



A study of climate labels' promise to redefine the climate impact of the restaurant industry

A case study of Klimato

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A study of climate labels' promise to redefine the climate impact of the restaurant industry. A case study of Klimato

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Foreword

As I am involved with the startup Klimato while writing this study, some ethical questions and conflicts of interests must be addressed. I currently work part time at Klimato as a marketing and social media manager intern while finishing my masters' degree. This study was not designed, requested, nor instigated by Klimato, but came from my own interest in the communication situation at hand, which is to understand how the climate label, as a communication tool, influences the meaning of what a climate responsible restaurant is. The ideas, thoughts, observations, analysis, and conclusions portrayed in this study are my own. I am under no obligation to portray the company in any way which is not driven by the data collected for this study.

Rather, my relationship with Klimato gives me a unique depth of knowledge about their label and enables me to have easier contacts with the restaurants I studied. This enabled me to conduct my interviews and observations on grounds of trust as the participants already have a relationship with Klimato, and in a set up that put the participants at ease. Also, my first-hand empirical knowledge acquired by working at Klimato is a useful gauge to compare participants' observations and statements with my own experience. Thus, enabling me to be aware of where to demand clarifications or dig deeper during the interviews, to collect accurate, reliable, and relevant data.

My interviewees were then very suitable to talk about their experience, but can have a predisposition to give positive feedback about Klimato since they chose the tool and are still working with Klimato. Their observations and thoughts only tell parts of the discussion and implementation of climate labels, limiting the possibilities of studying other things, such as what hinders restaurants to start using the labels. Also, since I do my internship at Klimato it may make it more difficult for the participants to express critique to me. Though I have made it clear that it's alright to lift critique, it is in reality uncomfortable.

Abstract

Purpose Collective efforts are needed to reach these ambitious goals to change the status quo to combat climate change. As the food industry accounts for more than one-third of global anthropogenic greenhouse gas emissions, it is one of the single largest contributors to climate change. Strategies for reductions of CO₂e (equivalent) emissions must be put in place to regulate the impact the food systems have on the climate. It is namely in restaurants where environmental communication by use of climate labels sharing information on carbon footprints can help reduce GHGs emissions on a systemic scale. *Aim* The aim is to gain insights and study how the label, as a communication tool, influences the meaning of what is a climate-friendly restaurant and its capacity to bridge the gap between knowledge, awareness, and action. This aim will be addressed with the following research questions; What are the motivations for restaurants' employees to adopt climate-friendly behaviour with the Klimato label? How does the use of the Klimato label influence the decision for restaurants to track their carbon footprint overtime, communicate the carbon footprint of dishes, and adapt menus to be more climate friendly? *Method* This study is based on a case study of the Swedish startup Klimato and their climate labels. The data was collected with eight semi-structured interviews made with video communication with three restaurant chains and four Klimato employees. *Analysis* The data collected via the interviews were examined using an inductive thematic analysis to identify key themes. The interpretative approach used was the transcending transmission approach to communication that helps gain insights into both instrumental and constitutive communication dynamics. The theoretical approach for analysis chosen for this study is 'symbolic interactionism' as it can help untangle those constitutive aspects of environmental communication surrounding climate labels to analyse the process of meaning-making through its use, co-creation and interpretation. *Results and discussion* The analysis brought forward four main themes; First, the role of communication and interaction between Klimato and the restaurants in defining and shaping climate-friendly restaurants. Secondly, the interactions between the scientific data accessible in Klimato's tool and the restaurants. Thirdly, the diverse implications of sustainability marketing for motivating climate actions and what they look like. And finally, climate actions and how they are being apprehended and implemented by the restaurants. The promise of Klimato's climate labels was discussed by both elaborating on sociocultural dynamics, sustainability marketing and activism forces and impulses influencing the motivations for restaurants to use Klimato's tool. I then discussed the capacity to transcend information into action through collaboration, and inclusiveness to overcome fear, greenwashing, and detachment. *Conclusions* This thesis found that restaurants have both an interest to implement climate labels in their business for the survival of their companies, as well as an intrinsic desire to be a company that take actions for the planet because of the restaurants' employees' convictions. However, restaurants find themselves in a tricky situation where they can be damned if they take 'wrong' actions that can be considered greenwashing, and damned if they do nothing. It is in that context that Klimato gains value as a tool that enables restaurants to legitimise their actions, build them and communicate them in a way that makes restaurants resilient and evolves as science and regulations do.

Keywords: carbon footprint, climate labelling, restaurant, climate action, environmental communication

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Abbreviations

CF	Carbon Footprint
CO ₂ e	Carbon dioxide equivalent
EU	European Union
IPCC	Intergovernmental Panel on Climate Change
LCA	Life Cycle Assessment
UN	United Nations

1. Introduction

1.1 Problem Formulation

Since the Paris agreements in 2015, the global agreement reached between the signing parties is to commit to limiting global warming to well below 2 °C compared to pre-industrial levels (UNFCCC, 2016). Collective efforts are needed to reach these ambitious goals to change the status quo and combat climate change. As the food industry accounts for more than one-third of global anthropogenic greenhouse gas emissions, it is one of the single largest contributors to climate change (FAO, 2021). For this reason, strategies for reductions of CO₂e (equivalent) emissions must be put in place to regulate the impact the food systems have on the climate if we want to achieve together the goal to remain at a level of global warming below 1.5°C above pre-industrial climate (IPCC, 2022).

The EU has come up with a Farm to Fork strategy to address this issue. The EU aims to introduce a labelling scheme to harmonise voluntary food labels and ensure that the climate impact of food is addressed and communicated within the food industry and to consumers in a manner that is recognised and comparable across the food sector (EU, 2020). Environmental labels provide neutral information about a product or a service in terms of its impact, for instance the carbon footprint, water footprint, recyclability, or provenance (ISO 14040, 2006). Environmental and more specifically climate or carbon labels (used in this study interchangeably) provide the tool to make informed choices, especially where the need to reduce carbon emissions has become a global concern (IPCC, 2022; Tan et al., 2014). Climate labels contain information about the amount of Greenhouse Gases (GHGs) emitted during the production, processing, packaging and transport (ISO 14040, 2006). The EU's efforts to introduce a climate labelling scheme aligns with findings in communication research studies where it has become increasingly apparent that environmental communication by use of environmental labels has the potential to redefine the climate impact of the food industry (Babakhani et al., 2020; Kostova, 2019; Pulkkinen et al., 2016). In this study, environmental communication is understood as language, visual image, protests, exchanges, actions, reaction, or even scientific report that do or say something about our ecological relationship with the world (Pezzullo and Cox, 2018, p.12-13). Indeed, environmental knowledge helps food companies address the GHGs emissions amassed throughout

their supply chain, which help drive systemic climate consciousness and impact (ibid). In light of the current gravitating interest for climate actions and solutions in the food industry coming from academia, corporations and governments, we observe collective interest and efforts to collect and communicate environmental data and knowledge to address the impact of food on the planet (EU, 2020; Kostova, 2019; Rööös et al., 2014).

This search for climate knowledge and actions can now be transposed to the hospitality industry as the development of scientific environmental data and knowledge communicated to food service. This communication is thought to enable actors such as restaurants, caterers, and chefs to make more informed decisions to implement climate solutions to lower the environmental impact of their activity (Sherry and Tivona, 2022; Kaljonen et al., 2020). For restaurants, this can start by reporting their GHG emissions to gain a better idea of their overall climate impact, to set climate goals, and identify the GHG emissions hotspots to start reducing (Sherry and Tivona, 2022). Scope 3 GHG emissions especially tend to have the largest climate burden for hospitality businesses, as they include all indirect emissions that occur throughout a company's value chain, both upstream and downstream (Sherry and Tivona, 2022; Huang et al., 2010). For example, the Scope 3 GHG emissions in food service are commonly associated with the agricultural activities necessary to produce the raw material prepared in restaurants, the emissions from cooking the food, and the transport associated with the journey taken by the food between the farm and the fork. When those emissions and their impact are communicated using a commonly recognised and understandable labelling system, such communication is a useful tool to connect the great diversity of actors within the food service industry (Sherry and Tivona, 2022; Kostova, 2019).

All in all, the food service industry is developing interactions between the restaurants, suppliers, and consumers, to become more informed about the impact of their activities on the climate (Babakhani et al., 2020; Kaljonen et al., 2020; Pullkinen et al., 2016). Interactions are understood here as any process where the action of one individual, a company, or a tool influences the action of another. Those efforts are being assisted and enabled by environmental communication and the use of climate labels to help provide a common language to build interactions that feed the debate and drive actions to adapt what we cook, how and why to fight the climate crisis (ibid).

1.2 The Communication Problem

Efforts to amass environmental data and knowledge of the impact of food in the food service industry has become essential to address the climate impact of food. Researchers have been diving into how to best determine the environmental impact of food which is currently largely estimated and calculated using life cycle assessment (LCA) methodology. As defined by Rööös et al. (2014), "LCA is a standardized method for quantifying the environmental impact caused during production, use, and waste management of a product or service" (p.88). Studies

from Sherry and Tivona (2022) and Rööös et al. (2014) have been diving into how LCA of the food served in restaurants can inform the purchasing decisions, definition, or creation of menus. The authors highlighted that for the global warming potential of the food served to be visualised and addressed, a necessary first step is to use Carbon Footprint (CF) data, to help build awareness and as a decision support tool for food service (ibid.). Systemic and harmonised communication is increasingly required of corporations, considering the global demand for more knowledge, information, debates and actions to address the climate crisis (Godeman, 2013). As a result, the food industry has been largely adopting carbon labels as a tool to be more transparent and accountable to address climate impacts, as these tangible efforts are needed throughout the entirety of the food system from the food producers, distributors, processors, marketers, traders, consumers, to having to manage food waste.

1.2.1 Motivations for climate action

The reasons for this widened climate interest and use of LCA in the food service sector are multiple and the favoured way to communicate the scientific data is through the creation and use of various environmental labels, especially CF labels (Brunner et al., 2018; Tan et al., 2014). The decision for food corporations to share the CF of their activity through labels is wide-ranging and can be motivated by various factors that change overtime. The motivations highlighted in previous studies range from the necessity to be proactive and future-proof businesses by adopting new net zero strategies to reach the goals set in the 2030 agenda before it becomes mandatory, the willingness to set up a “green” marketing strategy, also known as “sustainability marketing” to attract consumers, to educate the consumers, or for activism (Lemken et al., 2021; Koch, 2020; Dupuis and Schweizer, 2019; Galli et al., 2018; Tan et al., 2014). Indeed, sustainability marketing is commonly used to promote sustainable products and services, encourage sustainable lifestyles and behaviour, foster critical reflection and thinking (Kemper and Ballantine, 2019). For instance, Koch (2020) is branding Oatly as an “activist brand”, although a successful marketing strategy to differentiate Oatly in the market, it is a true and meaningful opportunity for brands to educate and mobilise debates around the climate crisis and fostering actions to tackle it (ibid.). These motivations seem to be largely external pressures forcing businesses to adapt and be accountable for their climate impact, but not only. My study also examines the motivations to use labels to communicate environmental information, but in a slightly complementary way as it is based on a case study and not hypothetical scenarios and is looking at the restaurant management motivation for implementing them rather than the consumer asking for or reaction to them.

1.2.2 Greenwashing issues

However, it is important to note that although environment labels are helping define ‘climate-friendliness’ for consumers and to better business practices, they are also

abused and have been known to lead to deception (Dupuis and Schweizer, 2019; Horne, 2009). Indeed, environmental labels provide communication and marketing angles which in some cases can divert into greenwashing or painting environmental “green” actions as more virtuous than they really are (Sharma and Kushwaha, 2019). Although not usually intentional, greenwashing usually happens when a company uses deceptive language or means of communication to persuade people that a company is doing more for the environment than they are to lure consumers in (Dupuis and Schweizer, 2019; Torelli et al., 2019). But generally, the use of environmental labels is a strategy and practice implemented to adapt, promote values, be coherent with today’s climate challenges, and be active or proactive to help shape and contribute to defining climate-friendliness (Delmas et al., 2019).

1.2.3 The gap between knowledge, awareness, and climate action

The divide between knowledge, awareness and climate action is a tough one to bridge. Indeed, it has become increasingly apparent that science-based facts about the climate are becomingly cemented as common knowledge and that the recognition of the need to address climate change has grown in society as a commonly agreed and recognised perception of what the issue is and why it is problematic. However, actual actions to tackle those commonly recognised issues are too often lacking, creating a dichotomy between awareness and action commonly referred to as the awareness-action gap or the attitude-behaviour gap (Ágústsdóttir, 2021; Zralek, 2017; Terlau and Hirsch, 2015). It means that although the connection between the cause and effect of the climate crisis are common knowledge and perceived as related, the actions taken to tackle this issue are non-existent or non-adequate in the face of the issue at hand (ibid.). This gap is problematic because it is the symptom showing our current inability to take action to tackle the climate crisis in a manner that is necessary if we are to reach the climate goals set by the UN.

Studies from Sherry and Tivona’s (2022), Babakhani et al. (2020) and Pulkkinen et al. (2015) explored reactions of consumers when faced with carbon labels (calculated with LCAs) on menus in restaurants. The studies observed the debates the labels sparked and the changes in food choices according to the information shared by the labels (IPCC, 2022). Studies highlighted that customers tend to react positively to the labels but that this initial short-term reaction needs to be supported by longer term campaigns to see carbon labelling drive future decisions making (Sherry and Tivona, 2022; Babakhani et al., 2020; Darkow et al., 2015). Darkow et al. (2015) summarised those concerns eloquently as, “although management is capable of observing the emerging domain of sustainability, it is uncertain whether executives are actually able to perceive and translate these observations on sustainability into strategy” (p.173). Sherry and Tivona’s (2022) further built on this idea and added that, “What is needed is clear guidance backed by data on what choices are truly more environmentally friendly” (p.2).

To build on the gap between knowledge and action identified above, studies from Camilleri et al. (2018) and Feucht and Zander (2018) examined the reasons for consumers' preferences for carbon labels. They highlighted that consumers tend to lack the knowledge, awareness, and tools to make the best possible climate-friendly decisions regarding their behaviour and consumption. The lack of labels and environmental information communicated in effect hinders the capacity to make informed decisions and take actions. Additionally, Feucht and Zander (2018) pointed out that, “Consumers expect policy makers and retailers to set up appropriate structures to support climate-friendly consumption. Given this, the contribution of a carbon label to a more climate-friendly consumption might be limited without the structural support of policy makers and retailers” (p.740). Indeed, labels are not always enough for action.

Studies find that consumer’s awareness of the connection between food choices and climate impact is lacking, making it necessary for climate labels to be part of a bigger social debates and dialogue to further raise awareness (Hartmann and Siegrist 2017; Leach et al. 2016; Peschel et al. 2016). Indeed, dialogue is a communication tool for interpersonal communication that allows people to understand different viewpoints and manage differences while promoting expression (Pezzulo and Cox, 2018). In other words, the responsibility to make environmentally friendly food decisions cannot solely lay on the consumers. Labels, but also the communication around them are necessary tools to bridge the divide between environmental knowledge, awareness, and climate action, and having interactions (IPCC, 2022). Actions in society are therefore crucial to try to bridge that divide and lead to deeply rooted and supported changes within the food industry, through for instance making climate labels visible, implementing regulations to make transparency mandatory or holding webinars, conferences and conducting scientific studies (ibid.).

As mentioned above, a key actor in the food industry is restaurants as they are at the crossroad between suppliers and consumers and feed vast amounts of people every day. Restaurants have a singular capacity to create connections between stakeholders in the food industry and foster productive communication to adapt to an industry in need for a sustainability transition (Pulkkinen et al., 2016; Wang, 2012). They are a consequential node for connecting and facilitating the interactions between the relevant actors and catalyse and encourage collective action. However, as shown above past studies have mainly focused on amassing environmental data for food products and some food services, the consumers’ interest and reactions to climate labels, the abuses of sustainability marketing for food products, and the future environmental policies to tackle the crisis in the food service sector from the top-down. Past studies have not reviewed how that climate knowledge relates to action in practice.

This raises questions about the role and potential of selected CF labels as well as the communication around the labels to help understand, and shape systematic and lasting climate solutions. What potential do labels have to close the bridge between environmental knowledge, awareness and action in settings where large quantities of food are served every day; restaurants. Additionally, since climate labelling the

food served at restaurants is a recent development, not many companies are providing the services to facilitate the climate communication of the CF of food in restaurants. Indeed, many past studies have been discussing CF labelling generically and have not studied a specific case of a company implementing their own labelling scheme and providing climate labelling for restaurants, studying a specific case will be the way to address the lack of link between awareness and action by enabling me to go into detail and examine real and concrete dynamics.

1.3 Theorising

As defined by Swedberg (2012, p.17) when describing “the basic rules of theorizing in social science”, when we reflect on a problem, we can only start theorising by putting the thinking on the side and focus on observing. So, we can then try to make sense of what we observed (ibid.). I have started reflecting on the problem studied in this thesis because I have come to ask myself and have a critical view over my own food consumption behaviour. Although I am a student who spends most of her time thinking about sustainable development and regenerative food production, I am often surprised at my food choices and the fact that they do not always reflect my values and intentions.

Since I joined Klimato in October 2021, my views on this issue were further expended as I switched my focus away from my own responsibility, and towards a more comprehensive realisation that the gap between knowledge, awareness and action in the food system is a systemic issue and that the potential to solve it cannot rely only on individual behavioural change. Indeed, as further emphasised in the most recent IPCC report (2022), infrastructures, policies and technology have a significant and indispensable role to play to not only make processes and services more climate friendly but encourage sustainable lifestyles and behaviour as well.

Based on those observations, I chose to research restaurants’ motivation to adopt climate friendly behaviour and how this process can be facilitated by working with a technological solution like Klimato’s tool. I believe that those research questions can be the entry point enabling me to look at wider socio-cultural dynamics shaping the context within which lasting climate friendly food management can be both constituted, encouraged to grow and spread globally.

1.4 Research Aim and Questions

This study investigates Klimato’s climate labels to explore environmental communication, as well as the communication around the labels. I aim to gain insights and study how the label, as a communication tool, influences the meaning of what is a climate-friendly restaurant and its capacity to bridge the gap between

knowledge, awareness, and action. This aim will be addressed with the following research questions:

1. What are the motivations for restaurants' employees to adopt pro-environment behaviour with the Klimato label?
2. How does the interaction of the Klimato label and restaurants work with Klimato influence the decision for restaurants to track their carbon footprint overtime, communicate the carbon footprint of dishes, and adapt menus to be more climate-friendly?

2. Research Design

This section presents the research design of this study, the methods of data collection, and the theoretical perspective that I chose to use to interpret my data. My choice of research design led me to use the transcending transmission approach to communication to gain insights into both instrumental and constitutive communication dynamics. The theoretical approach for analysis chosen for this study is ‘symbolic interactionism’ theory as it untangles those constitutive aspects of environmental communication surrounding climate labels. This research design enables me to breakdown my observations for later analysis considering the communication situation and context elaborated in the above section.

2.1.1 Interpretative approach

Communication is what structures society by helping develop common understandings of how and why we build our lives together (MISTRA EC, 2019; Craig, 1999). Humans become social when we act, think, and feel socially, we share and negotiate values, emotions on which our coexistence is built (ibid.). Communication is both the tool and lens through which we can make sense of the world around us and our interactions with it (Pezzullo and Cox, 2018). In this study, interactions are understood as verbal or non-verbal situations in which actions and reactions are producing a certain outcome (ibid.). In this study’s context of building labels to encourage positive actions for the planet, environmental communication has a dual nature. It is understood both as being a platform to constitute meaning collectively to make sense of how we perceive climate-friendly behaviour in restaurants, but also as a tool to foster curiosity and discussion, in an instrumental or strategic manner to enable behavioural change (Schoeneborn and Trittin, 2013). This approach to communication has been described by Schoeneborn and Trittin (2013) as transcending transmission communication. This is defined by the fact that to lead to positive impact on the environment, communication must relate, connect, and be grounded to other issues in society and in specific settings.

The transcending transmission approach is a useful communication theory to use when observing corporate communication, public relations or marketing that is strategic, but does not neglect the constitutive role of communication for organisation (Heide et al., 2018; Schoeneborn and Trittin, 2013). Ideally, this corporate communication process cannot and should not be driven only by voluntary “bottom-up” or mandatory “top-down” pressures to lead to longer lasting, stabilised, and consolidated forms of organisation and actions (Schoeneborn and Trittin, 2013, p.199). As presented by Schoeneborn and Trittin (2013), “this means that CSR communication should not be reduced to a corporate function that is

fulfilled by a stand-alone (or “satellite”) department of CSR or corporate communications, but should be treated as a holistic endeavor that encompasses the organization as a whole.” (p.206). When applied to the context of labelling in restaurants, the transcending transmission approach could be useful to gain insights into climate labels aiming to be neutral and merely share information to help individuals or businesses make informed decisions without being influenced by guilt, or shame. Indeed, according to the transcending transmission approach “communication constitutes organisation”, this is done namely by extending the boundaries of a corporation to involve third party and external or ‘extrinsic’ influences to take part in the environmental communication that co-constructs the organisation. This method might serve the restaurant industry specifically as intentions to take climate actions are done in a corporate setting requiring organised branding and strategic development for the wellbeing of the company and its employees. Admittedly, if consumers feel bad when purchasing food or driven to feel their action will not amount to anything, they are less likely to change their habits and keep purchasing food in that establishment (Horne, 2009). Initial reactions to environmental information might therefore be filled with frustration, stress or anger causing resistance or tensions. Indeed, as further emphasised by Cox (2010), if information and knowledge is shared and built in an encouraging and constitutive manner without passing judgement on the consumer or business for making certain decisions, it is more likely to lead to positive emotions. Consequently, this dynamic transcends communication into habits and new norms as the feeling of contributing to a good cause leaves the restaurants’ employees empowered and motivated to take similar climate actions in the future (ibid.).

This framing of the climate action narrative is therefore built on competing rationalities that try to reconcile the desire to do good for the planet and to maintain a profitable business. Here, those concerns can appear as conflicting or even threatening the motivations of using labels as an environmental communication tool. However, when using the transcending transmission approach, conflict can be embraced as an enabler and a platform to start collective interactions that are not one-dimensional (Schoeneborn and Trittin, 2013). Those interactions should account for all those complex and conflicting motivations and pressures influencing how climate action based on interaction with labels is embraced or not, such as profitability, monetary, ethical, regulatory, or governmental pressures. In other words, the transcending transmission communication approach is a tool that enables to observe and make sense of the negotiation of definition and the continuous building of collective understanding of what are climate-friendly daily decisions and actions. It highlights the idea that every single action, big or small, contributes to the process of meaning making, social construction and social change influencing how people and planet can thrive together (Pezzulo and Cox, 2018).

2.1.2 Theoretical approach for analysis

Based on the interpretative approach to environmental communication for this study, the theoretical perspective I chose to use to analyse constitutive aspects of Klimato’s climate labels is ‘symbolic interactionism’. I chose this theoretical

standpoint because the use of the symbolic interactionism theory can help untangle those constitutive aspects of environmental communication surrounding climate labels to analyse the process of meaning-making through its use, co-creation, and interpretation (Blumer, 1969). Indeed, visual representation and communication of environmental data using labels and what their use means for humans, and the planet, only makes sense when we, as human, are co-creating such meaning from interactions between the restaurants labelling their food, the labelling company, and the consumers, through interpretations, ideas, and emotions (Hansen and Machin, 2013).

Indeed, the labels mean nothing if they are not collectively recognised, understood, and used as an indicator or symbol for climate-friendly food. As explained by Blumer (1969), “Objects have no fixed status except as their meaning is sustained through indications and definitions that people make of the objects.” (p.12). Therefore, by examining the way the climate labelling startup Klimato and the restaurants are using the labels in their actions and interactions we can gain insights about the motivations behind using the labels, how the labels are commonly accepted in their setting and to what end.

Activities between individuals seeing the labels, discussing it, companies using the food labels, sharing information about it, and using them to communicate their own climate actions are all part of communicating with the labels and around them which shape the meaning of the labels and its application (Carter and Fuller, 2015). Those interactions occur in a specific social and cultural context influencing them. Indeed, communication comes with interaction, and interactions are what drive social change, enabling individual habits, behaviour, awareness, and actions to translate into global change and new norms at a societal scale. As such, the use of the symbolic interactionism theory requires a deep grounding in sociocultural communication theory to understand the diversity and depth of the driving forces in time, and place (Craig, 1999). I will take into consideration these sociocultural dimensions by examining the place, time, and overall context within which the Klimato tool is used by the restaurants and compare these observations to those of past studies. In fact, sociocultural dynamics are especially relevant in this study since the topic of food is one deeply connected to values, traditions, and emotions cemented in sociocultural dynamics such as gender, religion, cultural prohibition, beliefs, attitudes. These socio-cultural forces can be intrinsic, coming from the individual such as values or emotions, or extrinsic, coming from outside the individual as external conditions such as regulations or a given political context (Silvi and Padilla, 2021). As a results, those sociocultural forces impact the communication processes, influencing the attitude-behaviour gap and its impact on sustainable development (Ágústsdóttir, 2021; Nicholls and Drewnowski, 2021; Silvi and Padilla, 2021; Knox, 2000).

3. Data Collection

About Klimato

Klimato is a Swedish startup created in 2017 with the purpose to reduce the climate impact from food by helping restaurants calculate, get informed, share, and report on the carbon footprint per dish they serve. The calculations are done in the Klimato app, a web tool that enables restaurant employees to calculate themselves the climate impact of the food served by feeding information about the ingredients, production method, and country of origin in the tool.

For Sweden and Norway specifically, the database Klimato uses retrieves climate data and CF from RISE, Research Institutes of Sweden's Food Climate database. For other countries, Klimato has built country specific databases with carbon footprint data using ISO14040 certified method for calculating CO₂e emissions by use the LCA methodology reviewed and approved by IVL Swedish research Institute.

To communicate and contextualise what the CF means, Klimato indicates the carbon footprint and classifying dishes between three categories: Low (0.1-0.5 kg CO₂e), Medium (0.6-1.5 kg CO₂e), and High (1.6 + kg CO₂e) (see figure 1). To reach the UN's sustainability goals of the Paris Agreement, it is estimated by WWF One Planet Plate that each individual's food-related climate impact should not exceed 0.5 kg CO₂e per lunch or dinner (WWF, 2021). Currently, an average lunch or dinner in Northern Europe has a carbon footprint of 1.7 kg CO₂e per dish (ibid.). By communicating those facts and the carbon footprint of dishes Klimato aims to guide and inspire restaurant employees, chefs, and guests to make climate-friendly choices. The Klimato climate labels motivate people to chose low carbon with guilt and judgement, but Klimato has chosen a way to provide information and let people chose.

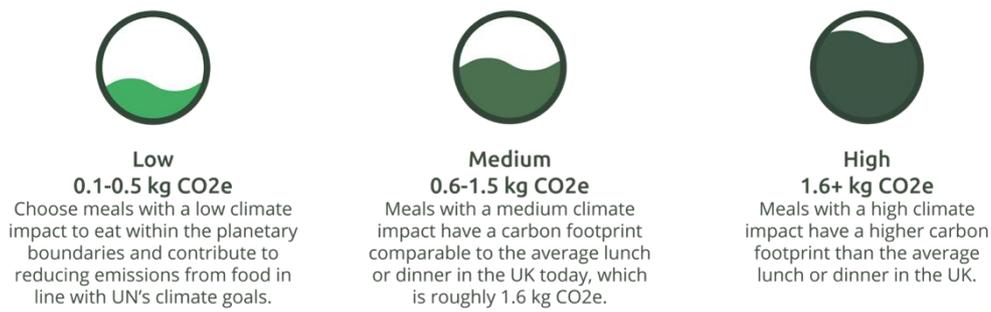


Figure 1. Image shared by Klimato to its customers communicating about the label and how to use them (Klimato, 2022).

About the Interviewees

The interviewees were selected according to their level of interaction with Klimato, the labels, and the restaurants that work with the climate labels. As presented in Table 1 and further explained in section 3.1, the eight interviews were equally balanced between Klimato employees and restaurants employees who work with Klimato to climate label their foods. Three different restaurants were selected according to the fact that they have similar size and are all small restaurant chains; ASIA in Norway, LETT in Norway, Sweden and Denmark, and VACA in Denmark (see Table 1).

Table 1. Table showing the list describing the participants for the interviews

Name of company/ restaurant	Location	Role	Length of work with Klimato
ASIA	Norway	Executive Chef (EC)	Since 2019
ASIA and Frenchie	Norway	Operational and Sustainability Manager (OSM)	Since 2019
LETT	Norway, Sweden, Denmark	Head of Operation (HO)	Since 2018
VACA	Denmark	Marketing Assistant (MA)	Since 2021
Klimato	Sweden	Chief Marketing	Since 2021

		Officer (CMO)	
Klimato	Sweden	LCA specialist and Sustainability Manager	Since 2019
Klimato	Sweden	Co-founder and Head of Business Development and Sales (HS)	Since 2017
Klimato	Sweden	Co-founder and Chief Executive Officer (CEO)	Since 2017

4. Methods

The chosen approach for this study is to conduct a qualitative research using the case study of Klimato. As eloquently presented by Muratovski (2016, p.48), the purpose of qualitative research is “the construction of a rich and meaningful picture of a complex and multifaceted situation”. In this study’s context, a methodology which accounts and enables to observe and make sense of complex phenomenon is a sensible choice to examine the communication problem in all its depth and complexity.

4.1 Interview design

The data was collected with eight semi-structured interviews made with video communication with three medium restaurant chains and four Klimato employees (see table 1). The purpose of choosing similar medium sized restaurants is to help make it easier to draw comparisons, connections, and parallels between businesses with similar financial capacities, team sizes, and management structures. In the original data collection design, I intended to carry video communication interviews with chefs, procurement manager, and sustainability manager, (or the most relevant people at the restaurant), which would amount to two or three interviews with employees in each one of the restaurants studied. However, I quickly realised that since climate labelling is a rather new process in restaurant management, those roles were often attributed to a single person in the restaurants. Or that only one or two people were involved and interacting with Klimato and the tool, be it through adding the ingredients to the Klimato app to calculate the CF, communicating about the collaboration internally and externally, and being part of implementing potential changes to menus to lower the CF of the dishes offered at the restaurants. Consequently, I reassessed my planned method and decided to carry out less interviews with the restaurants but have longer and more in-depth ones. However, to ensure I was still gaining enough insights to study the gap between knowledge awareness and action, I decided to carry four interviews of employees at Klimato. I interviewed one members of each of the four teams at Klimato; research and development and science, sales, operations and product, and marketing (see table 1). The purpose of interviewing individuals who work at Klimato is to gain data to build a benchmark against which to relate the various perspectives collected during the interviews. I made this choice of method to also acquire a better understanding of the context within which the labels thought and designed by Klimato are applied and used by the restaurants. The video interviews enabled to also collect the

participants impressions, opinions and reactions, gaining information about more than what the participants answer but also how they reply and react to questions.

The design for the semi-structured interview schedule was inspired by Gray et al. (2020) who researched Zoom video communication strategies as it provides a unique tool for data collection. Unlike in person interviews, online video conferencing provides accessibility to participants with busy schedules, who are not located nearby, and who may be social distancing due to the Covid-19 health situation. Indeed, it does not disturb their home or work schedule and they can find a place for the interview where they are most comfortable to speak freely. Meanwhile, the interviewer still gets to observe participants' non-verbal communication and reactions to the questions necessary to adapt the interview to the participant and guide the interrogation to get the most in-depth and developed data.

However, this method requires a steady internet connection and a laptop or phone to ensure that the communication is not broken down, cutting an interviewee half-way through a sentence, or thought. Those technical issues in communication would hinder the quality of the interview. Additionally, when someone is interviewed via video communication it can make data interpretation more difficult (Jamghorban et al., 2014). Indeed, this method can lower the spontaneity of the conversation and limit the number of follow-up, reformulating and deepening questions that help uncover complex ideas (ibid.). To counter those limitations, I collected as much authentic reactions as I could by purposefully not sending too much information about the interview nor the interview questions in advance. This was done to come closer to seeing the honest reaction of the interview.

4.2 Approach for analysis

As the data collected via the interviews is of a qualitative nature, I examined them using an inductive thematic analysis to identify key themes (Nowell et al., 2017; Burnard et al., 2008). As presented by Nowell et al. (2017), the inductive thematic analysis is data driven, meaning that, "Inductive analysis is a process of coding the data without trying to fit it into a preexisting coding frame or the researcher's analytic preconceptions." (p.8). The first phase of a thematic analysis is to familiarize yourself with the data. This is a stage at which all the raw interviews are organized as one body of data, to get an idea of what is in the data and what is interesting about it (Nowell et al., 2017, p.5). In the second phase, initial codes are generated to simplify and focus on specific characteristics of the data regardless of its relevance with the research questions at this point (ibid.). Those codes can be seen as "labels" assigned to a piece of text or a situation. In the third phase, codes related to similar concerns and ideas are condensed into subthemes (or categories), which highlight topics and ideas that appeared repeatedly during the data collection, building a picture of the main areas of significance and patterns emerging from the data (ibid.). Although they may seem less relevant, subthemes "play a significant role in adding to the background detail of the study" (Nowell et al., 2017, p.8). The

subthemes are finally grouped into themes that represent the essence of the main topics and situations of relevance for the study.

For instance, the topic of transparency and not passing judgement onto consumers through the labels is a central issue that repeatedly appeared during the interviews. However, this issue is not a theme in itself as it relates wider dynamics and situations that give it meaning in the context of this study. Indeed, this code ‘transparency and not passing judgement’, although it connects to many aspects of how and why the restaurants work with Klimato, this specific code is most relevant and telling of the quality and duration of the relationship between Klimato and the restaurants. The relationship is here understood as a subtheme that helps contextualise the situations in which judgment could be passed or transparency avoided. Finally, the overarching factor influencing the quality of this relationship but also the dynamics and the actors most influencing it according to codes such as collaboration and trust is ‘communication and interaction’ (see Appendix 1). Hence, ‘communication and interaction’ is the theme identified as most relevant to interpret the relating subthemes and categories and contribute to answering the research question based on the data itself.

Consequently, this inductive thematic analysis process enables me to not only dissect what the main areas of relevance and determinant ideas and situations are in this study, but also perceive relationships between those themes and how those relate to specific contexts, situations and interactions between Klimato, the labels, and the restaurants (see Appendix 1) (Calvet-Mir and March, 2019; Piso et al., 2019).

5. Results

The inductive thematic analysis helped identify patterns of four main recurring themes arising from the interviews and observations carried out with Klimato employees and customers (see Appendix 1). The first theme that appeared was the role of communication between Klimato and the restaurants in defining and shaping climate-friendly restaurants. Secondly, the interactions between the scientific data accessible in the Klimato app and the restaurants. Thirdly, the diverse implications of sustainability marketing for motivating climate actions and what they look like. And finally, climate actions and how they are being apprehended and implemented by restaurants.

5.1 Communication and interactions defining and shaping climate-friendly restaurants

The first observation made during the interview process is that communication between Klimato and the restaurants is a strong dynamic influencing, defining, and shaping climate-friendly behaviours. In interviews, most participants both from Klimato and the restaurants voiced the appreciation and importance they put on the open discussion they have. The dynamics put in place by Klimato also enable restaurants to share environmental information without judgement, but with transparency, and accountability, and how these dynamics are essential for opening, inviting, and maintaining channels of communication open over time.

5.1.1 No pointing fingers at anyone

It was brought up both by Klimato team member and the restaurants themselves that the Klimato label is not a traffic light system with red, orange, and green that tells people what is “good” or not. It is a more neutral communication system informing about the CF of dishes in a manner that encourages reflection and flexibility to choose meals higher or lower depending on what you choose to eat within a recommended carbon budget (see figure 1). When asked what shapes communication and interactions between the restaurants and Klimato, the Chief Marketing Officer (CMO) at Klimato emphasised that:

“If we're pointing fingers and pointing out that someone is doing things wrong, it could actually get the opposite effect with people getting put off by climate actions. We want people to be engaged in the climate conversation. So that everyone should fit, feel included, and want to take part in doing something for the climate rather than being put off.”

In this interview and most of the others, the idea expressed here by the CMO of building inclusive specific discussions as well as wider exchanges of ideas has been repeatedly brought up as a necessary approach to have people join the climate conversation, and not be stopped or limited by their fear of doing something that could be considered “wrong” for the environment. This dynamic for openness was recognised by all participants as fostering dialogue that encourage people and create open and inclusive spaces to start doing something for the planet, at their level, even if it is not perfect and can still change in the future.

Similarly, the maintaining of an open line for queries coming from both Klimato and the restaurants has been commonly identified as a very important tool to nurture their relationship. Based on the data collected during the interviews, communication and interactions take place directly between Klimato and the restaurants during marketing meetings, sales pitches, webinar, social media and ongoing email and video contacts, but also within the Klimato team to adapt the tool and services provided based on feedback from the restaurant. Also, some of the restaurants shared that they have internal reflections and discussions based on their calculation and how to make concrete changes to their menus to reduce their CF, and external talks with their clients to see how they respond to the labels.

Most participants from both Klimato and the restaurants emphasised that having open, trusting, and reliable communication is necessary for long-lasting, meaningful, and collaborative use and implementation of the Klimato labels. This open process was considered by the participants as a gateway to getting more and more people curious about using Klimato to reduce their emissions. Participants were adamant that Klimato’s willingness not to shame restaurants into doing more for the climate, and down the line shaming restaurant guests into choosing environmentally friendly, positively impacts the quality of the relationship between Klimato and the restaurants. Both the restaurants and Klimato employees pointed out that it is not easy, but crucial to have restaurants’ management engaged, thinking, and included in the climate conversation. It was repeatedly recognised that building a collaborative dialogue by use of ongoing email communication, availability from Klimato to answer any questions and reflect on the restaurants’ needs and pressures from their guests helps maintain the line open to discuss, reflect and collaborate. The participants have shared that they value how this constructive communication between the guest, restaurants and Klimato influences the quality of their interactions, recognising that it also impacts the willingness of restaurants to use Klimato’s services to become more climate-friendly now and in the future.

Still, I observed during the interviews that at the present time, since Klimato is a startup, the restaurants’ will, and requests are met more frequently by Klimato than the other way around. It is more difficult to have the power to make demands and

requirements when a company is just starting out. This explains Klimato's desire to be inclusive and change mentalities in a constructive manner, not by force.

The Operational and Sustainability Manager (OSM) and the Executive Chef (EC) at ASIA shared their own experience of approaching environmental communication not through preaching, but with efforts and actions put in place to make people more environmentally aware in the restaurant and its management. In ASIA's OSM own words about ASIA using the Klimato labels:

“I really like how it is now. Not so much pointing fingers, but reaching out with kind of “here is the information available”. Of course, nudging is also something that affects people a lot. But, I think good and reliable information that is available for most people, that's kind of the way I hope the communication can be.”

My observations and the answers in the interview showed that ASIA's OSM values communication as being part of a constructive process that facilitates and encourages people to engage, think, and be given the tools to be a part of the climate conversation. Those observations were made with most of the participants.

Also, most interviewees mentioned asking questions about the scientific data, regulations, best behaviours, and the climate in general, interrogations that help develop the environmental knowledge and awareness of both Klimato and the restaurants. This dynamic was recognised repeatedly during the interviews as helping to best inform decisions and the behaviour of all actors. Here, the role of communication is perceived by the interviewees as not only a means for informing decisions, but an opportunity co-create and recreate the ‘rules’ of communication, which in the Klimato-restaurant relationship is based on trust, not passing judgement and learning together how to best raise awareness to help reduce GHG emissions.

5.1.2 Communication around the labels

Another aspect of communication repeatedly brought up during the interviews is the importance of having communication around the labels, and the various tools restaurants use to do so. This was highlighted by participants both as internal dialogue within restaurant management, and externally for restaurants to share their efforts and work with their clients, to make their business more climate friendly. Klimato's role to guide restaurants communication about the climate is a big part of the collaboration between Klimato and its clients. The communication about the labels between the restaurants and their consumers and what they mean in the wider ‘climate crisis’ context is strongly encouraged by Klimato, but also demanded by the restaurants. Indeed, although the labels or CF values are not always present on menus due to the restaurant's preferences and aesthetics (see figure 2), Klimato strongly encourages having the labels or CF numbers apparent.

All three restaurants are providing information about the labels and creating platforms to discuss their collaboration with Klimato with their employees and customers. However, this is done at different levels. For instance, LETT is very involved in raising awareness and creating space to openly discuss their climate actions by sharing the CF on their menus and on social media. They are also training and informing their personnel about the climate impact of their food and mentioning Klimato and their CF reduction progress in their quarterly magazine available to read in the restaurants and on their website (see figure 2). Alternatively, ASIA has favoured more internal communication and leading by example by making the information available on their website and their menu, but not actively pushing it on to their clients (see figure 3). Regarding VACA, they were more hands-on in the beginning when they launched the collaboration. Now they have the labels visible on their menus, flyers in their restaurants with some information about the labels and have posted about their work with Klimato on social media (see figure 4).

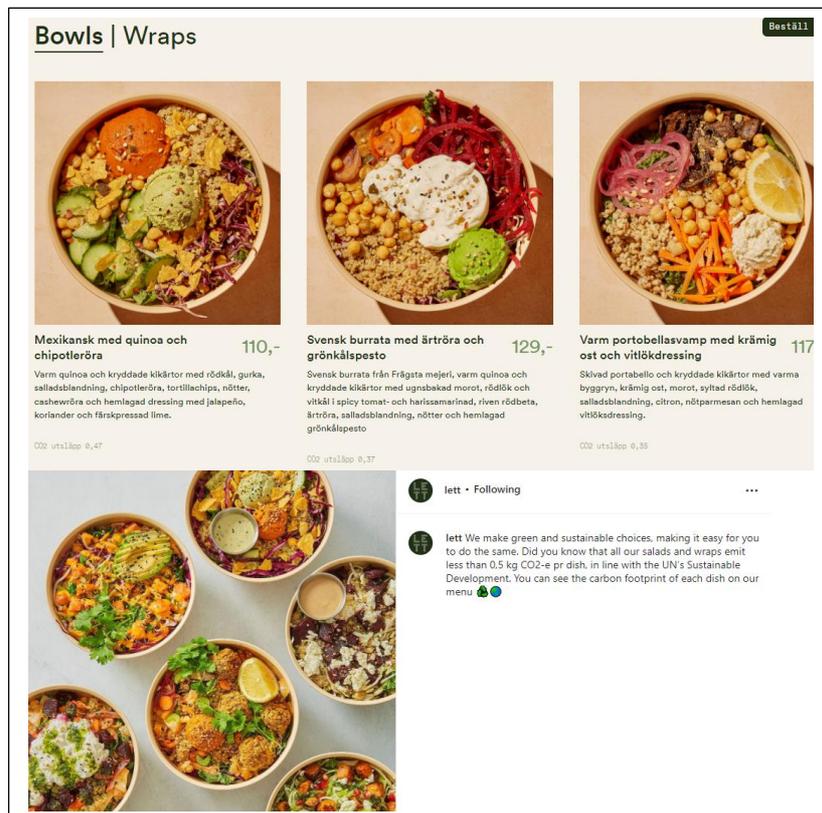


Figure 2. Image exemplifying LETT's use of the Klimato label and their communication around them on their menu and social media. They communicate the CF value in kg of CO2e per dish in numbers without using the Klimato labels 'symbols' (Gay, lett, 28 April, 2022; LETT, 2022). <https://lett.family/se/meny>

Figure 4. Image exemplifying VACA's use of the Klimato label and their communication around them on their menu and social media. They only communicate the CF value in kg of CO₂e per dish (Gay, vacafood, 28 April, 2022; VACA, 2022). <https://vaca.dk/menu/>

5.1.3 One Champion

There is one last driver which stood out as perhaps being the most influential in having fruitful and constructive exchanges of ideas or visions through conversations and interactions that define and shape the climate actions and communications of the restaurants; the need to have a champion. This term has been repeatedly used by the Klimato team and the idea of it brought up by the restaurants' employees. If there is not a person who is passionate about taking climate action and sees Klimato's potential in implementing transparency and CF reductions, it is a lot more difficult if not impossible for Klimato's tool and labels to build climate awareness and actions.

Klimato's head of sales (HS) expressed the need for a champion as both a limitation and a weapon for Klimato:

“You need somebody at the company that has the profile of thinking that it is something important, or thinking it is something good for their business, or for the environment. To really fight for Klimato and explain how Klimato can help them. In cases where we don't have an internal champion, we haven't really succeeded in making a big impact. If we have this internal champion, they can spread the word internally in the company. And more people become the champions in the company”.

Indeed, it came out clearly during the interviews that it is difficult to not only get people interested and excited about climate actions in the restaurant industry but to keep restaurants' management engaged, ensuring lasting efforts over time with for instance tracking and reporting the CF of food with Klimato. VACA's marketing assistant (MA) emphasised this struggle of balancing climate interest and passion with daily tasks and other responsibilities which can limit commitments:

“I think, when we just got the labels, at least me, I was very excited about it. And I wanted to show it to the world. I think that's the point where I was most engaged in it. Most involved. After we got it implemented, put the labels on the menus on the website, did the social media post, then you have a lot of other partners, a lot of other stuff you're working with. So it's there in the back of your mind, but it hasn't been an area of focus for me as much as I wanted it to be.”

During the interviews, an increased and ongoing interest for environmental efforts has taken many shapes both with and without Klimato. For instance, restaurants have talked about their efforts to reduce food waste and packaging waste, adapting their supply chain to support have local and smaller producers, as well as getting

more involved with Klimato. Indeed, Klimato offers different plans or levels of action that companies can take to make their business more climate friendly ranging from climate labelling, reporting, tracking to setting emissions reduction goals (figure 5). Although the intentions are encouraging and having a climate champion is a useful tool, keeping the interest going over time is difficult. When it comes to increasing their climate efforts with Klimato, many companies start with the basic package to calculate the CF of their dishes and share them with their guests, but it requires deeper interest and environmental ambitions to start tracking the climate impact through reports (figure 5). Efforts which the Klimato team highlighted can help gain a better understanding of where their emissions come from, to start setting and tracking climate goals.

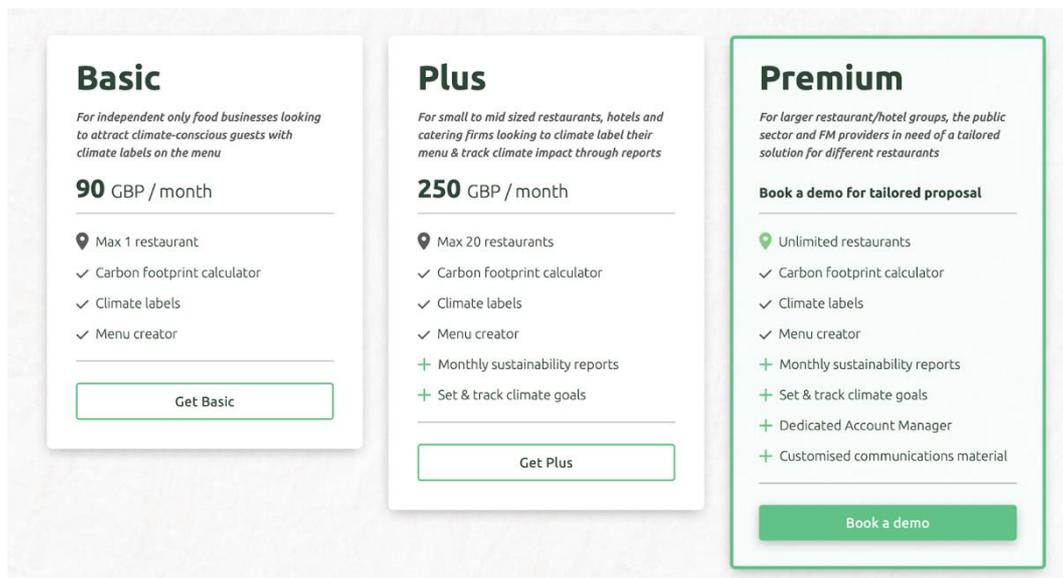


Figure 5. Image showing the different plans offered by Klimato to start climate labelling, reporting and tracking (Klimato, 2022). <https://www.klimato.co/get-started>

5.2 Interaction between the scientific data accessible in the Klimato app and the restaurants

The second theme that arose from the interviews and observation process is the importance of the interactions between the scientific data accessible in Klimato's tool and the restaurants. In most interviews both Klimato employees in their own experience of the tool and through their work with the restaurants as well as the restaurants' employees themselves have shared their own interpretation of their climate awareness increasing as they saw the CF of food on the climate through the Klimato tool and labels. This was especially visible during the interviews as the participants from the restaurants shared their experience in the Klimato tool, seeing the CF change as they switch ingredients in recipes. This connected the restaurants

employees directly with the fact that small changes can cause great impact for the environment.

5.2.1 Accessibility and user-friendliness

The Klimato tool was designed for restaurant employees, chefs, and other food service providers to be able to calculate the CF of their food themselves by entering a few information about their ingredients in the tool; quantity, number of servings, country of origin and production method. As voiced by the LCA specialist and sustainability manager at Klimato, the ambition of Klimato and the design of the tool is to remove barriers to make it more welcoming and less intimidating to have interactions between science and people, “Klimato is trying to make science easy and accessible to as many people as possible and informing people on a very important topic. As the carbon footprint of food, which is probably not as known as it should be.”.

The user-friendliness of the app was recognised by all participants as they discussed its accessibility and that one does not require previous knowledge to be able to calculate CF in the tool. ASIA’s OSM shared her own experience of using the app to calculate the CF of recipes as follows:

“I think it has improved a lot over the years. And it's becoming more and more user friendly. I think it's a very easy tool to use. And it goes super-fast to put in recipes once you understand also quite what are the most important ingredients that you fill into the app”.

However, chefs and restaurant owners are very busy, and they do not always find the time to use the app and do the calculations themselves which are then done by Klimato. This was recognised by some participants from the Klimato team as potentially limiting the actual interaction with the scientific data and the creative connection to seeing and enabling change in restaurants. But all the restaurants get an immersive demonstration of the app at the beginning of their work with Klimato to present how the tool works, how it helps calculate CF to communicate it and reduce it. VACA’s MA shared her views on the Klimato tool and noted that as VACA have a fixed menu, they do not use the tool much to reassess recipes:

“I know your business developer at Klimato did the calculations for every dish in the beginning, and we haven't changed anything since we started. But of course, yeah, if we come up with new dishes, we would need to go in and look ourselves.”

In the quote above we can see that for VACA although they may change suppliers, their menus and recipes are not changing that much, meaning that their experience of the tool will be reduced compared to restaurants with seasonal menus and other environmental goals in place that push them to reassess their resource management more often.

However, when asked what her own experience with the app she voiced that her experience in the tool, although short, left a significant impression on her:

“Yeah, I did use the tool. I did in the beginning, for example, try to swap out falafels with our tempura shrimps, and it was like, mind-blowing, to see what a difference it makes. I think that it is very interesting. And that's also like, just by doing small tricks, you can actually reduce the impact on the environment a lot. I think that's amazing.”

According to the interviews, although there are some limitations to the interactions of individuals with the scientific data, the capacity of the app to connect individuals to climate information without requiring previous knowledge brings people closer to the issue of climate change and excited about possible actions to take. This came across as quite striking to me as I expected more critics of Klimato and balanced arguments between Klimato's point of view and the restaurants. If anything, it seemed like Klimato was more aware of its own limitations and areas for improvement. In my opinion, this might be explained by the fact that this study looks at the restaurant industry for which climate action has come into focus only recently. The way that those actions are carried out and the reflections around them are presently being designed and shaped. This generally positive impression of Klimato at current times might lack some hindsight and change and evolve as the context do.

5.2.2 Legitimising decisions in restaurants

The participants highlighted that the tool provides visibility of the climate impact of food for restaurants, but that climate change is a big, intimidating, complex and intangible issue. Yet, during the interviews, the idea that the Klimato tool helps give an entry point to start visualising, raising awareness, and doing something about the climate crisis has come up clearly and repeatedly. For instance, when LETT calculate their new seasonal menus, they take the CF calculations as a strict guideline of what will be on the final menu or not according to whether the CF fits within their goals and how it will impact the taste, “when the ones who are involved in the development of the new menu start to calculates everything, then we take the decision “is that okay”, “maybe we have to cut something else” or “we have to use a little bit less of that ingredients or and a little bit more of that””.

When asked about how this knowledge and contact with the data impacted her and her willingness to act, LETT's head of operations (HO) said:

“And it also made it possible for us because, without Klimato, we never could do this by ourselves. And it was Klimato, who contacted us and made us aware of this. And then we learn more about it. And then we really got down to work with it and to make our menu climate friendly. And then, of course, now we're kind of on the right tracks and it is easier.”

As I understand it, in the quote above we can see that for LETT the evolution from gaining knowledge, to awareness and finally climate action has been encouraged by Klimato who helped LETT take notice of how they could improve their food

resource management to help the environment by using the Klimato tool. A solution for climate action which LETT has adopted and truly made its own by rethinking their entire menu based on the CF calculations provided by Klimato.

However, even though employees can be excited about climate actions and learning more, being transparent and accountable, the reality of taking those decisions to act for businesses is intimidating. During the interviews, the restaurants' employees voiced this concern that the economic survival of the restaurants is very important and that making big managerial decisions beyond sharing the CF on menus but rethinking and adapting recipes can depend on convincing the owners and other stakeholders. As voiced by ASIA's the EC:

“I mean, I look forward to the motivation (for climate action) growing and solidifying in future. But again, the caveat to that is the fact that the restaurant business is in tatters at the moment, post-COVID. So, it's very hard to find the right resources now, for restaurants”.

I interpret this quote as adding limitations to restaurants' ability to act, some members of the restaurant management team see the environment as competing with good economy, instead of getting better profit. Indeed, beyond efforts to limit negative climate impact, economic and social considerations must also be met. Changes in menus and supply chains are not decisions to take lightly and restaurant management want to make sure that changes will truly have an impact on the planet while preserving taste and providing added value for consumers. ASIA's EC also shared an encounter with the restaurant owner who “expressed a desire to have a little change again, and to maybe have red meat back on the menu”. Even though this decision does raise the CF of some dishes, the EC at ASIA managed to use the Klimato app as leverage to be able to influence these decisions, ensuring with data that the beef served on the menu would have a CF as low as possible by carefully choosing criteria such as its provenance, production method. Similarly, LETT, as mentioned before, has used the app to rethink their recipes. The CF calculations were motivation for the changes used to legitimise decision within the restaurant management, but also to consumers who would ask why their favourite ingredient was no longer on the menu, having the data available was a tool to justify management decisions and educate the consumers about the reasons for the changes. Most participants recognised this usefulness of the Klimato app to provide data to back up the negotiation of dishes changes in the restaurants.

5.3 Sustainability Marketing motivating climate actions

The third theme that arose was the importance of sustainability marketing as one of the biggest motivations for restaurants to start using Klimato. Although there was a contrast between what Klimato says and how the restaurants communicate about their own motivation, it appeared that the restaurants view Klimato's tool as sustainability marketing. As depicted throughout the interviews, the tools that Klimato provides help promote sustainable products and services, encourage sustainable lifestyles and behaviour, and foster critical reflection and thinking. In the interviews, those motivations appeared as a willingness to improve credibility,

reputation, future-proofing the business, and efforts to gain a competitive advantage.

5.3.1 Improving credibility and reputation building

A strong motivation for the restaurants to calculate and communicate the CF of their food is being able to show that they are “doing the right thing” by acting for the environment. This has been apparent in both the interview with the Klimato team and the restaurants. The restaurants have a desire to build a reputation as climate-friendly and accountable businesses. Although the Klimato team was clear that motivation to have a clean brand with a strong climate responsibility image is important, the restaurants do want to be transparent and have a willingness to communicate and act. In other words, the restaurants have a desire to have an environmentally friendly image as well as ‘walk the talk’ and take concrete actions to help the environment. As the MA at VACA expressed about the importance of climate action for their restaurant:

“It’s not a question to need to work with sustainability in some way. And again, I think you really need to integrate it into your core business, not just having it as an add on. Because for me, that just becomes kind of greenwashing. And that’s definitely not what we want to do.”

Indeed, with the constant risk of being branded as greenwashing, interviewees were adamant that credibility is central to their branding as well as ethos, or core philosophy, for how they run their restaurant. They shared in the interviews that this credibility is largely built through transparency, accountability, and adapting to new scientific knowledge and regulations.

Klimato’s CEO confirmed this position of the restaurant that beyond other motivations, Klimato’s clients do not only wish to show that they do good, but act:

“A lot of companies see an increasing need for it, from a demand point of view. A lot of companies feel that they need to do something good. It’s a lot from our reputation point of view, and also from wanting to do the right thing.”

I understand this quote as Klimato’s CEO presenting the motivations to work with Klimato which here are described as two-fold. First, the restaurants want to improve their image by building a strong reputation that they are climate friendly. Second, they have a desire to do something for the environment in their management because it is the right thing to do ethically.

Consequently, the motivation to improve the images comes internally, from a desire to do good, and from the outside, as a pressure for restaurants to market themselves as climate-friendly. Yet, currently throughout the interviews it appeared that the desire for the restaurants to market themselves as climate-friendly might be the number one factor for working with Klimato.

5.3.2 Future proof your business

Klimato's tool helps take managerial decisions in advance of requirement and market changes in the future, to ensure that a business will remain strong and resilient. In her interview, Klimato's CMO was unequivocal about the motivation for restaurants to use Klimato now to protect the future of their company by preparing now to adapt to raising demands to act for the climate in the future and regulations asking clear information and requirement from companies:

“Even if they might not be able to prove straight away that this is going to drive us more customers or drive more sales, they feel the need to do it, because they know that if we don't do it, we might actually lose in the long run.”

Indeed, many of the interviewees from both Klimato and the restaurants pointed out that implementing climate solutions now in the restaurant industry is not an option, but a prerequisite to survive in the future. Interviewees pointed out that this is due to top-down CF regulation pressures soon coming to help reach the UN climate goals, as well as public opinion becoming louder and more critical of whether actions are being taken and whether they are meaningful or not. In her own words, VACA's MA expressed that, “You can see it on the political side, you can see it from the consumer side. So for me, it's like, it's not a question that you need to work with sustainability in some way.”. It was clear in the interviews and observations that for the restaurants, taking pre-emptive measures for future regulations and aligning with global climate goals is a strong concern which will only grow in the future.

5.3.3 Differentiation and competitive advantage

Finally, the last marketing reason which repeatedly stood out during the interviews is the desire to differentiate restaurant's brands and gain a competitive advantage. Klimato's HS strongly emphasised the importance of this motivation for the restaurants to be the first ones to do something, to follow or create the trend and be able to position themselves early as climate-friendly:

“I think in the beginning, when it comes to the first customers, it was more about being maybe the first customer to do this. Like, we're the first restaurant in Stockholm to accommodate labels. So, we're the first pizza restaurant to have the kind of labels like they're early adopters.”

Although this positioning has become a little bit less relevant as more people are adopting climate solutions, Klimato's HS also emphasised the desire to “stand out from the rest because it's a hard business with a lot of competitors, very low margins.”. This desire is motivated less by the willingness to care for the planet but is driven by competition. Klimato's CMO explained that this desire to stand out usually means that restaurants “want to offer something new to their customers”.

From the interviews, it became clear that there is no ‘one motivation’ driving restaurants to adopt sustainability marketing as their climate action. There are both

internal desires to do the right thing for the planet, and external pressures and ambitions to respond and be resilient to changes coming to the restaurant industry and forcing restaurants to adapt to stay in business.

5.4 Climate actions and how they are being apprehended and implemented by restaurants

Climate action is a multifaceted theme that runs throughout all interviews. There are more corporate motivations for climate actions which I presented above, but simultaneously it appears there is also a deep intrinsic desire to drive the climate agenda and debate along with a deep fear of communicating and taking a “wrong” climate action that would lead businesses to be claimed as greenwashing.

5.4.1 Implementing changes in restaurants

During the interviews, a main difficulty for Klimato appeared to get restaurants to go beyond calculating, to setting and tracking CF reduction goals. Most interviewees recognised this challenge of taking an initial curiosity to start thinking about climate actions, and have it turn into much larger systemic changes. When asked about how business relationships with Klimato can shape climate actions in the restaurant industry overtime, Klimato’s CEO shared an example of the evolution of Klimato’s relationship and collaboration with two other medium-sized restaurants chains based in Sweden:

“We have a few cases of companies that start very basic by calculating a few recipes and then wanting more support reports. For example, the most recent example is a salad chain, who started off very small just calculating the menu, but now have moved on to monthly reporting and might also be interested in offsetting going forward. Another example is a burger chain, of course, who started off with our usual calculations and monthly reports, but then moved on to asking for more full-scale ESG reporting with all kinds of other environmental information.”

One of the reasons brought up during the interviews explains the desire for restaurants to not only communicate but keep improving and implementing climate actions by restaurants; a core and intrinsic willingness to help the planet. Indeed, some restaurant employees shared their desire for the restaurant to set an example and drive the climate debate. This drive compares to climate activism which ASIA’s EC described as follows:

“I tend to be, I would say, on the more militant side of things. So, I’m very interested in people taking direct action regarding climate change. And I think chefs should be at the forefront. So, I think, again, it’s with every action and decision that we take in the kitchen, we can make a small impact.”

Klimato’s CEO, when reflecting on the role of intrinsic motivation, pushes this idea even further. He pointed out that if the only purpose of using Klimato is marketing, efforts to address GHGs emission of food in restaurants do not go far as “if you

have an intrinsic motivation drive to reduce your carbon footprint, then these restaurants typically reduce their carbon footprint more than restaurants that do it for marketing purposes.”.

It appears that to implement systemic changes in restaurants, activism or militantism, or an intrinsic desire to help the planet is a strong ally. Those types of motivations seem to push the participants to take direct climate actions now themselves within the restaurant management beyond what is currently required or mandatory, in order to achieve climate-friendliness in line with their ideas, values and convictions.

5.4.2 Fear of greenwashing

There is a concern that can explain why not all companies chose to implement more extensive climate solutions. The fear of greenwashing has been raised by some interviewees as something to avoid at all costs. This fear of greenwashing is paralysing and is a concern for actions taken now and, in the future, causing concerns about how they will be perceived and judged then. This issue of greenwashing was addressed by Klimato’s CEO who pointed out the importance of having control and regulations for companies to not make unfounded claims:

“And I think we've seen that a lot just during the past three years where Oatly got a lot of bad PR. We've seen Max hamburgers getting sued for saying that by eating a Max Burger you save the climate, or brands saying that their milk is Net-Zero. And a lot of the time it can be an honest mistake”.

Klimato’s CEO also discussed the fact that due to those cases of greenwashing which were, at times, honest mistakes, Klimato’s clients are very concerned about what to communicate, how to claim certain things, and what they can say about their climate actions. As Klimato’s CEO put it, “there is a lot of trial and error still”, and the rules and guidelines are constantly evolving so Klimato is continuously challenged and must meet those fears with on-going trust-building with open and continuous dialogue with its clients to understand each other’s concerns and address any queries by staying on top of those regulations and being informed.

6. DISCUSSION

The aim of this thesis is to gain insights into how the Klimato label, as a communication tool, influences the meaning of what a climate-friendly restaurant is and the capacity for the labels when used in food services' settings to bridge the gap between knowledge, awareness, and action at the restaurant's level. Regarding the first research question to identify the motivations for restaurants' employees to adopt climate-friendly behaviour with the Klimato label, the inductive thematic analysis showed that those motivations are diverse and depend on intrinsic and extrinsic forces and conditions affecting restaurants' employees. Those influences are developed through interactions, dialogue as well as socio-cultural dynamics that ground our relationship with food within greater underlying forces, from inner values and emotions to wider social norms or regulations shaping the context of climate actions in the restaurant industry. For the second research question concerning the power of the Klimato label on the restaurants' decision to track and communicate the carbon footprint of dishes, and adapt menus to be more climate-friendly, the analysis showed that those measures depend on the capacity to turn knowledge into awareness and then action. However, it remains difficult to do so despite that there is a climate label and a tool available. Indeed, bridging the attitude-behaviour gap by influencing perceptions and managerial shifts is a complex process that depends on a myriad of factors which evolve with time, incentives, experience, and interactions.

Therefore, to discuss the promise of Klimato's carbon labels to facilitate climate impact in the restaurant industry, I will first elaborate on the intrinsic and extrinsic pressures and impulses influencing the motivations for restaurants to use Klimato. I will then discuss the capacity to transcend information into action through collaboration, and inclusiveness.

6.1 The motivations for restaurants to adopt climate-friendly behaviour

The interviews showed that the motivation to adopt Klimato to improve restaurants' practices and become more transparent about their CF was influenced by two main factors; the intention to implement sustainability marketing and an intrinsic desire to do good which can be compared to activism. As presented by Pezzullo and Cox (2018), communication is both the tool and the lens through which we make sense

of the world around us and our interactions with it. Building on this understanding, by choosing to start working with Klimato and sharing the impact of the food they serve, restaurants are contributing and redefining what the role of their restaurant is and what its management looks like. Indeed, when choosing to share climate related information, restaurants diversify their offer from simply serving food to also recognising the climate change as problematic. This becomes visible when restaurants position themselves as an organisation wanting to do something about the climate crisis.

6.1.1 Sociocultural dynamics shaping motivation

The motivation to work with Klimato can be explained by sociocultural dynamics that influence our connection to food according to our values, traditions, and emotions. Indeed, as discussed by Ágústsdóttir (2021), Nicholls and Drewnowski (2021) and Knox (2000), sociocultural dynamics such as regulations, norms, beliefs, and attitudes have an impact on the way we relate to sustainability issues, communicate about them, and chose to act. As society is increasingly becoming more aware of climate change and tries and find solutions to mitigate it, it seems like a natural extension that those attitudes extend to motivations to act within the restaurant industry. Indeed, those interactions occur in a specific social and cultural context influencing them. In other words, although sociocultural dynamics can only appear to be pressures being put on certain industries to adapt and change to the new norms of today, the desire to adapt a business to those new norms is also coming from within the restaurants themselves, through their employees.

This duality in motivation observed in my findings concurs with those of previous studies that found that motivations to use climate labels was both “forced” on them to adapt and be accountable for their climate impact and came from an intrinsic desire to preserve the planet (Silvi and Padilla, 2021; Koch, 2020). In this study’s context, this duality is seen as a strength, not a barrier. Indeed, in line with the observations of Schoeneborn and Trittin (2013), although those motivations might seem to be conflicting, they help make sense of complex mechanisms contributing to the meaning-making and framing of what is climate action. Indeed, by having external pressures meeting intrinsic ones, this desire to use climate labels both for the good of the restaurant and to enable climate action builds a narrative of the restaurant’s environmental actions based on interactions and communication that is not one-dimensional nor static.

The way in which communication and interactions impact the restaurant industry can be seen as creating new norms and shaping society (Carter and Fuller, 2015). The employees in the restaurants drive those interactions by drawing the manager’s attention to their passions, fears and wishes for the company. It is through those exchanges within the restaurant that the desire to adopt climate-friendly behaviours

can grow within the company and lead to shared motivation to adopt climate solutions like Klimato's. Indeed, it is through those debates growing from an individual scale to a corporate one that changes in individual habits, behaviour, awareness, and actions are made possible at the restaurants' level. What this means is that the way the various actors of the restaurant industry interact, discuss, debate, act and react, be it restaurants' employees, guests, suppliers, and label provider, all those means of communication cement what climate-friendly behaviour means in this specific context at a specific time.

I could observe meaning-making processes during the interviews as communication about climate actions within the company has shown to influence the understanding and implementation amongst the various actors. Indeed, during the interviews the idea that Klimato's climate labels are not a tool for judgement and pointing fingers but an incentive for the restaurant managers to make informed decisions was collectively voiced by all participants and this understanding clearly transpired in their use of the labels as well as their communication around them. This understanding of the labels is therefore not only a motivation to start using the labels, but a valued reason to keep using them and encourage others to do so.

6.1.2 Sustainability marketing and activism

The observations made during the interviews of the restaurants aligned with those made in past studies of the wider food industry. Indeed, the motivations highlighted in previous studies ranged from the necessity to be proactive and future proof businesses before it becomes mandatory, the willingness to manage reputations, attract and retain consumers, and educate them (Koch, 2020; Lemken et al., 2021; Dupuis and Schweizer, 2019; Galli et al., 2018; Tan et al., 2014). It is clear that first and foremost, the motivation to use the Klimato labels is as a tool to help develop restaurants and stay relevant. However, this is not enough, if the motivation is only focused on corporate gain. It will not create real impact and serve the restaurants long term. Indeed, in the face of the most recent IPCC report, behavioural and lifestyle changes are indispensable if we want to reach the Paris Agreements (IPCC, 2022). My results help nuance the findings of Koch (2020) and Kemper and Ballantine (2019) that "activism" or militant motivation to encourage sustainable lifestyles and behaviour, foster critical reflection and thinking. Indeed, the participants voiced that although activist brands help shape climate action, facade efforts with no intrinsic motivations behind them do not lead to the same CF reduction as passionate, excited, and militant efforts do. An example of this was when the EC at ASIA took it upon himself to look into local Norwegian meat farmers to improve this supply chain without being asked to do it, or other participants pushing for their companies to use Klimato and using the tool to legitimise their managerial decisions in the restaurant. This also echoes to Cox's (2010) observations that passion and deep emotional connection with the planet's fate is a motivation, which is not likely to pass. Consequently, by leading by example but also sharing this passion with others, one climate champion creates

others overtime, helping guide a systemic motivation for actions in the restaurant industry and beyond.

6.2 From communication to action

The interviews showed that the exposure to labels does not necessarily lead to climate awareness and action within the restaurants. However, communication around, and interaction in the tool with the scientific data are strong tools to help bridge the attitude-behaviour gap. Indeed, based on my observations, the user friendliness of the tool and its accessibility are strong factors to help restaurants' employees connect with the impact of food. Even so, it has appeared in past studies and in my own observations that using and at times abusing climate-friendliness claims come at great costs for companies (Dupuis and Schweizer, 2019; Horne, 2009). Although the restaurants may have the best intentions at heart, what claims can or cannot be made is constantly changing and evolving as science, knowledge and regulations do. Those evolutions limit restaurants' control over how society perceives them. In the face of those concerns, transcending information into action through collaboration, and inclusiveness is not only relevant, but key. So the responsibility of communication and action is not left up to one entity, but build together by the restaurants and Klimato who share responsibility, experience, and knowledge to build collective efforts needed to reach ambitious goals to reduce food related emissions to combat climate change.

6.2.1 Knowledge, awareness, and action

The observations I made during the data collection align with those of past studies as I noticed that gaining first-hand experience in the Klimato tool helps participants recognise that small changes do not have to be intimidating or scary and can lead to positive impacts for the planet. Camilleri et al. (2018) and Feucht and Zander (2018) elaborated that consumers tend to lack the knowledge, awareness, and tools to make the best possible climate-friendly decisions, lowering their confidence to act. In this study's context, this observation is also applicable to restaurant employees given the right information and tools, restaurants do take actions to "boost' consumer decision-making by providing relevant skills, knowledge, and decision tools" (Camilleri et al., 2018, p.53). Additionally, the findings of Hartmann and Siegrist (2017), Leach et al. (2016), Peschel et al. (2016) about the boundaries between customers' awareness and action in the food industry coincided with my own observations at the restaurants' level. That is visible as although restaurants have a significant potential for CF reduction and are a meaningful platform for climate action, they often lack the tools to inform and justify their managerial decisions and turn good intentions for the environment into fully formed, lasting and effective climate actions. Climate labels can be that tool to drive action, but their efficiency is limited by the need for the labels to be recognised, valued, and discussed as part of a bigger conversation to further raise climate knowledge, awareness and action.

Most interviewees recognised this challenge of taking an initial interest for climate actions, and turning it into much larger systemic changes, but highlighted the power of having a climate champion and genuine interest and intrinsic desire to do good as great starting points. Indeed, the climate champion has a significant impact on the climate conversations and debates within the restaurants with their intrinsic passion and drive to help the environment. This perception is developed both scientifically and by connecting emotionally to them. Ágústsdóttir (2021) sees this emotional connection as helping make climate awareness and action part of a new socio-cultural norm as it then becomes part of someone's identity. Interactions and communication between the different actors in the restaurant industry help co-create the meaning of climate action and emotionally connect the scientific knowledge to the actors' climate awareness, defining what it means to take climate actions in specific socio-cultural context. This can translate for instance into paying attention that the taste of the food is maintained when swapping ingredients for more climate-friendly ones, respecting the restaurants' own brand and messaging, to not have the cost of the dishes increase, to be a foodie first, and caring for the planet.

The gap between knowledge and action was also combated in the restaurants and in interactions between the restaurants and Klimato with the development of wider conversations around the labels through creating platforms for employees and customers to come face to face with the climate data in some form. This has taken the shape of namely having the labels visible on the menus, having environmental training for the employees, sharing articles about their work with Klimato in their magazine to encourage dialogue around the labels and help contextualise their use. Although the restaurants are given guidelines and inspiration for how they could share the work they do with Klimato with their audience and employees, none of those incentives are forced on Klimato's clients. The use of Klimato's labels is on a voluntary basis. Still, the need to have communication around the labels and the way this is done not only impacts the capacity to reduce emission, but the depth to which climate decisions can turn into systemic changes at the restaurants' level. The results of this study add valuable insights to Godeman's (2013) findings that the global demand for more knowledge, information, debates, and actions to address the climate crisis requires systemic and harmonised communication from corporations by showing the processes and examples of how this can take shape in practice.

6.2.2 Greenwashing

Regarding the use and abuse of the climate labels, my findings showed that the restaurants generally have a desire to do good as well as show it. This tends to limit the risk to be deceptive that Dupuis and Schweizer, (2019) and Horne (2009) defined as claiming that "green" actions are better for the environment than they really are. Indeed, this duality of motivation mentioned earlier seems to provide strong grounds to design credible actions that evolve and adapt with time. In the context of this study, greenwashing was recognised by participants as both an issue

to avoid at all costs due to both their personal desire to help the planet and to ensure that the restaurant does not get a bad reputation that would hurt it (Torelli et al., 2019). In this context, the risk of greenwashing can be perceived as a motivation causing a reaction or response for restaurants to start taking action (ibid.). In that sense, those findings corroborate with those of Delmas et al. (2019) that if the intentions to run their restaurants with good and transparent environmental performances, greenwashing is less likely to occur. Indeed, the use of environmental labels is a strategy and practice implemented to be coherent and not passive in the face of today's climate challenges. However, the reality today is that rules and guidelines are constantly evolving. This makes the space for action and claims within the restaurant industry slimmer and more frightening as there is this added responsibility for them to ensure that their actions align with the latest regulations. Klimato helps carry this responsibility with the labels and the help with the communication around them. Nevertheless, it was apparent in my findings that the interviewees see the responsibility to carry climate actions in the restaurant industry as going beyond Klimato and its clients, it is a part of collective efforts to reach climate goals.

6.2.3 From climate awareness to action through collaboration and not passing judgement

Climate effort to reach UN goals to limiting global warming to less than 2 °C compared to pre-industrial levels are collective efforts (UNFCCC, 2016). Restaurants are key actor in the food industry feeding vast amounts of people every day. They are connecting and facilitating the interactions between the actors and have the power to catalyse and encourage collective action. And as such they have a responsibility to do so, to adapt to an industry in a need for a sustainability transition as the food industry is responsible for more than one-third of global anthropogenic greenhouse gas emissions, making it one of the single largest contributors to climate change (FAO, 2021; Pulkkinen et al., 2016; Wang, 2012). My observations add insight to those of the IPCC (2022), Kostova (2019) and Rööös et al. (2014) that efforts to mitigate the climate crisis must come from a myriad of actors including the food industry, academia, corporations, and governments. Indeed, in the same way that the responsibility to make environmentally friendly food decisions cannot solely lay on the consumers, it cannot solely lay on the restaurants either. Now, my results confirm this relevance of collaboration, but also highlight another factor which is very influential in the success for labels to drive climate action, the importance of not passing judgement. By not pointing any fingers and leaving space for expression, learning, and trying new things to tackle the climate crisis, one encourages interaction and the appropriation of the climate issue by people, making them more connected to it and more willing to act to help the planet and accelerate change.

7. Conclusion

This thesis started from my own interrogations about my food consumption and my personal experience of using the Klimato tool, and grew into a much larger reflection around what climate-friendly restaurants are and the role that Klimato holds to help them address the climate crisis. In this qualitative research I aimed to gain insights and study how the label, as a communication tool, influences the meaning of what is a climate-friendly restaurant and its capacity to bridge the gap between knowledge, awareness, and action.

This thesis built on previous studies voicing that collaborative efforts are needed to achieve the climate goals set by the UN. As mentioned by the IPCC report (2022), climate change mitigations are indispensable. Considering this, this study found that environmental communication by use of inclusive, and non-judgmental climate labels, paired with consistent and extensive conversation around them has potential to facilitate climate actions, thus mitigations.

In summary, this thesis found that restaurants have both an interest to implement carbon labels in their business for the survival of their companies now and in the future, as well as an intrinsic desire to be a company that takes actions for the planet because of their own convictions. However, in today's climate and fear of judgement for doing something wrong or making false claims, restaurants find themselves in a tricky situation where they can be condemned if they take action that is considered improper or greenwashing, and condemned if they do nothing. It is in that context that Klimato gains value as a tool that enables restaurants to legitimise their positive climate actions, build them and communicate them in a way that is resilient and evolves as science and regulations do.

To be efficient and last, the solutions to address the climate crisis in the restaurant industry have to be multiple and reflect the complexity and diversity of the actors who shape it. Not only do the actors in the restaurant industry have a significant role to enact climate solutions, they have the power to shape what those actions mean in practice through communication and interaction. They can ensure that climate actions are most adequate and effective in place, essentially constituting what it means to be a climate friendly restaurant.

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Popular science summary

Climate labels' promise for redefining the climate impact of the restaurant industry. A case study of Klimato.

The food industry accounts for more than one-third of global human-made greenhouse gas emissions making it one of the single largest contributors to climate change. One strategy in place to reduce those carbon emissions and their impact on the climate is by providing environmental information. More specifically, it is the communication about the carbon footprint of food with labels and its impact on the climate, so that everyone can make informed decisions and “put their actions where their mouths are”. Since they serve large quantities of food to diverse and numerous people every day, restaurants are key and powerful platform from which climate labels sharing information on carbon footprints can help reduce GHGs emissions on a large scale needed to reach global carbon reduction goals.

However, there is a recognised gap between what people know, what their awareness of the climate crisis and its consequence, and their actions to do something about it. This study examines, with the use of interviews, this gap by investigating what are the motivations for restaurants' employees to adopt pro-environment behaviour with the Klimato label, and how does the use of the Klimato label influence the decision for restaurants to track their carbon footprint overtime, communicate the carbon footprint of dishes, and adapt menus to be more climate friendly.

This thesis found that restaurants have both an interest to implement carbon labels in their business for the survival of their companies now and in the future, as well as an intrinsic desire to be a company that takes actions for the planet because of their own convictions. However, in today's climate and fear of judgement for doing something wrong or making false claims, restaurants find themselves in a tricky situation where they can be condemned if they take action that is considered improper or greenwashing, and condemned if they do nothing. It is in that context that Klimato gains value as a tool that enables restaurants to legitimise their positive climate actions, build them and communicate them in a way that is resilient and evolves as science and regulations do.

These findings can help the current discussions at the National and European level to implement climate labelling schemes for food to look at climate labels as an environmental communication tool that relates to more than the transmission of

information. Environmental communication with climate labels is a powerful tool to feed and support the global climate conversation and enable everybody to choose for themselves knowingly what they eat and why.

The results can also help companies beyond the restaurant industry to gain perspective on the role of communication and transparency. Corporations in the food industry and beyond are powerful platforms to take climate actions and inspire others to do so in a meaningful way through communication that is collaborative and non-judgemental.

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Appendix 1

The coding scheme is structuring the data collected for this study between codes, categories/subthemes and themes. The four themes are divided into subthemes or categories to describe how the theme appeared as a patterns in the data collected, highlighting areas of relevance and repetition that help build an understanding of situations at hand and their context. Similarly, the codes are describing more specifically ideas, situations, sentences or concerns generated from the data to simplify and focus on specific characteristics of the data regardless of its relevance with the research questions.

I used this coding scheme to help structure and visualise the entirety of the data collected and gain perspective to be able to see how different area of relevance of repetition in the data relate to each other and what they have to say about the communication problem at hand.

Coding scheme		
Themes	Categories/subthemes	Codes
Communication and interaction	Impact of longer, more collaborative and deeper relationship between Klimato and clients	Open and collaborative relationship widening knowledge and perspectives for both Klimato and restaurants.
		Not easy but crucial to have people engaged, thinking and included in the climate conversation.
		No judgment. More accountability, transparency without judgement.
		Trust building. Backing up decisions, being reliable.
	Discussion around the labels	In restaurant
		On menus
		On website
On social media		

	One Champion	Keep company engaged Create excitement
Interaction with the climate data	Accessibility, user friendliness.	Removing barriers, more welcoming and less intimidating to have interactions between science and people
		Does not require previous knowledge.
		Making a complex issue tangible
	Excitement from seeing the impact of actions on CF in the app.	
	Legitimising decision in restaurants	Provides the data to back up some management of dishes changes in the restaurants Helps guide those decisions to ensure positive impact on the planet
Sustainability Marketing	Improving credibility and reputation building	To do the right thing for the environment and show it.
		Internal and external pressures to be responsible
	Future proof your business	For managerial purposes
		Pre-emptive measures for future regulations
Differentiation /competitive advantage	Being the first to do it Stand out from the crowd	
Climate Action	implementing change in restaurant management	Dialogue and long-term collaboration
		From an initial curiosity to thinking about climate actions into much larger systemic changes
	Activism	Pushing a sustainability (climate agenda) in marketing
		Restaurants driving the climate debate
	Fear of Greenwashing	Fear of being labels as greenwashing is paralysing
		Concerns for now and in the future Limiting climate actions
Need for Klimato top constantly be informed and up to date with regulations, communication guidelines and science		

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