double claiming also in the Kyoto Protocol Emissions Trading System. At the time, private certification standards had developed different approaches to deal with the issue.[236] However, the German Öko-institute (2016) did reveal that the climate mitigation units under the Kyoto Protocol were over-stated, and these approaches did not alleviate the problem.[237]

[231] The Paris Agreement (2015), Article 4.
[232] Schneider et. al. 2019, 181.
[233] Tamme 2021, 10.
[234] Doda et. al. 2021, 28.
[235] Environmental Defence Fund 2018, 2.
[236] Kreibich & Hermwille 2021, 945.
[237] Öko-Institut 2016.

5.4 Mechanisms to Avoid Double Counting

In general, double counting can be avoided through robust and transparent accounting system to track and verify carbon credits, and to ensure that they are used only once to meet emissions reduction targets. In the voluntary market, different certification schemes propose different methodologies to account carbon credits.[238] Currently, the accounting of carbon credits in the voluntary market is typically done by third-party verifiers or registries. These organizations are responsible for verifying that the emissions reductions or removals claimed by a project developer are real, permanent, and additional (in line with the quality criteria) to what would have occurred without the project. They also keep track of the carbon credits generated by the project and issue certificates that can be bought and sold on the voluntary carbon market.[239] These private certification standards use different approaches in dealing with the double counting risk. This recognition of the risk can be seen as an indication of the consciousness among voluntary carbon market participants, to address the risk.[240]

The Paris Agreement establishes an international accounting framework in relation to cooperative approaches under the Article 6. It avoids double counting through a mechanism that is called 'corresponding adjustments'. It is a form of double entry book-keeping. Between countries, the country A selling emission reductions makes an addition to its emission level, and the country B acquiring the emission reductions makes a subtraction. Both countries prepare an emissions balance sheet which is adjusted for these international transfers of emission reductions.[241] In case of company-and-country double counting, the corresponding adjustment means that the amount of the voluntary offset is removed from the country's GHG registry that counts towards that country's NDC. This is currently only a theoretical solution in EU, as the present EU legislation does not make it possible.[242,243]

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[238] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 7.
[239] Ministry of Environment 2021:12, 24.
[240] Kreibich & Hermwille 2020, 945.
[241] Schneider et. al. 2019, 181.
[242] Laininen et. al. 2022, 47.
[243] This is because EU and member states are jointly and separately parties to the Paris Agreement, as the competences related to the agreement are both exclusive to EU and shared between EU and member states ('mixed agreement').

Other, Paris Agreement solutions include company made 'contribution claims' and using GHG outside the NDC. 'Contribution claim' means, that the voluntary offset would not be considered as offsetting towards carbon neutrality but a contribution to host country's climate target. This would alleviate the country's mitigation effort but not contribute to additional GHG reduction. Thus, the voluntary action would not qualify as offsetting for the company. Third option is to use offsets from sectors and GHG that are not covered by that country's NDC. As countries are free to choose their NDC strategies and goals, there may be leeway in offsetting from a sector that is not included.[244]

The proposed EU Carbon Removals Certification Regulation has also addressed double counting. The Regulation's recital (26) states on double counting and its possible relation to fraudulent practice: '*Certification schemes should establish and maintain interoperable public registries in order to ensure transparency and full traceability of carbon removal certificates, and to avoid the risk of fraud and double counting. Fraud may occur if more than one certificate is issued for the same carbon removal activity registered under two different certification schemes or has been registered twice under the same scheme. Fraud may also occur when the same certificate is used several times to make the same claim based on a carbon removal activity or a carbon removal unit (…)'.* The regulation includes a set of rules and procedures to ensure compliance with the certification system, such as registries, monitoring, and reporting. The explanatory part of the Proposal (2022, 12) states that the article 12 will impose the obligation for certification schemes to set up and maintain public registries, as it is of key importance to prevent fraud and avoid double counting. The recital (26) elaborates on how the these should work: '*The registries should store the documents resulting from the certification process of carbon removals, including summaries of certification audits and re-certification audit reports, the certificates and updated certificates, and make them publicly available in electronic form. The registries should also record the certified carbon removal units that meet the Union quality criteria. In order to ensure a level playing field within the single market, the Commission should be empowered to adopt implementing rules setting out standards and technical rules on the functioning and the inter-operability of those registries*'.

[244] Doda et. al. 2021, 28–29.

6 Chapter 6: The Effects of Double Counting on Companies

This Chapter discusses the hypothetical situation where a company has purchased CO2 offset from the voluntary carbon market, and it is later revealed that the offset is double counted. Double counting can be seen as a flaw in the commodity, as avoiding double counting is an established part of the offset quality criteria. However, as the double counting can occur in several ways (see Chapter 5), the consequences may depend on the method of the occurred double counting. Also, the effects are different, depending on whether the issue is related to investors or consumers.

The different quality factors of carbon offset are assessed somewhat simultaneously, first in the validation and second in the verification process. The offset has to conform, for instance, with being additional, real, quantified and verified. When the integrity of the commodity is established, it has to be counted only once towards climate change mitigation.[245] The ex-ante assessment for double counting includes credible and verified accounting scheme as quality assurance.[246] The problem of double counting is that the commodity itself might be of good quality, but what happens after when it is sold, makes it flawed. Therefore, it is not always possible for purchasers to diligently assess this quality factor similarly as the other factors - as ex-ante assessment does not guarantee the ex-post occurrence of double counting.

Double counting is just one way in which offset can be flawed. Failure to meet one or more of the quality criteria, renders the commodity defective and it fails to fulfill its purpose for the offset purchaser. An example of the ex-post quality issue is the Verra Rainforest debate in January 2023. The newspaper Guardian published a report on 23 January 2023 stating that 90% of Verra qualified rainforest carbon offset projects did not meet quality criteria. The projects were widely purchased by internationally renowned big corporations such as Disney, Shell, and Gucci of which some had labelled their products subsequently carbon neutral. Guardian wrote that most of the rainforest projects did not represent genuine carbon reductions and some of them were additionally even harmful for indigenous peoples.[247]

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[245] Institute of International Finance 2021, 77.
[246] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 7.
[247] The Guardian 23 January 2023. Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows.

There is not yet case law regarding effects of double counting *per ce*, so this Chapter discusses the effects of incorrect sustainability information in different forms. It could be concluded that false or unverifiable CO2 compensation by offset makes sustainability statements and carbon neutrality claims erroneous, false, or at least misleading in the end. The examples show that these situations may lead to companies being involved in legal disputes either with investors, consumers, non-governmental organizations (NGOs), officials or even with other companies.

The following four topics were found from referenced source material, as they are issues that were consistently discussed in relation to companies and the problem of unverifiable or false climate claims. They are discussed in parallel to double counting, although they do not specifically pose an issue of double counting. This is because double counting in post-2020 is a new phenomenon, and the issue might not yet have risen to surface. It is not to say, that offset has not yet been unintentionally or intentionally double counted, but that it can be laborious to discover.

The case examples were found from Grantham Research Institute's database on climate change laws of the world[248] and from Sabin Center for Climate Change Law's database on global climate change litigation[249]. The decisions from Consumer Agencies were first found in news articles and then searched from the original sources. The emphasis of this research was on case law covering the topic and regarding Europe and application of EU law, but as the climate change litigation is just evolving, one example of non-EU case is given, however, it has a connection to Europe as well. The following cases are given as examples, as the Chapter does not aim to consist of all the related case law.

6.1 Incorrect Sustainability Information

Companies in the European single market are obliged by the EU Non-Fiduciary Reporting Directive to make sustainability statements that report on environmental matters, social and

[248] Grantham Research Institute on Climate Change and Environment https://climate-laws.org/litigation_cases
[249] Sabin Center for Climate Change Law http://climatecasechart.com/non-us-climate-change-litigation/

employee-related matters, respect for human rights and anti-corruption and bribery matters. These statements are to be made publicly available alongside with the management report.[250]

Companies do report their voluntary carbon neutrality goals in their mandatory sustainability statements. Few examples of Finnish companies are given here. For instance, the energy company Helen discloses in its sustainability report (2021, 11), that by 2030, after achieving the reduction of 85 per cent to 1990 level in 2030, they will compensate any residual emissions to achieve carbon neutrality. The retailer company Stockmann's report (2021, 7) states that they use a CO2 compensated courier service for customer orders. This Swedish-based courier service, Buddbee, discloses in their sustainability report (2021, 12, 22) that they too measure their annual CO2 footprint with the GHG protocol standard and compensate any residual emissions with their partner company Lune. Lune offers different carbon offset projects of which two Buddbee has purchased compensation from in 2021. These CO2 reduction projects were a sun panel project in India and an afforestation project in Uruguay, Buddbee stated. The Finnish elevator and escalator company Kone (2021, 22) states to have carbon neutral maintenance services for elevators as any residual emissions are compensated through a third party, South Pole, whose projects are verified by Gold Standard. From these examples it is seen that companies do report on their voluntary CO2 compensation, but the extent of the given information is different depending on the company, their carbon management practices and their vision of their path to carbon neutrality.

The sustainability information is valuable to investors and other stakeholders who are increasingly interested in companies' carbon management practices.[251] Different stakeholders value companies' climate change mitigation aspirations and climate goals, and success in such environmental matters can also create revenue for companies in form of investor funding and loyal customers.[252] If the carbon neutrality information includes offset, which is later revealed as double counted, the information becomes false in retrospect. This could have a negative effect on company's reputation, which is one of the most valuable immaterial properties of any given company, as it affects the profitability of the company's operations[253]. The consequences

[250] The EU Non-Fiduciary Reporting Directive (2013/34/EU) Article 19a. The Article has been implemented into Finnish Accounting Act (1336/1997) as a separate Chapter 3a.
[251] Doda et. al. 2016, 257.
[252] Ditlev-Simonsen 2021, 98.
[253] Lautjärvi 2022, 108.

of false sustainability information may depend on the nature of the information and the affected stakeholders.

The new EU directive on corporate sustainability reporting (CSRD) will make external sustainability information more transparent as it obliges companies to disclose the same information and in addition specifically on GHG reductions.[254] Furthermore, the proposed Corporate Sustainability Due Diligence Directive (CSDDD) will enhance sustainable practices in corporate governance.[255] It also includes the complaints procedure under its Article 9. However, it remains unclear on what would qualify as potential or actual adverse events on human rights or environment, for the affected stakeholders to initiate the grievance procedure. For instance, could the procedure be initiated by NGOs relevant to that sector, if they think the company's sustainability report describes the use of carbon offset from project that is problematic and do not deliver mitigation outcomes. The next Chapter discusses litigation that is related to incorrect sustainability information.

6.2 Environmental Litigation

Incorrect sustainability information may lead to litigation with investors or other company stakeholders. There have been cases, where investors have claimed that they have been miss-sold due to false sustainability information.[256] However, this phenomenon is new, and private law practices related to so-called 'ESG litigation' are just emerging globally and in the EU.[257]

A recent landmark case was adjudicated in 2019 in UK on company's liability for corporate social responsibility. The case was about a company's responsibility for the actions made by its subsidiaries in the value chain. The Supreme Court ruled in *Lungowe v Vedanta*[258] that information published in the company's sustainability statement established a duty of care for the company.[259] The parent company was deemed liable, alongside their non-UK subsidiaries,

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[254] European Council 28 November 2022. Press Release. Council gives final green light to corporate sustainability reporting directive.
[255] European Commission 2023. Corporate Sustainability Due Diligence. Fostering sustainability in corporate governance and management systems.
[256] Thomson Reuters 1 December 2022.
[257] Hannes Snellman 25 November 2022.
[258] The Supreme Court 10 April 2019. *Vedanta Resources PLC and another (Appellants) v Lungowe and others (Respondents)*. [2019] UKSC 20, UKSC 2017/0185.
[259] Salminen et al. 2022, 163.

for adverse human rights impacts occurring abroad. This was in part due to the fact that the parent company had published a sustainability statement, in which it had emphasized its board's oversight over its subsidiaries i.e., in relation to group-wide environmental control and sustainability standards and for their implementation throughout the group. The case had other materiality as well, but in part the culpability was based on the claims made in the company's sustainability statement.[260]

Another case relating to incorrect sustainability information released by a company, is the recent H&M case in New York. Although this case is not judged according to EU legislation, it is still an example of a case where company has been brought to trial because of the sustainability information it has released in its external relations. Similar court cases could also arise in the EU. On 17 June 2022 an investigating journalist revealed that the clothes company H&M used Higg Material Sustainability Index® sustainability score -labels[261] (index scorecards for product sustainability level) in its products, that posed falsely positive information. For instance, it was stated in one scorecard that the product was made with 20% less water than average, although it was made with 20 % more than average. On 22 July 2022, a class action lawsuit was filed against H&M. One of the arguments was, that H&M's labelling, marketing, and advertising was designed to mislead consumers about the products' environmental attributes, through the use of false and misleading environmental scorecards. In addition, issues related to advertising were raised, for company's claims that its products were "conscious," a "conscious choice," a "shortcut to sustainable choices". The case is pending in the Court of Southern District of New York.[262]

One aspect in the H&M case, is the form in which the sustainability information was presented to the public. The Higg Material Sustainability Index® is developed by the US based Sustainable Apparel Coalition (SAC). The Higg MSI® is used globally by 21,000 companies in the apparel industry to measure their value chain, and it is the leading environmental and social assessment tool in the industry.[263] Ajax and Strauss (2019) have described lawsuits in the US involving

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[260] The Supreme Court 10 April 2019. *Vedanta Resources PLC and another (Appellants) v Lungowe and others (Respondents)*. [2019] UKSC 20, UKSC 2017/0185, para 55–58.
[261] The Higg Material Sustainability Index® (MSI) is developed by the US based Sustainable Apparel Coalition (SAC) and it is a suite of tools for the standardized measurement of value chain sustainability. https://apparelcoalition.org/the-higg-index/
[262] THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK. *CHELSEA COMMODORE individually and on behalf of all others similarly situated, Plaintiff, v. H&M HENNES & MAURITZ LP, Defendant*. Case 7:22-cv-06247.
[263] Sustainable Apparel Coalition (SAC) 2023.

incorrect company sustainability disclosures. They concluded that there were three circumstances which gave materiality to a case: (1) the statutory scheme and the type of interest the plaintiff seeks to protect (investors' versus consumers' interests); (2) the location in which the sustainability-related disclosure occurs or should have occurred (a formal filing to authorities versus a sustainability claim); or (3) the form in which the sustainability disclosure is presented to the public, for example, whether information appears to be an affirmative statement of fact or an aspirational promise to engage in sustainable practices.[264] The H&M case is different from a common misleading marketing practices case in a sense that the company had used an established standard to release the information, and not merely made unsubstantiated marketing claims.

In June 2022, SAC had globally paused the use of the consumer facing Higg MSI® transparency program. This was just a month before the lawsuit was raised in New York. It was due to the Norwegian Consumer Agency's note that the Norwegian company Norrøna was breaking the national marketing law in marketing clothes as environmentally friendly by using the SAC tool.[265] The Agency issued a warning also against H&M on 14 June for the use of the same type of environmental claims. The Agency concluded that the SAC tool is "not sufficient as a basis for the environmental claims they have used in marketing". The Agency noted that the use of the Higg MSI® in consumer marketing, can easily constitute a breach of the prohibition of misleading marketing practices under the national Marketing Control Act § 6 and § 7. The Agency further noted that as the national law is based on harmonized EU Directive on Unfair Commercial Practices (2005/29/EC), the company could face similar difficulties if they pursue their actions in other EU/EEA countries outside Norway.[266] The future EU Regulation on substantiating green claims (draft expected to be published in March 2023, see Chapter 4.2) will regulate green claims related also to clothes and apparel industry in EU. The sustainability measurement under the Regulation is expected to be done with the PEF index. It has raised concern among some civil society organisations, as the index, developed by the Commission's expert group, possibly partly uses similar data as the Higg MSI®.[267]

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[264] Ajax & Strauss 2019, 703-704.
[265] Just Style 17 June 2022. (The H&M case was widely covered by 'Just Style' which is a clothes and apparel industry B2B network.)
[266] Norwegian Consumer Agency 14 June 2022. Case nr: 22/5262-1.
[267] Just Style 2 November 2022.

6.3 Misleading Marketing Practices

Misleading marketing practices cases can relate to double counted offset if the company's product-related carbon neutrality claim is vested in CO2 offset which is in later inspection revealed as double counted and thus rendering the claim void. The product is thus not carbon neutral. The poor-quality offset does not deliver climate change mitigation outcome, and this can in some cases be revealed afterwards in closer scrutiny. The offset can be revealed as poor quality also because of double counting, for instance because of double sale by fraud. As there is no specific case law on void carbon neutrality based on double counting, similar consumer law cases on unverifiable carbon neutrality are examined in this thesis. The cases in this Chapter show, how some product related carbon neutrality claims were misleading because they could not be substantiated by facts.

In the European Union single market, the Unfair Commercial Practices Directive (UCPD) 2005/29/EC applies to marketing practices. It is implemented into Member States' (MS) national laws. The UCPD is based on the principle of full harmonisation. To remove internal market barriers and increase legal certainty for both consumers and businesses, it establishes a uniform regulatory framework harmonising national rules in the internal market. Consequently, the UCPD establishes that MSs may not adopt stricter rules than those provided for in the Directive, not even to achieve a higher level of consumer protection (unless so permitted by the Directive itself).[268]

The Directive, in its current form, does not include a specific text on substantiating environmental claims. However, the Commission published a notice paper on 29 December 2021 to guide the MSs on the interpretation and application of UCPD, and it includes a specific section on 'environmental claims' made by companies.[269] The UCPD itself does not currently provide specific rules on environmental claims, but it provides a legal basis to ensure that traders do not present environmental claims in ways that are unfair to consumers. It does not prohibit the use of 'green claims' as long as they are not unfair.[270]

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[268] Unfair Commercial Practices Directive (2005/29/EC), Article 4 and Recitals 5, 12 and 13.
[269] NOTICES FROM EUROPEAN UNION INSTITUTIONS, BODIES, OFFICES AND AGENCIES. COMMISSION NOTICE. Guidance on the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market. (Text with EEA relevance). (2021/C 526/01).
[270] Ibid, 73.

On March 2022, the Commission published a proposal for a Directive amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information. The new Directive will amend the UCPD by expanding the list of product characteristics about which a trader cannot mislead consumers – and it also covers the environmental impacts. The new Directive will, among other things, prohibit making generic, vague environmental claims where the said environmental performance of the product or company cannot be demonstrated. Examples of generic environmental claims are 'environmentally friendly', 'eco' or 'green', which wrongly suggest or create the impression of excellent environmental performance. Also, it prohibits making environmental claims about the entire product when it concerns only a certain aspect of the product. Using voluntary sustainability labels are also prohibited, if they are not verified by a third-party or established by authorities.[271]

Presently, it may be difficult for consumers to assess climate claims made by companies, due to the newness of the idea of climate change related products and the absence of in force harmonizing law on the green claims.[272] The claims used in advertising are often unambiguous, and in addition may sometimes be used interchangeably when in fact they do not mean the same thing. It is thus difficult for the consumers to assess the reality behind the claims. For instance, 'sustainable', 'conscious choice', 'climate neutral' can mean a set of things whereas 'carbon neutral' is more accurate.[273] Currently carbon neutrality can also be claimed in part of a product or service, which may further confuse consumers. Some companies have claimed products to be 'sustainable' or 'carbon neutral' and simultaneously used harmful ingredients or practices in their production.[274]

According to the Finnish Consumer Ombudsman[275], the evaluation of marketing actions for their misleadingness starts with the overall impression that the marketing creates for the consumer. The decisive factor in the assessment is not the words used in the advertisement, but the image the 'average consumer' gets when reading it in the usual way.[276] The 'average

[271] European Commission 30 March 2022. Circular Economy: Commission proposes new consumer rights and a ban on greenwashing.
[272] Interpol Environmental Crime Programme 2013, 19.
[273] The Advertising Standards Authority (ASA) 2022, 4, 13-16.
[274] The World Bank 2022, 41.
[275] Finnish Market Court Decision 2009. (MAO:655/09).
[276] Finnish Consumer Ombudsman 2021. KKV/77/14.08.01.05/2021.

consumer' standard is established by the European Court of Justice case law.[277] It is also embedded into the UCPD Recital 18 of the Preamble, that clarifies that the Directive "takes as a benchmark the average consumer, who is reasonably well-informed and reasonably observant and circumspect, taking into account social, cultural and linguistic factors".[278] It is noteworthy that the case law, presented next, does not involve the use of any ecolabels.

German Courts and Long Practise of Evaluating Green Claims

In the European Union, the German regional courts have been active in adjudicating cases which were based on climate neutrality claims made by companies. The German Federal Court of Justice has noted already in 1995, that a strict standard had to be applied against the background of emotional advertising power, the low level of knowledge of the public and the complexity of environmental protection issues.[279] As there are many German cases on the topic, two recent cases are explored here as examples, and they portray similar issues covered in other cases as well. In the first case, the Regional Court of Mönchengladbach held in February 2022 that a jam company was liable for misleading advertising, as it had not disclosed how the product was 'climate neutral' and 'climate neutral value-for-money-classic'. The production of the jam was not carbon neutral itself, but the residual CO2 was offsetted by the company, rendering the product as net carbon neutral. The court noted that an average consumer would not understand the defendant's claims to mean that climate neutrality was achieved in balance. While it could be assumed that an informed consumer knew of the concept of climate neutrality through compensation, the average consumer would relate the claim to the specific product and the manufacturing process and not to offsetting. Therefore, the Court found the advertising claims to be misleading pursuant to § 5 para. 1 of the national Act against Unfair Competition ('UWG').[280] In the UWG § 5 para 1, the unfairness is deemed to have occurred where a person engages in a misleading commercial practice which is suited to causing the consumer or other market participant to take a transactional decision which they would not have taken otherwise.

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[277] European Court of Justice. *Gut Springenheide GmbH, Rudolf Tuskyand vs. Oberkreisdirektor des Kreises Steinfurt Amt für Lebensmittelüberwachung,* Case C-210/96.
[278] Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) No 2006/2004 of the European Parliament and of the Council ('Unfair Commercial Practices Directive').
[279] Buschfeld, et. al. 2022.
[280] Grantham Research Institute on Climate Change and the Environment 2023. Litigation cases. Regional Court of Mönchengladbach's decision on company's climate neutral claims regarding jams.

In this case, the Court found the marketing misleading under the UWG § 5(1)1, as it contained untrue information about essential characteristics of the goods.[281] The German UWG serves to implement the EU UCPD.[282] The UPCD Article 6 "Misleading Actions" is implemented into the UWG § 5.

Another German case under the UWG § 5 concerned bin liners, which were packaged with a label 'climate neutral' as well as the indication that the product supports Gold Standard certified climate protection projects to achieve the UN climate goals. The first instance Regional Court of Kiel found in June 2021, that the advertising claim was misleading as the average consumer would understand the claim 'climate neutral' in relation to all of the defendant's products. The claim was thus misleading and inaccurate under UWG § 5(1)1, as the defendant produced non-climate neutral products as well. The information on Gold Standard projects was on defendant's webpage's but on a sub-webpage, which required further research from customers. The Court rationed, that this did not meet the disclosure requirements, and moreover, that it suggested that the whole company was climate neutral even though this was not the case. However, the decision was appealed to the Higher Court of Schleswig which overturned the judgment on 30 June 2022[283]. The Higher Court found that the 'climate neutrality' was an unambiguous statement, and it meant that the products advertised with it could also mean that it had a balanced carbon footprint. The High Court concluded that the claim did not mean, that it was achieved completely by avoiding emissions during the production, as the advertisement pointed out that climate neutrality was achieved through compensation measures. Lastly, the Court stated that explanatory notes on the type and scope of the compensation measures were not required, as the information on how climate neutrality was achieved was not essential for the purchase decision and therefore did not need to be provided on the packaging.[284]

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[281] Regional Court of Mönchengladbach 25.2.2022. 2. Kammer für Handelssachen. 8 O 17/21. ECLI:DE:LGMG:2022:0225.8.0.17.21.00. para 41.
[282] German Federal Ministry of Justice 2021. Act against Unfair Competition in the version published on 3 March 2010 (Federal Law Gazette I, p. 254), as last amended by Article 3 of the Act of 10 August 2021 (Federal Law Gazette I, p. 3433). English translation. https://www.gesetze-im-internet.de/englisch_uwg/englisch_uwg.html
[283] Regional Court of Schleswig, Urteil vom 30.06.2022 - 6 U 46/21. https://openjur.de/u/2437148.ppdf
[284] Grantham Research Institute on Climate Change and the Environment 2023. Litigation cases. Higher Regional Court of Schleswig's decision on company's climate neutral claims regarding bin liners.

Case Examples from Finland

The Finnish Consumer Ombudsman has also, in November 2021, taken interest on climate neutrality claims made by companies in their marketing towards end consumers. The Ombudsman published a press release, where they noted that untrue or misleading information must not be given in marketing, and essential information must not be omitted. This also applies to environmental claims, the use of which in marketing has two main principles: (1) claims must be clear, precise, and understandable, and must not mislead consumers and (2) the company must have evidence to support its claims.[285] These notions are based on UCPD Section 'Misleading Commercial Practices' of Article 6 'Misleading practices' and Article 7 'Misleading omissions', which are corresponding in the Finnish national Consumer Protection Act (38/1978) Chapter 2 in Sections 6 and 7. The Ombudsman has given their opinion in total of three cases in Finland which have concerned environmental claims.

The first case from September 2021 concerned a Finnish food manufacturer company Atria. The Consumer Ombudsman evaluated the company's claim '30% smaller carbon footprint' used in Atria's print advertisement. Next to the claim was a picture of a new minced meat package, with the text in the front bottom corner: 'TOWARDS A CARBON-NEUTRAL FUTURE. The carbon footprint of this packaging is 30% SMALLER than that of box packaging'. There was also another claim '50% less plastic', printed on minced meat packages. Both claims were factual claims and the company had to evidence that they were based on facts. In the first claim, an independent third party had verified that under the ISO-14040:2006 and ISO 14044:2006 standards, the product had a 30% smaller carbon footprint. The Ombudsman concluded that the company had made a factual claim and had not mislead the average consumer, who could well understand the claim in relation to the product itself. The other claim was based on an ISO-standard life cycle analysis, conducted by its packaging material supplier, and validated by an external expert. The life cycle analysis showed that the new minced meat package was made of different plastic than the old one and that the new package was, regardless of its size, about 50% lighter than the corresponding old package. Due to the content of the claim, it was clear that it specifically concerned the packaging of the products. The Ombudsman thus considered that the claim did not give the consumer an incorrect overall picture of the

[285] Finnish Consumer Ombudsman 17 November 2021. Miten niin pienempi ilmastovaikutus? Kuluttaja-asiamies peräänkuuluttaa tarkkuutta markkinoinnin ympäristöväittämiin.

packaging's environmental impact and that it was not false or misleading according to the national Consumer Protection Act (38/1978) Section 6.[286]

The second case from October 2021 concerned the food manufacturer Arla. The company had claimed in their KESO cottage cheese box 'This cardboard box has a 60% lower climate impact than the old plastic can'. In addition, Arla used the expression '60% lower climate impact with the new jar' in the marketing of KESO cottage cheese. In this case, the claims were also factual, and the company had to evidence them, which they did. However, the Ombudsman stated that the claim 'climate impact' was imprecise and the average consumer could not be assumed to understand the concept fully by just looking at the product. The Ombudsman's assessed that the claim of 'climate impact' did not give the necessary information – because in this case it only meant GHG emissions measured in CO2 equivalents, and no other possible climate impacts. The company had provided further information on their webpage, but it required scrolling down the page to a picture by which clicking, the information was to be found. Since Arla's claim was unspecified, information about its more precise content was necessary for the consumer to understand it. Without information delimiting and explaining this claim, the claim was misleading as intended in the Chapter 2, Section 6 of the national Consumer Protection Act. When the information explaining the claim was given on a website quite a long way from the claim, the consumer had not been given information in a sufficient manner as referred to in Chapter 2, Section 7 of the Consumer Protection Act (38/1978).[287]

The most recent case is from July 2022. The energy company Fortum had released a 'For the Mother Earth' television commercial, which created an image of the company's environmental friendliness and used e.g., expressions 'towards a cleaner world' and 'clean energy and recycling'. In the end of the commercial, the Fortum logo and the texts 'clean energy and recycling' and 'Join the change' were presented. The video did not provide any other information about Fortum's operations or products. The Ombudsman noted that the advertisement aimed to create an image of the company as good and responsible, and aimed to position the company as part of the solution to global environmental problems. The main message of the advertising video 'towards a cleaner world' and the image of Fortum's environmental friendliness remained very general and vague. 'Join the Challenge' created the impression that the consumer can have a positive impact on the environment by choosing this energy company. However, it was not possible from the commercial to find out in what concrete

[286] Finnish Consumer Ombudsman 30 September 2021. KKV/77/14.08.01.05/2021.
[287] Finnish Consumer Ombudsman 22 October 2021. KKV/76/14.08.01.05/2021.

way Fortum was part of the change, as the commercial did not tell in more detail about Fortum's own operating methods, their changes, or different ways to reduce the burden on the environment. The Ombudsman assessed that after seeing the video, it was still difficult for the consumer to evaluate the real effects and meaning of their choice. In this case, the Ombudsman decided to hear an external expert in order to evaluate the report submitted by Fortum. The expert stated that measures had already been started by the company towards green transition, but it was clear that it was still difficult to assess the realism of their carbon neutrality goals. Also, to make a future reference, it should focus on a period in which the effects of the company's already implemented actions are focused and visible. Based on these issues, the Ombudsman concluded that Fortum's television advertisement was misleading and in violation of Chapter 2, Section 6 of the Consumer Protection Act (38/1978).[288]

6.4 Greenwashing and Reputational Damage

The growing interest in the market for ‘green products’ may give consumers a false impression that companies are in general operating in a sustainable way, when in fact some of them may engage in greenwashing.[289] In 2020, EU made a sweep on online marketing, which concentrated on greenwashing. Based on the findings, the MSs national consumer protection authorities further investigated them, and had a reason to believe that in 42% of the 344 cases the claims were exaggerated, false or deceptive and could potentially qualify as unfair commercial practices under EU rules.[290] The Finnish Ombudsman also took interest in the afore mentioned Atria and Arla cases based on this EU report.[291]

‘Greenwashing’ has been defined in the EU (2021, 72) as making false or unverifiable claims concerning the environmental attributes of products or services. According to the circumstances, this can include all types of statements, information, symbols, logos, graphics and brand names, and their interplay with colours, on packaging, labelling, advertising, in all

[288] Finnish Consumer Ombudsman 29 July 2022. KKV/78/14.08.01.05/2021.
[289] Ditlev-Simonsen 2021, 98.
[290] European Commission 28 January 2021. Press Release. Screening of websites for ‘greenwashing': half of green claims lack evidence.
[291] Finnish Consumer Ombudsman 17 November 2021. Miten niin pienempi ilmastovaikutus? Kuluttaja-asiamies peräänkuuluttaa tarkkuutta markkinoinnin ympäristöväittämiin.

media (including websites) and made by any organisation, if it qualifies as a trader and engages in commercial practices towards consumers.[292] 'Greenwashing' is not a legal claim itself but a description of a practise.

Greenwashing is usually considered as deliberate, but can also occur because of a lack of corporate and legal oversight. This of course, does not diminish the company's responsibility for their actions. Companies may simply lack the knowledge and supporting data to make genuine claims about the effects of their sustainability efforts. It has been established, that companies should at least refrain from using vague expression such as 'eco-friendly' or 'sustainable' and instead properly document their claims, so that they are not suspected of providing false information. If a company is using carbon offset, they should take proper care in quantifying it accordingly.[293] As noted previously, in relation to CO2 compensation, companies may lack the knowledge to adequately consider the possibility that the offset may be double counted.[294]

Companies can face accusations of false marketing practices that constitute as greenwashing. In many instances these claims are made by consumers, NGOs, or government officials. However, in Italy 2022, a microfiber company was sued by their competitor for making misleading and false sustainability claims to greenwash their products. The defendant had used several sustainability claims such as 'the first and only microfiber that guarantees environmental sustainability throughout the productive cycle', 'the first sustainable and recyclable microfiber', '100% recyclable', '100% recyclable at the end of its lifecycle'. Applying the national law that implements the UPCD, the Italian Court found these claims to be vague, generic, false, and non-verifiable. The Court specifically discussed the unfair competitive advantages to be gained from greenwashing, given today's heightened awareness of environmental issues, commenting that the ecological virtues claimed by a company or for a product can influence the average consumer's purchasing choices. The Court applied the Commission's guidelines (2021) on interpretating the UCPD in relation to environmental claims, and found that the claims made by the defendant did not pass the test to be 'clear, true, accurate, not misleading, and based on robust, independent, verifiable, and generally

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[292] NOTICES FROM EUROPEAN UNION INSTITUTIONS, BODIES, OFFICES AND AGENCIES. COMMISSION NOTICE. Guidance on the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market. (Text with EEA relevance). (2021/C 526/01)., p. 72.
[293] Nesbit 2022.
[294] Laininen et. al. 2022, 43.

recognized evidence, which must consider updated scientific findings and methods'.[295] The Italian case is a landmark case in a sense that it is the first time in the EU internal market that a company was sued by another for greenwashing, based on UCPD.[296]

There is also a present case pending in court in France, which concerns allegations on false net-zero claims and greenwashing. On 2 March 2022, Greenpeace with other NGOs sued the French energy company TotalEnergies for false and misleading marketing practices, under the French national law that implements the UCPD. The energy company claims to be carbon neutral by 2050 while, according to the applicant, they simultaneously engage in unsustainable practices. Greenpeace concluded, that under their calculations, TotalEnergies released four times more CO2 emissions than the company had reported.[297] The case is important as it is the first in EU where a major energy company is sued for their net-zero claims and a suspected practise of greenwashing under the UCPD. Therefore, the outcome of this case will also be relevant to other companies claiming net-zero in EU.[298]

In May 2022, the airline company KLM was called out by environmental pressure groups in the Netherlands, for claiming their CO2 compensation programme (reforestation projects) helped to offset consumers' CO2 emissions from flying. The company also claimed to be net-zero by 2050 in line with the aviation industry. FossielVrij NL, ClientEarth and Reclame NL urged the company to stop 'Fly Responsibly' advertisements, alleging that they violate the Dutch implementation of the UCPD, by giving false impression that KLM's flights will not exacerbate the climate crisis. The Dutch Advertising Committee also noted that the advertisement's tag line, 'Be a hero, fly CO2 zero', is an absolute claim and as such, the company has the burden of proving it to be real. In July 2022, FossielVrij NL and the others filed the lawsuit before the district court in the Netherlands. The airline representative made a statement to Reuters news agency, stating 'It would certainly not be in our interests to misinform our customers. It's our responsibility to make future travel as sustainable as possible. We believe that our communications comply with the applicable legislation and regulations'.

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[295] Clifford Chance 13 January 2022. Business & Human Rights Insights. Italy's first greenwashing case between corporates.
[296] Law Society Gazette Ireland 26 January 2022. Eco 'virtue signals' breach competition law in Italy.
[297] Greenpeace 3 November 2022. Greenpeace finds TotalEnergies emissions almost 4 times higher than reported. Press Release.
[298] Sabin Center for Climate Change Law 2023. Greenpeace France and Others v. TotalEnergies SE and TotalEnergies Electricité et Gaz France.

The case[299] is a first greenwashing case against an airline in EU, and it is currently pending in the District Court of Amsterdam.[300]

The future of the KLM and TotalEnergies cases will show, on what grounds companies in carbon intensive sectors can claim sustainability in their marketing practices, and what is deemed as misleading. Carbon intensive business' may have a credibility problem in claiming carbon neutrality if emissions are primarily compensated but not reduced. It may give a misleading or false impression about company's climate actions as a whole.[301] Greenwashing claims in these examples are legal claims under consumer law. They are in essence claims of misleading marketing practices, but heightened with a notion that the practise is deliberately misleading to give a false impression for the average consumer. Such a claim is a reputational damage risk to a company. Accusations, or even suspicions, of false or misleading marketing practices or greenwashing are a significant reputational risk to any company.[302]

Carbon Market Watch (CMW) recently noted in February 2023, in a press release accompanying their Corporate Climate Responsibility Monitor 2023 report, that companies should refrain from using carbon neutrality claims because, among other issues, of the several quality problems related to CO2 offset. It seems currently almost impossible to rely on a genuine climate contribution that CO2 projects promise. Therefore, according to CMW, companies should be extra careful in claiming carbon neutrality and if doing so, be prepared for reputational damage, ESG litigation, accusations of misleading marketing practices or greenwashing.[303]

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[299] The District Court of Amsterdam. *STICHTING TER BEVORDERING VAN DE FOSSIELVRIJ-BEWEGING* and others vs. *KONINKLIJKE LUCHTVAART MAATSCHAPPIJ N.V.*, C/13/719848 / HA ZA 22-524.
[300] Reuters 22 July 2022 & Bloomberg 6 July 2022.
[301] Cahill 2022. Credibility Gap for Carbon-Neutral LNG.
[302] KPMG 2022.
[303] Carbon Market Watch 13 February 2023.

7 Chapter 7: Discussion

This Chapter elaborates on the issues found on the previous Chapters of this thesis, namely the quality issues of carbon offset and the risk of litigation that companies may face if their carbon neutrality claims cannot be substantiated. This discussion draws parallel to a situation where a company's carbon neutrality claim would not be possible to substantiate because the offset, used to compensate the residual CO2 emissions, is double counted elsewhere.

7.1 Difficulties in Quality Assessment Poses Market Integrity Risk

Assessing the quality of carbon offset is difficult, as the assessment depends on several factors. One dividing factor is the means of the carbon offset, whether it is a carbon reduction or a removals unit (or a combination of these two). Reduction units are based on business-as-usual (BAU) and baseline scenarios and thus based on mathematical calculations.[304] Removals units can be based on natural or technical removals. With the technological CO2 removals, the removed amount can be technically verified. However, the permanence of the storage of such carbon removals may be questionable. Both project types thus pose quality issues, but from different quality criterion.[305]

It is difficult to give an estimate of the ratio of the reduction and removals projects, as the landscape is continually evolving, and new projects are frequently launched. However, it can be concluded that presently most of the carbon offset units are produced in reduction projects.[306]

The reduction projects are easier to develop, as they are in many cases nature preservation projects in developing countries. There are also economic incentives to generate such projects in developing countries. These reduction actions could be seen as form of traditional climate change mitigation, as similar projects were established already under the UNFCCC Kyoto Protocol's (1997-2020) Clean Development Mechanism (CDM).[307] The Certified Emissions

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304 Grantham Research Institute on Climate Change and Environment 2022. What are carbon offsets?
305 Tamme 2021, 4.
306 University of Oxford 2020.
307 Nordic Council of Ministers 2021, 36.

Reductions (CERs), in essence carbon credits, generated through the CDM mechanism, were revealed by the German Institute for Applied Ecology the Öko-Institut (2016) not to pose additional emissions reductions. The report was prepared for the EU Directorate-General for Climate Action. The report suggested that 85% of the projects covered in the analysis and 73% of the potential CER supply for the Kyoto Commitment period of 2013-2020 had a low likelihood that the emission reductions were additional and not over-estimated. Only 2 % of the projects were perceived as additional.[308] The report (2016, 160) found that as additionality and permanence were questionable in most CDM reduction projects, the market posed considerable information asymmetry. Also, economic incentives to overestimate credits further undermined the integrity of the market. The report concluded, that actually crediting mechanisms should not be used for climate change mitigation because of these inherent problems that the mechanism poses. The EU CRCR Proposal's Impact Assessment Report (2022, 11) draws from the report and finds that as previous studies show reduction projects have had difficulties, stakeholders do not trust existing schemes. However, the Assessment Report does not address the issue of crediting schemes quality in general, as was raised by the Öko-instut.

The quality problems of CO2 offset have spurred protests among NGOs and consumers, calling all offset as scam or greenwashing.[309, 310, 311] Recently in late January 2023, the newspaper Guardian revealed that Verra verified 'REDD+' reduction projects did not meet offset quality criteria, although widely purchased by large corporations for purpose of claiming carbon neutrality. REDD+ is a mechanism established under the UNFCCC[312] and stands for 'Reducing Emissions from Deforestation and forest Degradation'.[313] In REDD+ projects, the emission reductions are calculated by the same manner as in any reduction project: comparing the difference between: (a) BAU baseline emissions; and (b) actual emissions when the project materialized. Verra answered on 31 January 2023, stating that the technical reviews of West et al. 2020 and 2023, and from Guizar-Coutiño 2022 were incorrect in their calculations.[314]

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308 Öko-institut, 11.
309 Greenberg 10 November 2021.
310 Childs & de Zylva 22 October 2021
311 EUROPEAN COMMISSION Brussels, 30.11.2022 SWD(2022) 378 final COMMISSION STAFF WORKING DOCUMENT EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT Accompanying the document Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals, 5-6.
312 UNFCCC, REDD+ https://redd.unfccc.int/
313 The Guardian 23 January 2023. Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows.
314 Verra 31 January 2023.

Whichever is right in their calculations, the case still shows how difficult it is to verify the additionality criterion in CO2 reduction projects.

The technical carbon dioxide removals seem superior method in actual verifiable CO2 mitigation. However, developing technical carbon removals projects acquire new, complex, and expensive technology. The use of carbon removals and especially technical removals is presently still low, due to these reasons.[315]

The European Union has published its proposal on Carbon Removals Certification Regulation in November 2022. It emphasizes the need to scale up on carbon removals as the reduction will not be enough in keeping with the Paris Agreement climate targets. Also, the Proposal acknowledges the mistrust of wider public on CO2 offset products and aims to ensure a credible certification scheme.[316] The mistrust is in part based on the fact that the voluntary carbon market and the offsets are not regulated by law and there is not a directly applicable enforcement mechanism in case of low-quality carbon offset. The state of immature regulation by law poses severe quality assurance problems for the market.[317]

In relation to avoiding double counting, the answer by UNFCCC and EU is robust accounting. The Paris Agreement Article 6(2) gives out the double-entry bookkeeping method called 'corresponding adjustments' and the Proposal for the EU Carbon Removals Certification Regulation Article 12 requires maintaining public and interoperable registries. However, the Paris Agreement addresses only action between countries, and does not account for companies. Also, neither of these instruments are currently applicable in EU, and furthermore the CRCR (when in force) will concern only offset from carbon removals. These two legislative mechanisms pose an incoherent legislative framework for companies. Currently, if the project host country claims the same offset under their NDC, the action does not give any additional climate change mitigation outcome for the company. Therefore, it is presently a question whether the corporate offset is in fact always double counted if a country uses the same emissions category in their NDC. To avoid double counting the offset, for the purposes of both a country and a company, corresponding adjustments should be made between the two[318].

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315 Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6.
316 EUROPEAN COMMISSION Brussels, 30.11.2022 SWD(2022) 378 final COMMISSION STAFF WORKING DOCUMENT EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT Accompanying the document Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals, 5-6.
317 Interpol Environmental Crime Programme 2013, 14-17.
318 Laininen et. al. 2022, 47.

The use of different standards and crediting schemes makes it almost impossible for purchasers, whether natural or legal persons, to compare the offset products. The purchasers face additional search cost when comparing and assessing differently constructed offsetting projects. There may also be issues related to information asymmetric[319], that complicate the functioning of the market. Together these can constitute as a situation of 'market failure' for the voluntary carbon market, as it creates a risk that financial support goes to activities that cannot be relied upon as effective climate change mitigation actions.[320]

To conclude, corporate purchasers should refrain from purchasing CO2 offset from carbon reduction projects in order to achieve credible compensation. Even though reduction projects seem 'moral' in a sense that they preserve nature in the midst of an environmental, human induced catastrophe (climate change), it seems that they deliver more good feelings than good facts. Considering all the CO2 offsetting mechanisms, the reduction projects are the most difficult to verify to actually deliver climate change mitigation outcome. This problem is profoundly situated in the quality criteria of 'additionality' of the action; would this project be developed anyway (such as a renewable energy plant), and what is thus the amount of the actual avoided emissions[321]. In addition, according to recent studies from 2020-2023, land- and forest-based carbon offsets (both reduction and removals projects) have brought about little to no substantive emissions reductions and minimal, inconsistent forest protection, while also in some cases impeding the natural habitat of indigenous peoples[322]. This new knowledge further incentivises to increase offset from technical CO2 removals. Reduction projects also remain unregulated by law in the EU, when the Carbon Removals Certification Regulation comes into force, as it applies only to carbon removals (whether natural, technical, or mixed). However, the problems of calculations on baselines and avoided emissions, would not be avoided through law, as was the case with the Kyoto mechanism. The reduction projects, when verified by established standards and verifiers, are calculated based on the best industry knowledge of that time. Because of the uncertainties on the actual avoided emissions (additionality and permanence), the reduction projects should not be used for carbon neutrality claims but for climate contribution claims. They can be beneficial for the environment in some cases, but the use for credible offsetting remains uncertain despite of best efforts.

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[319] Information asymmetry refers to a situation where one party in a transaction has more or better information than the other.
[320] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, Explanatory memorandum, p. 6.
[321] Gillenwater et. al. 2008, 86.
[322] Krishnan & Fuchs 2023.

7.2 New EU Law on CSR Changes Status Quo

Law does not specifically regulate corporate carbon neutrality claims, as they are voluntary, but it does regulate matters related to such claims. These matters cover at least mandatory sustainability statements, claims made in marketing and advertising, and the use of legislation-based ecolabels. There has been a significant increase in liability-related lawsuits and other dispute resolution procedures related to corporate ESG issues in recent years[323]. There have for instance been many recorded cases in relation to consumers and also to human rights, but there has not yet been a legal dispute specifically concerning double counted CO2 offset. However, this kind of litigation could be possible for instance between a company and an investor. A case could rise in a situation where a company has acted negligently in vetting suitable CO2 compensation, as the use of poor-quality offset could pose a reputational risk to a company. Such ESG litigation could also cause significant financial losses to a company. These losses can be indirect or direct; the possible reputational damage can affect investors and consumers, and the direct effects can include fines or damages to the other party[324].

Some environmental organizations have criticized, that the low-cost carbon credits incentive companies to offset from the cheapest low-quality projects, and not to reduce their emissions that could be reduced by other means. In addition, there remains doubt, whether these low-cost projects deliver mitigation outcomes at all and are merely a form of corporate greenwashing.[325] Different CO2 offset projects do offer different priced carbon credits, where lower quality credits are cheaper.[326] For instance, in 2021 the low-quality carbon removals were estimated to cost around 4 €/tCO2, whereas high-quality carbon removals price reached 20 €/tCO2 to 70 €/tCO2 or more.[327] The gap in offset unit prices is explainable with the division into reduction and removal units, as removals credits tend to trade at a premium to reduction credits. Removals projects require higher level of investment, and those credits are also on high demand as they are deemed more reliable in mitigating climate change.[328]

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323 Vanhala 2022, 430.
324 Ibid, 559.
325 1) Greenberg 10 November 2021 2) Childs & de Zylva 22 Oct 2021.
326 EUROPEAN COMMISSION Brussels, 30.11.2022 SWD(2022) 378 final COMMISSION STAFF WORKING DOCUMENT EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT Accompanying the document Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals, 34.
327 Ibid, 42.
328 Vavasuli & Vandana 10 June 2021.

Companies in the EU are obliged by the Non-Financial Reporting Directive (NFRD) to disclose information on sustainability, and when the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD) are implemented, companies will have to disclose more detailed information on their sustainability related practices. Although carbon neutrality as such is not mandatory for companies, they will need to disclose related information. The information includes for instance mandatory reporting on Scope1, 2 and 3 emissions[329] and plans on how the company is implementing actions with the limiting of global warming to 1,5 Celsius degrees.[330] This information is relevant also to investors and erroneous information could have consequences.[331] These requirements by EU law make the sustainability comparison between companies easier in the internal market, as they are obliged to disclose similar information. Currently the NFRD gives much leeway on what to report and how.[332] It remains to be seen, how these will affect the mandatory sustainability statements released by companies alongside their managerial report, and will these obligations affect the due diligence actions of companies, when they need to publish more information in their outward relations than before. Would there be legal consequences, if these environmental matters are reported in official documents and the information is in later scrutiny revealed as incorrect? In the context of US law, Ajax & Strauss (2019, 718) have discussed the rise of investor-initiated lawsuits in relation to sustainability statements that have contained false and misleading information or omitted information about corporate sustainability practices.

The practical application of the complaints procedure under the CDDDD remains also unclear. It is unclear how the Commission intends the complaints procedure under the Article 9 to be interpreted - what would be the cases that could be dealt between a company and a person who claims actual or potential harm, but not in the court of law or with an official regulatory agency? Is the complaints procedure to be taken as non-binding dispute resolution mechanism? The issue is not much elaborated in the Proposal. The recital (23) states that "*Recourse to the*

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329 DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting. Brussels, 16 November 2022, p. 118–119.
330 European Commission 23 February 2022. Fact Sheet. Just and sustainable economy: Companies to respect human rights and environment in global value chains.
331 Vanhala 2022, 430.
332 EUROPEAN COMMISSION. Brussels, 21.4.2021. SWD(2021) 150 final. COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Accompanying the document Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting, 11.

complaints and remediation mechanism should not prevent the complainant from having recourse to judicial remedies". The Article 9(2)c gives NGOs the possibility to engage in the complaints procedure. As companies have been taken to court by NGOs claiming harm, would this provision be needed to comply with first? Is the Article 9(2)a, a provision that could help individual person to complain without having to recourse to lengthy and expensive judicial proceedings? How is the complaints procedure different from normal human resources practices in relation to, for instance labour law in workplaces, as the claimants can be also trade unions? According to recital (53) Members States are to appoint national authorities who would be entitled to carry out investigations, on their own initiative or based on complaints or substantiated concerns raised under the Directive.

According to the UN Guiding Principles on Business and Human Rights, corporate non-judicial grievance procedures should be predictable.[333] Currently it remains quite unpredictable for both parties, what kind of cases can be brought to the complaints procedure. Nevertheless, as the procedure is vested in "*legitimate concerns regarding those potential or actual adverse impacts on human rights and environment*" per Article 9(1), these issues are quite severe. At least actual adverse human rights and environment impacts should not be dealt with inside closed doors and with potential information asymmetry and asymmetry in resources to negotiate these kinds of issues. In relation to misleading carbon neutrality claims, those are already quite efficiently processed in national Consumer Agencies, who also have the power to introduce sanctions. Could poor quality or flawed offset be reported to a company as an interested party, and they would bring it to an end (stop purchasing it) in line with the Article 8(1)? It would require, per Article 6(1) that the company also identifies the offset as poor quality and as an adverse environmental event.

The Proposal has been lastly discussed in the European Council on 2 March 2023. The discussion from that Ordinary legislative procedure (COD) remains currently only in French.[334] However, from previous Council discussion on 1 December 2022, Estonia made a statement distressing the vagueness of the complaints procedure "(…) *the vague obligations would make it difficult for the companies to assess their obligations in order to reasonably avoid possible*

[333] United Nations 2011, 33.
[334] European Commission 2023. Follow the steps of procedure 2022/0051/COD. Author's note: last visited on 18 March 2023.

civil liability and for the injured party to assess the reasonable prospects of a claim".[335] The Proposal will next proceed to the first reading of the Parliament.[336]

The implementation of the CSDD Directive and the future use of the complaints provision will show, what kind of issues will be taken to the complaints procedure, and does it for instance, have an effect on judicial economy in national courts or regulatory agencies. It remains also to be seen, how the complaints procedure will be implemented in Member States' national laws and for what sectors.

7.3 Increased Risk of Litigation Related to CO2 Emissions

The 2020's has seen a significant rise in the carbon neutrality claims made by companies, who wish to take part in the Paris Agreement climate goals.[337] However, with the rise of the corporate CO2 neutrality claims, also claims of misleading marketing practices have been on the rise, as consumers are more educated on sustainability.[338] Therefore, there could also arise cases, where the product-related carbon neutrality claim is in closer/later scrutiny revealed as void because the offset used as a basis for the claim is revealed as double counted. This would make the product non-carbon neutral in retrospect. The Finnish Consumer Ombudsman has decided to hear an external expert on the matter of company's sustainability practices[339]. Such additional third-party analysis could perhaps also reveal offset quality issues when a company is claiming carbon neutrality in a product. This Chapter elaborates on three types of misleading marketing practises cases, which can be seen to form a conceptual evolvement in the subject matter in the cases.

The first cases of misleading marketing practices were based on carbon neutrality claims, where the subject matter was on vague and unambiguous terminology. Companies had used marketing terms such as 'sustainable', 'green', 'carbon neutral' without explaining what these claims meant. The average consumer was not able to deduct, what kind of environmental impact the

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335 Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 - General Approach = Statement by Estonia, 2.
336 European Commission 2023. Follow the steps of procedure 2022/0051/COD.
337 Doda et al. 2021, 19.
338 Buschfeld et. al. 2022.
339 Finnish Consumer Ombudsman 29 July 2022. KKV/78/14.08.01.05/2021.

commodity possessed. This was also perhaps due to the newness of the idea of CO2 neutral products, and the marketing practices were just evolving. Due to national case law in EU Member States, based on the Unfair Commercial Practises Directive, these claims have to be substantiated when they are presented as factual claims. Although falling to both categories of Articles 6 and 7 of the UCP Directive, it could be argued that these cases were mostly misleading as they omitted information under the Article 7. National case law has probably corrected this problem, and the coming EU regulation on substantiating green claims will also tackle any residual issue (expected to be published in March 2023[340]).

A further category of misleading marketing practices cases can be described as containing materiality mostly under the Article 6 and the marketing being misleading as it '*contains false information and is therefore untruthful or in any way*'. Many of the misleading marketing practices cases also possessed this problem, but a further nuance to the issue could be a situation where the product characteristics are *later* revealed as false due to erroneous standard or other sustainability calculation. It is then a case that is essentially established on the verifiability of the alleged sustainability characteristics. An example of such a case is the H&M case, that the Norwegian Consumer Agency[341] also noted under the EU UCP Directive. The clothes company H&M had used SAC's Higg's MSI score cards, which is an established international standard, used by over 20,000 companies worldwide[342]. Often companies use industry self-regulatory instruments as a form of risk management. In this case, the whole clothing and apparel industry was taken aback from the information that the standard was flawed. Further concerns on credible standards were aired by the industry, as the coming EU regulation on consumer products related PEF-index may use similar data[343]. These standards are based on calculations of emissions life-cycle analysis, which shows how difficult it is to calculate emissions that would occur in a hypothetical opposite situation ('business-as-usual' and baseline calculations). Not depending on the outcome of the H&M case, it is a reminder for companies using standards, that they are not necessarily accurate, and due diligence should be exercised beyond choosing a standard. Standards should also be updated, as SAC has promised to do[344], as methods for sustainability related calculations and predictions evolve in time.

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340 European Parliament 20 January 2023. Legislative Train. Substantiating green claims In "A European Green Deal".
341 Norwegian Consumer Agency 14 June 2022. H&M. Case nr: 22/5262-1.
342 Sustainable Apparel Coalition (SAC) 2023. The Higg Index. https://apparelcoalition.org/the-higg-index/
343 Just Style 2 November 2022.
344 Just Style 11 November 2022.

In the evolvement of sustainability related consumer claims, a third category of misleading marketing practices can be seen to include 'moral' claims that are still based under both Articles, 6 and 7 UCPD. These claims include the notion that the advertisement is a form of greenwashing; it gives both materially and morally untruthful information as it is simultaneously lacking the 'big picture' of the company. These are the cases that concern companies from carbon intensive industries, and their carbon neutrality claims. NGOs in France have bought a case against an energy company TotalEnergies[345] and in the Netherlands against the aviation company KLM[346]. In both cases, the plaintiffs argue that these companies cannot claim carbon neutrality in their products because their business operations are based on using fossil fuels, and in addition, they have not reduced the amount of emissions that they could have reduced by modern technologies, but instead have resolved to compensate by CO2 offset. Both of the cases are pending in court. It may be that these cases are in the grey zone, meaning that it is possible that the companies have acted diligently but the morals of general society have shifted so that it is not 'morally' correct to claim carbon neutrality if the business is based on carbon – although the company would be net carbon negative because of reductions and offsetting.

In the case of *Milieudefensie et al. v. Royal Dutch Shell plc*[347], the oil company was brought to justice in 2019 under the Dutch Constitution and of alleged human rights violations under the European Convention on Human Rights, for not reducing their emission in line with the Paris Agreement. It was not a case on misleading marketing practices, but it in part portrays the topic of a moral duty in emissions reductions.[348] The company argued, among other defences, that there is no legal standard, statutory or otherwise, that would establish that Shell was acting in conflict with an unwritten legal standard by failing to comply with emissions caps. However, the Court decided, that based on the duty of care provision (Article 6:162) of the Dutch Civil Code[349], claiming that *'acting in conflict with what is generally accepted according to unwritten law is unlawful'*, and therefore Shell was culpable. The company was ordered by the Court to

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345 *Greenpeace France and Others v. TotalEnergies SE and TotalEnergies Electricité et Gaz France*
346 District Court of Amsterdam. *STICHTING TER BEVORDERING VAN DE FOSSIELVRIJ-BEWEGING and others vs. KONINKLIJKE LUCHTVAART MAATSCHAPPIJ N.V.*, C/13/719848 / HA ZA 22-524.
347 The Hague District Court. *Milieudefensie et al. v. Royal Dutch Shell plc* . C/09/571932 / HA ZA 19-37.
348 Sabin Center for Law 2023. Milieudefensie et al. v. Royal Dutch Shell plc.
349 Burgerlijk Wetboek (1992)

reduce its emissions by 45% to comply with the Paris Agreement goals. On 20 July 2022, Shell appealed the decision, and the case is pending in court in the Netherlands.[350]

There have been cases in Europe where individuals and NGOs have brought States to court under European Convention on Human Rights (ECHR) provisions and where the issue is based on emissions reductions in line with the Paris Agreement 1,5 degrees goal. These cases include the famous *Urgenda Foundation v. The State of the Netherlands* (2015), where the Dutch government was ordered to take more ambitious action by reducing carbon emissions by at least 25 percent by 2020. The Court concluded that the Netherlands had a duty to take climate change mitigation measures due to the 'severity of the consequences of climate change and the great risk of climate change occurring'. In reaching this conclusion, the Court cited Article 21 of the Dutch Constitution[351]; EU emissions reduction targets; principles under the ECHR (Articles 1, 2, 8 and 13[352]); the 'no harm' principle of international law; the doctrine of hazardous negligence; the principle of fairness, the precautionary principle, and the sustainability principle embodied in the UN Framework Convention on Climate Change; and the principle of a high protection level, the precautionary principle, and the prevention principle embodied in the European climate policy.[353] There have also been similar cases in Ireland[354] and also in the Court of Justice of the European Union[355] but the plaintiffs have not been successful in their claims against authorities. These cases are different from cases that could concern companies, as companies do not have direct and applicable obligations under the Paris Agreement, as countries do. However, these cases show how climate change litigation has evolved to include human rights. If ECHR provisions, for instance right to life (Article 2) and right to family life (Article 8) are seen to integrally relate to emissions reductions in line with the Paris Agreement, it could bring materiality for cases against companies as well. These two afore mentioned ECHR articles were relied on by the Milieudefensie et al. in the original case against Royal Dutch Shell plc in 2015, which is currently pending in the appellate court.

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350 Sabin Center for Climate Change Law 2023. Milieudefensie et al. v. Royal Dutch Shell plc.
351 Grondwet voor het Koninkrijk der Nederlanden (2018)
352 *The Supreme Court. Urgenda Foundation v. The State of the Netherlands*
ECLI:NL:HR:2019:2006, Hoge Raad, 19/00135
353 Sabin Center for Climate Change Law 2023. Urgenda Foundation v. State of the Netherlands.
354 The High Court 2019. *Friends Of The Irish Environment Clg* vs. *The Government Of Ireland, Ireland And The Attorney General*. [2019] IEHC 747.
355 Judgment of the Court (Sixth Chamber) of 25 March 2021. *Armando Carvalho and Others v European Parliament and Council of the European Union*. Case C-565/19 P.

7.4 Conclusions

Poor-quality CO2 offset can have several negative effects for companies. Firstly, in their dealings with investors and secondly with consumers or other external stakeholders such as NGOs. These effects can be divided into risks of environmental litigation in relation to ESG matters and claims of misleading marketing practices. However, these are hypothetical end-results of claiming carbon neutrality that had not actually happened due to double counting, as there has not yet been such legal cases. These deductions are based on general findings on the effects of erroneous sustainability related information on companies, based on case law and referenced literature. Double counting has reference to such cases, as it makes carbon neutrality claims void if they are constituted on the double counted offset. This same conclusion could be made with any of the quality issues of CO2 offset. However, double counting differs from the other quality criterions because the commodity itself can be of good quality but the practise of using it multiple times, makes it flawed. Carbon credits can also be intentionally used in fraudulent practise. The robust accounting does not necessarily protect the offset/carbon credit for being overstated[356]. Therefore, it could be argued, that ex-ante due diligence in purchasing offset does not necessarily provide actual climate change mitigation outcome in ex-post evaluation when the quality issue is double counting. Also, the NDCs under the Paris Agreement create a situation where it is probable that the same emissions offset is used by both the project host country and a company, and therefore double counted as double claimed.

Vanhala (2022, 430-459) divides ESG litigation into five groups: 1) strategic ESG litigation; 2) company's responsibility for the operations of subsidiaries and value chains; 3) cases of greenwashing; 4) contractual disputes between companies due to the neglect of responsibility requirements; 5) disputes related to investment protection agreements between companies and states. The findings of this thesis support, that in relation to carbon neutrality claims, companies may be subject to at least strategic ESG litigation[357] and litigation related to greenwashing. The cases brought to court by environmental NGOs can be considered as strategic litigation, as they are aimed to bring a broader societal change in the society, beyond the individual case. Cases related to consumers are greenwashing cases in the categorisation by Vanhala. However, those

[356] Öko-Institut 2016.
[357] European Center for Constitutional and Human Rights (ECCHR) 2023 defines strategic litigation as litigation that aims to bring about broad societal changes beyond the scope of the individual case at hand. https://www.ecchr.eu/en/glossary/strategic-litigation/

cases could also be described as cases of misleading marketing practices as it is a judicial term, and the cases are adjudicated in relation to consumer law. Sustainability information released by companies could also lead to other consequences described by Vanhala. However, this ESG litigation is just evolving and currently it seems that inside the EU jurisdiction, there is not that much case law which could be reasoned to relate directly to CO2 offset.

Other questions of this thesis include CO2 offset quality and EU corporate social responsibility legislation. It has been established that the quality assessment of CO2 offset is difficult and even more difficult when the voluntary carbon market is unregulated. Also, the quality issue seems to be more pressing with the reduction than with the removal units. The scaling up on carbon removals will benefit the whole of Europe, if the coming CRCR increases investments and uses in carbon removals technologies. In relation to corporate social responsibility (CSR), EU is introducing Directives that will make sustainability reporting more coherent and more stringent. These legal regimes, both in relation to carbon removals and CSR, can channel both private and public actions consistent with a sustainable and low emissions economy. Institutional processes do establish and vest power and authority to carry-out assessments, monitor compliance and to enforce sanctions. Such legal processes are also critical in addressing disputes relating to these issues.[358]

The evolvement of cases in relation to carbon neutrality and emissions reductions in general, shows how the sustainability concepts have developed and sustainability has become more and more important to lawmakers, businesses and to consumers. In relation to products and services, consumers today may be more of an ‘informed’ consumer than ‘average’ consumer in relation to sustainability, although the EU legislation uses the average consumer as a benchmark. Companies should keep up with the new knowledge and be precise in their marketing practices. Also, business in carbon intensive sectors should acknowledge their shortcomings, as an informed consumer will accept that it is not possible to reduce the use of fossil fuels to zero with current technologies. Climate change litigation in relation to companies is also evolving fast, and including a new notion of human rights in relation to emissions reductions. The pending cases concerning KLM, TotalEnergies and Shell will also show, will companies be obliged to more stringent requirements than before.

[358] Figueres 2013, vii.

8 References

LITERATURE AND ARTICLES

Ajax, Caitlin M.; Strauss Diane, 2019. *Corporate Sustainability Disclosures in American Case Law: Purposeful or Mere "Puffery"?* Ecology Law Quarterly. 2019, Vol. 45 Issue 4, p703-734. 32p. DOI: https://doi.org/10.15779/Z381N7XN18

Brosset, Estelle; Maljean-Dubois, Sandra 2020. *The Paris Agreement, EU Climate Law and the Energy Union.* Research Handbook on EU Environmental Law, 2020.

Buddbee 2022. *Sustainability Report 2021*. https://budbee.com/wp-content/uploads/2022/07/budbee-sustainability-report2021-komprimerad.pdf

Carmichael, Richard 2019. *Behaviour change, public engagement and Net Zero*. A report for the Committee on Climate Change. Centre for Energy Policy and Technology (ICEPT) and Centre for Environmental Policy (CEP) Imperial College London. t https://www.theccc.org.uk/publications/ and http://www.imperial.ac.uk/icept/publications/

Ditlev-Simonsen, Caroline D. *A Guide to Sustainable Corporate Responsibility: from Theory to Action.* Cham: Springer International Publishing AG, 2021. Print.

Doda, B.; Gennaioli, C.; Gouldson, A.; Grover, D.; Sullivan, R. 2016. *Are Corporate Carbon Management Practices Reducing Corporate Carbon Emissions?* Corp. Soc. Responsib. Environ. Mgmt., 23: 257– 270. doi: 10.1002/csr.1369.

Doda, Baran; La Hoz Theuer, Stephanie; Cames, Martin; Healy, Sean; Schneider, Schneider 2021. *Voluntary offsetting: credits and allowances*. Climate Change 04/2021. Report. German Environment Agency. https://www.umweltbundesamt.de/sites/default/files/medien/5750/publikationen/2021_01_11_cc_04-2020_voluntary_offsetting_credits_and_allowances_1.pdf

Ecosystem Marketplace 2022. *The Art of Integrity. Ecosystem Marketplace's State of the Voluntary Carbon Markets 2022 Q3*. Washington DC: Forests Trends Association. Available by request: www.ecosystemmarketplace.com

Environmental Defence Fund 2018. *Meeting the climate change goals of the Paris Agreement. How to Avoid Double Counting of Emissions Reductions*. Fact Sheet. https://www.edf.org/sites/default/files/documents/double-counting-handbook.pdf (Accessed 19 March 2023).

European Center for Constitutional and Human Rights (ECHR) 2023. *Strategic litigation*. Glossary. https://www.ecchr.eu/en/glossary/strategic-litigation/ (Accessed 19 March 2023).

Fafaliou, Irene; Giaka, Maria; Konstantios, Dimitrios; Polemis, Michael 2022. *Firms' ESG reputational risk and market longevity: A firm-level analysis for the United States*. Journal of Business Research, Volume 149,2022, Pages 161-177, ISSN 0148-2963, https://doi.org/10.1016/j.jbusres.2022.05.010.

Figueres, Christiana 2013. *Preface.* In: Hollo, Erkki J., Kati. Kulovesi, and Michael. Mehling. Climate Change and the Law. Dordrecht; Springer.

Gillenwater, M., Broekhoff, D., Trexler, M. et al 2007. *Policing the voluntary carbon market.* Nature Climate Change 1, 85–87 (2007). https://doi.org/10.1038/climate.2007.58

Grantham Research Institute on Climate Change and Environment 2022. *What are carbon offsets?* Internet Article 7 July 2022. https://www.lse.ac.uk/granthaminstitute/explainers/what-are-carbon-offsets/ (Accessed 10 March 2023).

Grantham Research Institute on Climate Change and Environment 2023. *Climate Change Litigation database*. https://climate-laws.org/litigation_cases

Haba, Herman Fassou; Bredullet, Christophe; Dastane, Omkar 2023. *Green consumer research: Trends and way forward based on bibliometric analysis.* Cleaner and Responsible Consumption. Volume 8, 2023, 100089, ISSN 2666-7843, https://doi.org/10.1016/j.clrc.2022. 100089.

Ilgin, Mehmet Ali & Gupta, Surendra M. 2010. *Environmentally conscious manufacturing and product recovery (ECMPRO): A review of the state of the art.* Journal of Environmental Management. Volume 91, Issue 3, 2010. Pages 563-591, ISSN 0301-4797. https://doi.org/10.1016/j.jenvman.2009.09.037.

Helen 2021. *Helenin hiilineutraaliusohjelma*. https://www.helen.fi/helen-oy/vastuullisuus/vastuullisuus-helenissa/hiilineutraalisuusohjelma (Accessed 2 February 2023).

Hollo, Erkki J. *Johdatus ympäristöoikeuteen*. 3., uud. painos. Helsinki: Talentum, 2009. Print.

Hollo, Erkki J., Kati. Kulovesi, and Michael. Mehling. *Climate Change and the Law*. Dordrecht: Springer, 2013. Print.

Karassin, Orr; Oren Perez. 2018. *Shifting Between Public and Private: The Reconfiguration of Global Environmental Regulation.* Indiana Journal of Global Legal Studies 25 (1): 97–129. doi:10.2979/indjglolegstu.25.1.0097

Karavias, Markos, *'The Concept of Corporate Obligations under International Law'.* Corporate Obligations under International Law. Oxford Monographs in International Law (Oxford, 2013; online edn, Oxford Academic, 23 Jan. 2014), https://doi.org/10.1093/acprof:oso/9780199674381.003.0002.

Knox-Hayes, Janelle 2018., *'Carbon Markets: Resource Governance and Sustainable Valuation',* in Gordon L. Clark and others (eds), The New Oxford Handbook of Economic Geography, Oxford Handbooks (2018; online edn, Oxford Academic, 5 Feb. 2018), https://doi.org/10.1093/oxfordhb/9780198755609.013.31.

Kokko, Kai 2017a. *Ympäristöoikeuden perusteet: yleiset opit, sääntely ja ratkaisun teoria*. Helsinki: Edita Publishing Oy, 2017.

Kokko, Kai 2017b. *Oikeustieteellinen sääntelytutkimus ympäristöoikeuden näkökulmasta*. Lakimies 7–8/2017, 1054–1069.

KONE 2022. *Sustainability report 2021*. https://www.kone.com/en/Images/KONE_Sustainability_Report_2021_tcm17-115554.pdf

Kreibich Nicolas; Hermwille, Lucas 2020. *Caught in between: credibility and feasibility of the voluntary carbon market post-2020*. CLIMATE POLICY2021, VOL. 21, NO. 7, 939–957 https://doi.org/10.1080/14693062.2021.1948384.

Krishnan, R., Hidalgo, S. J., & Fuchs, M. (2023). *The Problem with Carbon Offsets*. Stanford Social Innovation Review, 21(2), 38–44. https://doi.org/10.48558/23S8-DT45.

Kulovesi, Kati 2013. *Exploring the Landscape of Climate Law and Scholarship: Two Emerging Trends.* Article in: Hollo, Erkki J., Kati. Kulovesi, and Michael. Mehling. Climate Change and the Law. Dordrecht: Springer, 2013.

Laininen, Jenni 2020. *Hiilidioksidipäästöjen kompensointi - päästövähennysyksikön varallisuusoikeudellisesta luonteesta.* Liikejuridiikka 2020/2, s. 83-118.

Laininen, Jenni 2022. *Hiilidioksidipäästöjen vapaaehtoinen kompensointi*. In: Silfverberg ja työryhmä. Ilmastometsät. Metsät planeetan pelastajina. Into Kustannus Oy. Helsinki.

Laininen, Jenni; Ahonen, Hanna-Mari; Laine, Anna; Kulovesi Kati 2022. *Selvitys - Vapaaehtoisiin päästökompensaatioihin liittyvät erityiskysymykset*. Ympäristöministeriö. 2022/9.

Lautjärvi, Kari 2022. *Yhtiön johto ja yritysvastuun oikeudellinen ulottuvuus*. Article in: Vanhala, Anne, Michael Ristaniemi, and Meri Dahlqvist. Yritysvastuu & oikeus. Helsinki: Kauppakamari, 2022. Print.

Mehling, Michael 2013. *Implementing Climate Governance: Instrument Choice and Interaction.* Article in: Hollo, Erkki J., Kati. Kulovesi, and Michael. Mehling. Climate Change and the Law. Dordrecht; Springer, 2013.

Mähönen, Jukka 2022. *Vastuullisuusraportointi.* Article in: Vanhala, Anne; Michael Ristaniemi, and Meri Dahlqvist 2022. Yritysvastuu & oikeus. Helsinki: Kauppakamari. Print.

Nordic Council of Ministers 2021. *Voluntary compensation of greenhouse gas emissions. International guidance and initiatives.* https://pub.norden.org/temanord2021-541/temanord2021-541.pdf (Accessed 17 March 2023).

Organisation for Economic Co-operation and Development (OECD) 2015. *Industry Self-Regulation: Role And Use In Supporting Consumer Interests*. OECD.

Organisation for Economic Co-operation and Development (OECD) 2020. *Forum on Tax Administration: Enhancing Reputational Risk Management*, OECD, Paris. www.oecd.org/tax/forum-on-tax-administration/publications-and-

products/coi/enhancing-reputational-risk-management.htm (Accessed 4 March 2023).

Piirto, Linda; Teräväinen, Sami 2022. *Arviomuistio asianmukaisen huolellisuuden velvoitteesta -Kansallisen yritysvastuulain arviointia*. Työ- ja elinkeinoministeriön julkaisuja • Yritykset • 2022:24.

Ristaniemi, Michael 2022. *Mitä on yritysvastuuoikeus*? Article in: Vanhala, Anne; Michael Ristaniemi, and Meri Dahlqvist 2022. Yritysvastuu & oikeus. Helsinki: Kauppakamari. Print.

Rogelj, J., D. Shindell, K. Jiang, S. Fifita, P. Forster, V. Ginzburg, C. Handa, H. Kheshgi, S. Kobayashi, E. Kriegler, L. Mundaca, R. Séférian, and M.V. Vilariño, 2018: *Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development.* In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C 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.)]. In Press.

Salminen, Jaakko; Rajavuori, Mikko; Viljanen, Mika. *Vastuu yritysvastuu-velvoitteesta.* Article in: Vanhala, Anne, Michael Ristaniemi, and Meri Dahlqvist. Yritysvastuu & oikeus. Helsinki: Kauppakamari, 2022. Print.

Sabin Center for Climate Change Law 2023. *Greenpeace France and Others v. TotalEnergies SE and TotalEnergies Electricité et Gaz France*. http://climatecasechart.com/non-us-case/greenpeace-france-and-others-v-totalenergies-se-and-totalenergies-electricite-et-gaz-france/ (Accessed 4 March 2023).

Sabin Center for Climate Change Law 2023. *Milieudefensie et al. v. Royal Dutch Shell plc.* http://climatecasechart.com/non-us-case/milieudefensie-et-al-v-royal-dutch-shell-plc/ (Accessed 18 March 2023).

Sabin Center of Climate Change Law 2023. *Armando Ferrão Carvalho and Others v. The European Parliament and the Council. "The People's Climate Case".* http://climatecasechart.com/non-us-case/armando-ferrao-carvalho-and-others-v-the-european-parliament-and-the-council/ (Accessed 20 March 2023).

Sabin Center for Climate Change Law 2023. *Friends of the Irish Environment v. Ireland.* http://climatecasechart.com/non-us-case/friends-of-the-irish-environment-v-ireland/ (Accessed 20 March 2023).

Sabin Center for Climate Change Law 2023. *Urgenda Foundation v. State of the Netherlands.* http://climatecasechart.com/non-us-case/urgenda-foundation-v-kingdom-of-the-netherlands/ (Accessed 20 March 2023).

Saenger, Ingo 2017. *Disclosure and Auditing of Corporate Social Responsibility Standards: The Impact of Directive 2014/95/EU on the German Companies Act and the German Corporate Governance Code*. Article in: du Plessis, Jean J., and Chee Keong. Low. Corporate Governance Codes for the 21st Century International Perspectives and Critical Analyses. Ed. Jean J. du Plessis and Chee Keong. Low. 1st ed. 2017. Cham: Springer International Publishing, 2017.

Schneider, Lambert; Kollmuss, Anja; Lazarus, Michael 2014. *Addressing the risk of double counting emission reductions under the UNFCCC*. Stockholm Environment Institute, Working Paper 2014-02.

Schneider, Lambert; Duan, Maosheng Duan; Stavins, Robert; Kizzier, Kelley; Broekhoff, Derik; Jotzo, Frank; Winkler, Harald Winkler; Lazarus, Michael Lazarus; Howard, Andrew Howard; Hood, Christina 2019. *Double counting and the Paris Agreement rulebook - Poor emissions accounting could undermine carbon markets*. Climate Policy Vol 366 Issue 6462, p. 180-183.

Silfverberg ja työryhmä 2022. *Ilmastometsät. Metsät planeetan pelastajina*. Into Kustannus Oy. Helsinki.

Simon-Kucher & Partners 2021. *Global Sustainability Study 2021.* Consumers are key players for a sustainable future. https://www.simon-kucher.com/sites/default/files/studies/Simon-Kucher_Global_Sustainability_Study_2021.pdf (Accessed 10 March 2023).

Smits, Jan M. 2017. *What Is Legal Doctrine? On the Aims and Methods of Legal-Dogmatic Research.* Article in Rob van Gestel, Hans-W. Micklitz & Edward L. Rubin (eds.), Rethinking Legal Scholarship: A Transatlantic Dialogue, New York. Cambridge University Press. P. 207–228.

Stockmann 2022. *Corporate Social Responsibility 2021.* https://year2021.stockmanngroup.com/pdf/Stockmann_corporate_social_responsibility_2021.pdf

Stuart L. Gillan, Andrew Koch, Laura T. Starks 2021. *Firms and social responsibility: A review of ESG and CSR research in corporate finance*, Journal of Corporate Finance, Volume 66, 2021. https://doi.org/10.1016/j.jcorpfin.2021.101889

Sullivan, Rory. *Corporate Responses to Climate Change: Achieving Emissions Reductions through Regulation, Self-Regulation and Economic Incentives*. Sheffield, U.K: Greenleaf Pub., 2008. Print.

Tamme, Eve 2021. *Carbon removal with CCS technologies*. Global CCS Institute. Brief. https://www.globalccsinstitute.com/wp-content/uploads/2021/02/Carbon-Removal-with-CCS-Technologies.pdf

The Greenhouse Gas Protocol 2015. *A Corporate Accounting and Reporting Standard – Revised edition.* GHG Protocol, Climate Program, World Resources Institute (WRI).

The World Bank 2022. *State and Trends of Carbon Pricing 2022*. Washington, DC: World Bank. © World Bank https://openknowledge.worldbank.org/handle/10986/37455 (Accessed 27 Jan 2022).

University of Oxford 2020. *The Oxford Principles for Net Zero Aligned Carbon Offsetting*. September 2020. https://www.smithschool.ox.ac.uk/sites/default/files/2022-01/Oxford-Offsetting-Principles-2020.pdf (Accessed 18 March 2023).

University of Oxford 2022. *Oxford Net Zero. What is Net Zero?* https://netzeroclimate.org/what-is-net-zero/ (Accessed 19 March 2023).

Vanhala, Anne 2022. *Miten vastuullisuus näkyy käytännössä yritysjuristin työssä*? Article in: Vanhala, Anne, Michael Ristaniemi, and Meri Dahlqvist. Yritysvastuu & oikeus. Helsinki: Kauppakamari, 2022.

Wemaëre, Matthiu 2021. *Article 6 - Voluntary Cooperation/Ndcs.* Article in: Calster, Geert van, and Leonie Reins. The Paris Agreement on Climate Change: a Commentary. Cheltenham, England: Edward Elgar Publishing, 2021. Print.

Öko-Insititut ev. 2016. *How additional is the Clean Development Mechanism?* Analysis of the application of current tools and proposed alternatives. Study prepared for DG CLIMA Reference:

CLIMA.B.3/SERl2013/0026r.https://climate.ec.europa.eu/system/files/2017-04/clean_dev_mechanism_en.pdf (Accessed 18 March 2023).

OFFICIAL SOURCES

International Organizations

Intergovernmental Panel on Climate Change (IPCC), 2021a. *Climate Change 2021: The Physical Science Basis.* Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2391 pp.

Intergovernmental Panel on Climate Change (IPCC), 2021b. *Annex VII: Glossary* [Matthews, J.B.R., V. Möller, R. van Diemen, J.S. Fuglestvedt, V. Masson-Delmotte, C. Méndez, S. Semenov, A. Reisinger (eds.)]. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi,

Interpol Environmental Crime Programme 2013. *Guide to Carbon Trading Crime.* Interpol. https://www.interpol.int/content/download/5172/file/Guide%20to%20Carbon%20Trading%20Crime.pdf (Accessed 19 March 2023).

Office of the United Nations High Commissioner for Human Rights (OHCHR) 23 May 2022. *OHCHR Feedback on the Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence.* https://www.ohchr.org/sites/default/files/2022-05/eu-csddd-feedback-ohchr.pdf (Accessed 31 March 2023).

United Nations 2011. *Guiding Principles on Business and Human Rights*. https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf (Accessed 17 March 2023).

United Nations Development Programme (UNDP), Climate and Forests Programme 2021. *High-Integrity Voluntary Carbon Markets (VCM): Emerging Issues in Forest Countries.* https://www.undp.org/sites/g/files/zskgke326/files/2021-11/UNDP-High-Integrity-Voluntary-Carbon-Markets-Emerging-Issues-in-Forest-Countries-V2.pdf

United Nations Framework Convention on Climate Change (UNFCCC) 25 October 2021. *Rise in Greenhouse Gas Concentrations Jeopardizes Paris Agreement Temperature Targets.* Press Release. https://unfccc.int/news/rise-in-greenhouse-gas-concentrations-jeopardizes-paris-agreement-temperature-targets (Accessed 10 January 2023).

United Nations Framework Convention on Climate Change (UNFCCC) 2023. *REDD+ Platform. Reducing Emissions from Deforestation and forest Degradation* https://redd.unfccc.int/ (Accessed 19 March 2023).

United Nations Framework Convention on Climate Change (UNFCCC) 2023. *What are Market and Non-Market Mechanisms?* https://unfccc.int/topics/what-are-market-and-non-market-mechanisms (Accessed 19 March 2023).

European Union

European Commission 2012. *EU Ecolabel User handbook for the application for copying and graphic paper 2012.* https://ec.europa.eu/environment/ecolabel/documents/usermanual_paper.pdf (Accessed 19 March 2023).

European Commission 2015. *EU ETS Handbook.* https://climate.ec.europa.eu/system/files/2017-03/ets_handbook_en.pdf (Accessed 19 March 2023).

European Commission 2017. *Communication from the Commission — Guidelines on non-financial reporting (methodology for reporting non-financial information)*. C/2017/4234. p. 1–20. OJ C 215, 5.7.2017, p. 1–20

European Commission 2019. *Communication From the Commission. Guidelines on non-financial reporting: Supplement on reporting climate-related information* (2019/C 209/01).

European Commission 28 January 2021. *Press Release. Screening of websites for 'greenwashing': half of green claims lack evidence.*

https://ec.europa.eu/commission/presscorner/detail/en/ip_21_269 (Accessed 27 February 2023).

European Commission 2022. *Corporate Sustainability Reporting*. https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en (Accessed 15 December 2022).

European Commission 2022. *EU Eco Label.* https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home_en (Accessed 3 December 2022).

European Commission. *EU Emissions Trading System (EU ETS).* https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en#:~:text=The%20EU%20Emissions%20Trading%20System%3A%201%20operates%20in,around%2040%25%20of%20the%20EU%27s%20greenhouse%20gas%20emissions. (Accessed 10 December 2022).

European Commission 2022. *Public Initiatives. Certification of carbon removals – EU rules*. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13172-Certification-of-carbon-removals-EU-rules_en (Accessed 3 December 2022).

European Commission 2022. *Sustainable carbon cycles. Carbon Removal Certification.* https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/carbon-removal-certification_en (Accessed 19 December 2022).

European Commission 7 February 2022. *Call for evidence for an impact assessment - Ares(2022)869812*. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13172-Certification-of-carbon-removals-EU-rules_en (Accessed 16 March 2023).

European Commission 23 February 2022. *Fact Sheet. Just and sustainable economy: Companies to respect human rights and environment in global value chains.* https://ec.europa.eu/commission/presscorner/detail/en/fs_22_1147

European Commission 23 February 2022. *Questions and Answers: Proposal for a Directive on corporate sustainability due diligence.* https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_1146

European Commission 30 March 2022. *Circular Economy: Commission proposes new consumer rights and a ban on greenwashing.*

https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2098 (Accessed 27 February 2023).

European Commission 19 January 2023. *30 years of EU single market: benefits and challenges.* https://www.europarl.europa.eu/news/en/headlines/economy/20230112STO66302/30-years-of-eu-single-market-benefits-and-challenges-infographics (Accessed 14 March 2023).

European Commission 2023. *A European Green Deal.* https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en (4 January 2023).

European Commission 2023. *Initiative on substantiating green claims*. https://ec.europa.eu/environment/eussd/smgp/initiative_on_green_claims.htm (Accessed 26 February 2023).

European Commission 2023. *Environmental Integration.* https://ec.europa.eu/environment/integration/integration.htm (Accessed 14 March 2023).

European Commission 2023. *Just Transition Mechanism: making sure no one is left behind.* https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en#who-will-benefit (Accessed 16 March 2023).

European Commission 2023. *Corporate Sustainability Due Diligence. Fostering sustainability in corporate governance and management systems*. https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en (Accessed 19 March 2023).

European Commission 2023. *Follow the steps of procedure 2022/0051/COD.* https://eur-lex.europa.eu/legal-content/EN/HIS/?uri=CELEX:52022PC0071 (Accessed 18 March 2023).

European Council 28 November 2022. *Press Release. Council gives final green light to corporate sustainability reporting directive.* https://www.consilium.europa.eu/en/press/press-releases/2022/11/28/council-gives-final-green-light-to-corporate-sustainability-reporting-directive/ (Accessed 19 March 2023).

European Council 2 December 2022. *Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 - General Approach = Statement by Estonia.*

European Parliament 20 January 2023. *Legislative Train. Substantiating green claims In "A European Green Deal".* https://www.europarl.europa.eu/legislative-train/theme-a-european-green-deal/file-substantiating-green-claims (Accessed 26 February 2023).

Other

Consumer Ombudsman 17 November 2021. *Miten niin pienempi ilmastovaikutus? Kuluttaja-asiamies peräänkuuluttaa tarkkuutta markkinoinnin ympäristöväittämiin.* https://www.kkv.fi/ajankohtaista/tiedotteet/miten-niin-pienempi-ilmastovaikutus-kuluttaja-asiamies-peraankuuluttaa-tarkkuutta-markkinoinnin-ymparistovaittamiin/ (Accessed 26 February 2023).

Finnish Environment Institute (SYKE) 2017. *Consumption choices to decrease personal carbon footprints of Finns.* Reports of the Finnish Environment Institute 30 | 2017. Sitra.

Finnish Innovation Fund (Sitra) 2015. *Benefits of Carbon Neutrality in a Rapidly Changing Business Environment.* Sitra Studies 102. Frost & Sullivan November 2015. https://www.sitra.fi/app/uploads/2017/02/Selvityksia102.pdf (Accessed 19 March 2023).

Ministry of Economic Affairs and Employment 18 March 2022. Press Release. *Kansallinen yritysvastuulaki on mahdollinen, mutta olisiko EU-sääntely vaikuttavampaa?* https://valtioneuvosto.fi/-/1410877/kansallinen-yritysvastuulaki-on-mahdollinen-mutta-olisiko-eu-saantely-vaikuttavampaa-

Ministry of Economic Affairs and Employment 24 November 2022. Press Release. *Päästökauppalainsäädännön uudistaminen käynnistyy – valmistelun ohjausryhmä ja alatyöryhmät asetettu*. https://tem.fi/-/paastokauppalainsaadannon-uudistaminen-kaynnistyy-valmistelun-ohjausryhma-ja-alatyoryhmat-asetettu

Ministry of Economic Affairs and Employment 2022. *Päästökauppa.* https://tem.fi/paastokauppa (Accessed 19 March 2023).

Talousvaliokunta 2016. *Valiokunnan mietintö TaVM 33/2016 vp ─ HE 208/2016 vp, p. 2.*

The Advertising Standards Authority (ASA) 2022. *Environmental Claims in Advertising, Qualitative Research Report.* https://www.asa.org.uk/static/6830187f-cc56-4433-b53a4ab0fa8770fc/CCE-Consumer-Understanding-Research-2022Final-090922.pdf (Accessed 26 February 2023).

Valtioneuvoston kanslia 2008. *Tuotteiden ilmastovaikutuksista kertovat merkit. Selvitys Vanhasen II hallituksen tulevaisuusselontekoa varten.* Valtioneuvoston kanslian julkaisusarja | 11/2008.

LAWS AND REGULATIONS

International Law

United Nations 2015. The Paris Agreement.

European Union

EUROPEAN UNION 2003. Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

NOTICES FROM EUROPEAN UNION INSTITUTIONS, BODIES, OFFICES AND AGENCIES. COMMISSION NOTICE. Guidance on the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market (Text with EEA relevance) (2021/C 526/01).

EUROPEAN COMMISSION 2011.COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A renewed EU strategy 2011-14 for Corporate Social Responsibility. COM(2011) 681 final. Brussels, 25.10.2011.

DIRECTIVE 2013/34/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 June 2013 on the annual financial statements,

consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC

EUROPEAN COMMISSION. Brussels, 21.4.2021. SWD(2021) 150 final. COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Accompanying the document Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. {COM(2021) 189 final} - {SEC(2021) 164 final} - {SWD(2021) 151 final}

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)

EUROPEAN COMMISSION Brussels, 23.2.2022. COM(2022) 71 final. 2022/0051(COD). Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 (Text with EEA relevance).

EUROPEAN COMMISSION Brussels, 30.11.2022. COM(2022) 672 final. 2022/0394 (COD) Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals {SEC(2022) 423 final} - {SWD(2022) 377 final} - {SWD(2022) 378 final}

EUROPEAN COMMISSION Brussels, 30.11.2022 SWD(2022) 378 final COMMISSION STAFF WORKING DOCUMENT EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT Accompanying the document Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals {COM(2022) 672 final} - {SEC(2022) 423 final} - {SWD(2022) 377 final.

EUROPEAN COMMISSION. Brussels, 30.3.2022COM(2022) 143 final2022/0092 (COD) Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information.

COMMISSION DELEGATED REGULATION (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the

Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives (Text with EEA relevance).

National Laws of the Member States

Finland

Accounting Act (1336/1997)

Act on Aviation Emissions Trading (34/2010)

Climate Act (234/2022)

Consumer Protection Act (38/1978)

Ecodesign Act (1005/2008)

Emissions Trading Act (311/2011)

Germany

Gesetz gegen den unlauteren Wettbewerb (UWG)

Norway

Lov om kontroll med markedsføring og avtalevilkår mv. (markedsføringsloven)

The Netherlands

Burgerlijk Wetboek (1992)

Grondwet voor het Koninkrijk der Nederlanden (2018)

CASE LAW

France

Greenpeace France and Others v. TotalEnergies SE and TotalEnergies Electricité et Gaz France

Finland

Market Court 2009. MAO:655/09.

Consumer Ombudsman 30 September 2021. KKV/77/14.08.01.05/2021.

Consumer Ombudsman 29 July 2022. KKV/78/14.08.01.05/2021.

Germany

Regional Court of Mönchengladbach 25.2.2022. 2. Kammer für Handelssachen. 8 0 17/21. ECLI:DE:LGMG:2022:0225.8.0.17.21.00. para 41.

Regional Court of Schleswig 2022. Urteil vom 30.06.2022 - 6 U 46/21.

Ireland

The High Court 2019. Friends Of The Irish Environment Clg vs. The Government Of Ireland, Ireland And The Attorney General. [2019] IEHC 747.

Norway

Norwegian Consumer Agency 14 June 2022. Case nr: 22/5262-1.

The European Court of Justice

European Court of Justice 1996. *Gut Springenheide GmbH, Rudolf Tuskyand vs. Oberkreisdirektor des Kreises Steinfurt Amt für Lebensmittelüberwachung*, Case C-210/96. ECLI:EU:C:1998:369.

Judgment of the Court (Sixth Chamber) of 25 March 2021. *Armando Carvalho and Others v European Parliament and Council of the European Union*. Case C-565/19 P.

The Netherlands

District Court of Amsterdam. *STICHTING TER BEVORDERING VAN DE FOSSIELVRIJ-BEWEGING and others* vs. *KONINKLIJKE LUCHTVAART MAATSCHAPPIJ N.V.*, C/13/719848 / HA ZA 22-524.

District Court of The Hague 2021. *Milieudefensie et al. v. Royal Dutch Shell plc*. ECLI:NL:RBDHA:2021:5339. C/09/571932 / HA ZA 19-379 (English version).

Supreme Court. Urgenda Foundation v. State of the NetherlandsECLI:NL:HR:2019:2006, Hoge Raad, 19/00135

The United Kingdom

The Supreme Court 10 April 2019. Vedanta Resources PLC and another (Appellants) v Lungowe and others (Respondents). [2019] UKSC 20, UKSC 2017/0185.

The United States of America

THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK. CHELSEA COMMODORE individually and on behalf of all others similarly

situated, Plaintiff, v. H&M HENNES & MAURITZ LP, Defendant. Case 7:22-cv-06247.

OTHER

Bloomberg 6 July 2022. *KLM Accused of Greenwashing in Suit on 'Fly Responsibly' Ads*. News Article. https://www.bloomberg.com/news/articles/2022-07-06/klm-accused-of-greenwashing-in-suit-over-fly-responsibly-ads?leadSource=uverify%20wall (Accessed 10 March 2023).

Buschfeld, Jan Henning; Hillebrand, Sarah; Spanken-Monz, Stefanie 2022. *Greenwashing claims on the rise in Germany: adverts for climate-neutral products and services put to the test*. Freshfields Bruckhaus Deringer. Internet Article, 10 November 2022. https://sustainability.freshfields.com/post/102i15k/greenwashing-claims-on-the-rise-in-germany-adverts-for-climate-neutral-products (Accessed 27 February 2023).

Cahill 19 January 2022. *Credibility Gap for Carbon-Neutral LNG*. Center for Strategic and International Studies (CSIS). Internet Article. https://www.csis.org/analysis/credibility-gap-carbon-neutral-lng (Accessed 4 March 2023).

Carbon Market Watch 13 February 2023. *Not zero: New report exposes greenwashing in climate plans of top global corporations.* Press Release. https://carbonmarketwatch.org/2023/02/13/not-zero-new-report-exposes-greenwashing-in-climate-plans-of-top-global-corporations/ (accessed 6 March 2023).

Clifford Chance 2022. Business & Human Rights Insights. *Italy's first greenwashing case between corporates.* Internet Article, 13 January 2023. https://www.cliffordchance.com/insights/resources/blogs/business-and-human-rights-insights/2022/01/italys-first-greenwashing-case-between-corporates.html (Accessed 27 February 2023).

Childs, Mike & de Zylva, Paul 22 October 2021. *A dangerous distraction – the offsetting con.* Friends of the Earth. https://policy.friendsoftheearth.uk/insight/dangerous-distraction-offsetting-con (Accessed 19 March 2023).

EURACTIV 23 January 2023. *Draft EU 'green claims' law overly focused on CO2 impact, critics say.* News Article.

https://www.euractiv.com/section/energy-environment/news/draft-eu-green-claims-law-overly-focused-on-co2-impact-critics-say/

European Round Table for Industry (ERT) 2023. *Case study: KONE.* https://industry4climate.eu/casestudy/kone-2/ (Accessed 15 March 2023).

Greenberg, Chris 10 November 2021. *Carbon offsets are a scam.* https://www.greenpeace.org/international/story/50689/carbon-offsets-net-zero-greenwashing-scam/ (Accessed 19 March 2023).

Greenpeace 3 November 2022. *Greenpeace finds TotalEnergies emissions almost 4 times higher than reported.* Press Release. https://www.greenpeace.org/international/press-release/56491/greenpeace-finds-totalenergies-emissions-almost-4-times-higher-than-reported/ (Accessed 4 March 2023).

Hannes Snellman 25 November 2022. *ESG Litigation – What Are We Seeing Under the E and Is It the Same as Climate Change Litigation?* Blog post. https://www.hannessnellman.com/news-views/blog/esg-litigation-what-are-we-seeing-under-the-e-and-is-it-the-same-as-climate-change-litigation/ (Accessed 4 March 2023).

Inamdar, Amar 7 November 2022. *Carbon credits and the energy transition: An Investor Perspective.* UNFCCC Climate Champions, Race to Resilience, Race to the Zero. Internet Article. https://climatechampions.unfccc.int/carbon-credits-and-the-energy-transition-an-investor-perspective/ (Accessed 19 March 2023).

Just Style 17 June 2022. *H&M Group, Norrøna under fire in Norway over environmental claims.* https://www.just-style.com/news/hm-group-norrona-under-fire-in-norway-over-environmental-claims/ (Accessed 19 March 2023).

Just Style 2 November 2022. *EU PEF tool's regulations in question now after Higg's MSI.* Internet article. https://www.just-style.com/news/eu-pef-tools-regulations-in-question-now-after-higgs-msi/ (Accessed 19 March 2023).

Just Style 11 November 2022. *SAC responds to consumer watchdog 'guidance' around Higg MSI.* https://www.just-style.com/news/sac-responds-to-consumer-watchdog-guidance-around-higg-msi/ (Accessed 19 March 2023).

Law Society Gazette Ireland 26 January 2022. *Eco 'virtue signals' breach competition law in Italy.* Internet article. https://www.lawsociety.ie/gazette/top-

stories/2022/january/false-eco-virtue-signals-breach-competition-law-in-italy (Accessed 2 March 2023).

KPMG 2022. *ESG: Addressing greenwashing in financial services. What is it, why greenwashing matters, and how do you avoid it?* https://kpmg.com/dp/en/home/insights/2022/05/esg-addressing-greenwashing-in-financial-services.html (Accessed 4 March 2023).

Nesbit, Tanya 2022. *What is Greenwashing?* Thompson Hine, Legal Updates. November 2022. Internet article. https://www.thompsonhine.com/insights/rise-in-greenwashing-cases-what-companies-need-to-know/ (Accessed 28 February 2023).

Reuters 26 April 2022. *Lundin sells its first 'carbon neutral' oil as climate activism grows.* News Article. https://www.reuters.com/business/sustainable-business/lundin-sells-its-first-carbon-neutral-oil-climate-activism-grows-2021-04-26/ (Accessed 26 February 2023).

Reuters 22 July 2022. *Dutch airline KLM sued over 'greenwashing' ads*. News Article. https://www.reuters.com/business/aerospace-defense/dutch-airline-klm-sued-over-greenwashing-ads-2022-07-06/ (Accessed 4 March 2023).

The Guardian 23 January 2023. *Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows*. News Article. https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe (Accessed 4 March 2023).

Thomson Reuters 1 December 2022. *Greenwashing: scrutiny and sustainability.* Internet Article. https://uk.practicallaw.thomsonreuters.com/w-037-7042?transitionType=Default&contextData=(sc.Default)&firstPage=true (Accessed 4 March 2023).

Vavasuli, Silvia & Vandana, Sebastian 10 June 2021. *Voluntary carbon markets: how they work, how they're priced and who's involved.* S&P Global. Internet Article. https://www.spglobal.com/commodityinsights/en/market-insights/blogs/energy-transition/061021-voluntary-carbon-markets-pricing-participants-trading-corsia-credits (Accessed 18 March 2023).

Verra 31 January 2023. *Technical Review of West et al. 2020 and 2023, Guizar-Coutiño 2022, and Coverage in Britain's Guardian.* Internet Article. https://verra.org/technical-review-of-west-et-al-2020-and-2023-guizar-coutino-2022-and-coverage-in-britains-guardian/ (Accessed 17 March 2023).