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Greening the Workplace: An Explorative Study into Understanding Employee Green Behaviour in the Transportation Industry

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Abstract

Achieving the Net Zero Goal by 2050 is a critical and urgent task to address climate change. Organizations play a pivotal role in this effort, and adopting a comprehensive environmental framework is essential for firms to realize this goal. The effectiveness of an environmental framework depends, to some extent, on the employees' eagerness to endorse such practices and proactively take steps at their individual levels. Termed Employee Green Behaviour (EGB), it encompasses the scalable actions and behaviours of employees aimed at environmental sustainability in an organization. This study is based in the transportation industry and aims to examine whether EGB can be explained through organizational green climate and affective commitment of the employee. Moreover, it seeks to understand if EGB can determine employees' job satisfaction.

A mixed methodology was employed to understand participants' green behaviours. Purposive sampling was used to select participants from TIP Group. First, the 23 participants were asked to perform an online task, consisting of a Q sorting. Then, semi-structured interviews were conducted with all participants to understand their Q sorting choices and opinions on green behaviour more deeply.

A factor analysis in the Q-sort data revealed two distinct factor groups. The distinguishing element between the two groups was their organization's concern for becoming environmentally friendly. The qualitative results were helpful in clarifying the Q-sorting results. The findings indicate that policies, managerial support, and effective communication strategies are contributors to employees' green behaviour. Whereas affective commitment is not a strong motivator of green behaviour and sustainable practices do not explain job satisfaction among employees.

This research shows that employees engage in green behaviours at work, in part because of their personal ecological concerns and in part because they perceive their organization is concerned with becoming more environmentally friendly. This is underpinned by perceived environmental policies and managerial support. However, there exists a gap between environmental concern and employee's green actions, owing to the everyday challenges to EGB. Thus, present study advises to fill this existing gap through environmental education and effective communication strategies catered to improve employees' understanding of such policies. Future green behaviour studies must continue to examine explanations and consequences of green behaviours in a variety of contexts.

Key Words: employee green behaviour, transportation, organizational green climate, affective commitment, job satisfaction

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Introduction

Sustainability has become an important issue across the world as people become increasingly aware of the negative impacts that excessive consumption patterns have on the planet. As an aftermath of the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, organizations faced external influences of regulatory forces, public concern, and competition pressure to become sustainable (Banerjee et al., 2003). More recently, the COVID-19 pandemic served as a disruptive force and a catalyst, imparting notable effects on environmental sustainability (Adams & Abhayawansa, 2022; Rume & Islam, 2020). Now more than ever, sustainability isn't just a passing trend but is considered as a driver of innovation within firms. These developments have resulted in firms to integrate environmental sustainability into their strategies and policies. Practices such as modifying production processes based on firms' pollution prevention policy, saving energy costs in offices, and implementing recycling programmes for employees (Yin & Schmeidler, 2009) are some of the ways in which organizations become ecologically sustainable. Supportive behaviours for sustainability exhibited by management and realizing company's sustainable vision to employees through environmental policies can accelerate an organization's environmental performance (Dangelico & Pontrandolfo, 2015). To stay relevant and keep pace with the changing regulatory landscape of sustainability, organizations may find it beneficial to prioritize the development of solid policies and encourage their workforce to actively support the implementation of such policies.

A large portion of organizational greening is dependent upon how effectively a firm's employees implement its environmental framework in real-time (Paillé et al., 2014; Renwick et al., 2013). Quite frequently, the determinant of the success or failure of environmental strategies of an organization lie upon the employees' willingness (or lack thereof) to support innovation and take initiative at their own level for the environmental impact of the organization (Paillé & Raineri, 2015). Employees also hold an in-depth understanding of the production processes of the firm, which allows them to be well-versed in understanding their organization's environmental procedures and identify environmentally harmful activities. Thus, the scalable actions and behaviours of employees aimed at environmental sustainability in an organization, termed as 'employee green behaviour' (EGB) are integral to an organization's success achieving their environmental goals (Dangelico, 2015; Hanna et al., 2000). This reflects the view that effective environmental management must be entrusted

with a penetrative organizational vision where all individuals are involved in making the company environmentally sustainable (Sarkis et al., 2010).

The current study is focuses on three crucial aspects surrounding EGB. First, this research sets out to explore the potential explanations of green behaviours through the lens of an organizational green climate. Then, the aspect of affective commitment among employees towards the organization is taken into consideration when ascertaining green behaviours of individuals. Lastly, the aspect of job satisfaction is investigated in the context of green behaviours to determine if such a process contributes to the overall satisfaction of employees at work. Therefore, in this study, the research questions are as follows-

1) How does organizational green climate explain the process of employee green behaviour?

2) What are the possible explanations by which affective organizational commitment helps in determining employees' willingness to act pro-environmentally?

3) In what ways does employee green behaviour create job satisfaction among employees?

This study has been conducted in an open and explorative manner, set in the transportation industry inside a Netherlands-based transport organization. Among all the sectors, the transportation sector was the only one where carbon emissions increased for the European economy in second quarter of 2023 (Eurostat, 2023). It is then quite meaningful to study how employees operating in such an industry can help in contributing towards the environmental sustainability of their organization through their green behaviours.

Exploring the aspect of job satisfaction through a process like employee green behaviour with the other aspects of organizational green climate and affective commitment has been meagerly researched (Tang et al., 2023). Job satisfaction as a consequential element to green behaviour is still not concretely evidenced in the EGB literature and has warranted more research, so this study aims to contribute to the topic surrounding the outcomes of EGB. When studying the role of OGC and affective commitment to explain EGB, the current research contributes to the person-environment fit theoretical perspective in green behaviour literature. Additionally, there is an increasing need to research both required and voluntary green behaviours simultaneously (Nilsson et al., 2017). This is because quite often in green behaviour literature, research tends to focus on one type of green behaviour. Hence, this research will consider the required and voluntary green behaviours of employees. Moreover, the current research will make theoretical contributions in the organizational greening literature from a lesser-utilized perspective, by adopting a bottom-up approach and

understanding it from the point of view of employees. A further contribution of this work includes the practical insights that it provides to organizations aiming to employ a successful sustainable framework directed towards its employees. Finally, a potential benefit of this study for organizations lies in its ability to offer insights from a communications standpoint. This is particularly valuable to firms which face a gap between environmental policies and pro-environmental behaviour of employees, which can be addressed through effective communication surrounding sustainable practices.

Theoretical Framework

The following section details a broad theoretical background, consisting of terms and constructs that are relevant to this study, leading up to its further usage in this research.

Employee Green Behaviour

Inside organizations, there is a growing streak of ambitious efforts to help make the organization and the society more sustainable. These efforts are often led by employees of the organization, either as part of their job description or voluntary behaviours that are a result of personal environmental concern (Lamm et al., 2013). Employee green behaviour is defined as the "scalable actions and behaviours that employees engage in or bring about that are linked with, and contribute to, environmental sustainability" (Ones & Dilchert, 2012, p. 452). These actions and behaviours include a broad range of activities, some of which include recycling paper, conserving resources like water and electricity, commuting with public transport and cycles, creating sustainable products and processes, devising green innovations, and influencing and educating colleagues through training and activism (such as lobbying) (Paillé & Boiral, 2013). This is an important behaviour because employees are typically the ones who implement most environmental practices and policies of an organization, and this participation is a key contributor in helping firms achieve their sustainable goals and thus improve firms' environmental performance (Paillé et al., 2014).

Required Green Behaviour and Voluntary Green Behaviour

Workplace pro-environmental behaviour of an employee is classified into required and voluntary green behaviour (Ones & Dilchert, 2013). Required EGB refers to the behaviours that fall within the boundaries an employees' core job tasks and that are explicitly required by the employer. For example, to enhance sustainability goals, a firm might employ an Environmental, Sustainability and Governance (ESG) team to help with organizational greening. The core task of such a team is to establish policies and practices that are environmentally sustainable for the organization. However important these roles may be, they are not enough for any organization to fully decarbonize its footprint. Ultimately, the biggest contributor to organizations becoming more sustainable is the voluntary green behaviour of employees (Daily et al., 2009). These are "individual and discretionary" (Paillé & Boiral, 2013, p. 431) actions that fall outside the boundaries of employees' job description and are not explicitly recognized and rewarded by the organization. Voluntary green behaviours are

considered as part of an organization's overall citizenship behaviours and are different from required in-role tasks. They are "by definition extra-role behaviours" (Ramus & Montiel, 2005, p. 557). This type of green behaviour is performed with the primary purpose to help the environment and are largely based on personal values of employees. So, actions such as taking the initiative to commute to work with public transport or suggestions to switch off the lights and computers at the end of the workday can fall under voluntary green behaviour at work (Lamm et al., 2013). In reality, it is not always possible for employers to demand employees to go above and beyond their formal duties to voluntarily perform such tasks because such tasks compete with employee's in-role time and attention, which tends to hold priority over voluntary tasks, including pro-environmental tasks (Zientara & Zamojska, 2018). In the words of Mirvis (2012, p.93), "no company can mandate volunteerism". Therefore, both required and voluntary green behaviours are considered important in achieving positive environmental performance (Daily et al., 2009; Norton et al., 2014). Ultimately, the way green behaviour is classified will vary according to the organization because what is considered required and voluntary will differ with each organization (Paillé & Boiral, 2013; Yin & Schmeidler, 2009).

In this study, both required and voluntary green behaviours of employees are considered collectively as EGB because some employees of the organization are required to carry out sustainable behaviour as part of their job description whereas voluntary behaviours can be performed by both employees with descripted sustainable tasks and those without it. Moreover, the environmental policies and practices in place at the current company do not 'dictate' what an employee should or should not do. They exist to inform and encourage employees to become more environmentally friendly. It leaves a lot of open ground for employees to interpret and adapt their attitudes and behaviours according to what they think seems fitting to their day-to-day tasks. This suggests that organizations must actively comprehend key drivers that motivate their employees to act sustainably if they want to expedite the adoption of sustainable practices.

EGB in the Current Study

In the transportation industry, there have been some studies undertaken to determine distinct types of pro-environmental behaviours, but very few studies investigate the motivators of such behaviours. In the current study, this is investigated through the lens of an organizational green climate and affective commitment. This helps to build theory on the person-environment fit perspective, which argues that how employees base their attitudes and

behaviours is partly determined by the way they balance their reaction to match with contextual characteristics of a situation (Steg et al., 2014). In the current study, OGC and affective commitment are interrelated concepts because they stem from the same roots of policies, actions, and events in an employee's work life. Investigating these two components together thus helps to contribute to the person-environment fitting perspective in a new light. Moreover, performance outcomes of EGB have mostly been studied at the organizational and team level in green behaviour literature, such as, how it contributes to the environmental performance, environmental reputation, competitive advantage, and relationship with coworkers (Chen et al., 2015; Dangelico, 2015; Del Brío et al., 2007; S. H. N. Lee & Ha-Brookshire, 2018; Raineri & Paillé, 2016). At the individual level, only few studies have investigated the outcomes of employees performing pro-environmentally. For example, Lee and Young (1994) found that Taiwanese employees derived intrinsic satisfaction from office recycling activities, based on factors of participation and frugality. Recently, Zhang et al., (2021) confirmed EGB has a significant, positive impact on self-esteem levels, thus resulting in employee well-being. Current research will aim to bring light to job satisfaction of employees because of their pro-environmental behaviours.

Organizational Green Climate

An individual's behaviour is determined, among other factors, by their immediate environment or work climate in which they function. According to the social information processing theory, the social environment of an employee is directly influential to their attitudes in the organization (Salancik & Pfeffer, 1978). Employees operate in an equivocal or ambiguous social environment, where they must constantly interpret cues from the surrounding climate to make sense of issues or events (Brown et al., 2015). The work climate provides meaning by acting as a guide to the employee about socially acceptable behaviours, attitudes, and reasons for actions. This process is called sense making and it is focused on three interrelated processes of perception of cues, making interpretations and engaging in action by adapting attitudes, intentions, and abilities accordingly (Weick et al., 2005). Collective sensemaking is at the core of organizational climate, which refers to the collective perceptions of organizational policies, procedures, and practices (Schneider et al., 1998). Organizational climate is learned mainly through a combination of institutional and managerial emphasis on specific policies, and through immediate leaders, such as line managers and supervisors (Isensee et al., 2020). The same can be reiterated for organizational

green climate, where the factors that determine green climate include "environmental policy and management orientation (e.g., policy statements, training, information released to employees and supervisor's behaviour) as well as specific environmental tasks (e.g., recycling, water resource management and chemical control)" (Chou, 2014, p. 438). The implication, therefore, is that the formal management or organization can promote a work climate of environmental sustainability through specific policies and practices, thereby inducing the formation of environmental sustainability.

The role of immediate supervisors such as line managers is of considerable significance in forming and learning a green culture (Ramus & Steger, 2000). In the regular day-to-day activities of an employee, line managers are the most actively involved and engaged with their employees than top management. This iterates that employees are bound to pay attention to the words and actions of their supervisors, which influences their actions and behaviours (Cantor et al., 2012). Supervisors are therefore the backbone of providing necessary reasoning of certain environmental initiatives, acting as "interpretive filters", and encouraging their subordinates to get involved in relevant organizational policies and practices at work (Kuenzi & Schminke, 2009). Organizational green climate is thus a vehicle to provide employees with sustainable values, goals, and aspirations of the organization to align their own motivations, behaviours, and attitudes. In other words, the formative contents of organizational green climates such as policies, procedures, and supervisor behaviour, are the normative context that signals the staff of the organization's green values and consequently inform them of the attitude and behaviour that is expected out of them. Accordingly, it is postulated that when employees in the current transportation company sense the presence of an organizational green climate, through the content of environmental policies, procedures, and supervisor behaviour, they are more likely to carry out such green behaviours themselves.

In addition to external influences, an individual's behavior is also shaped by internal factors, including emotions and past experiences, which guide their actions. This study seeks to further study if EGB can be explained by affective commitment to one's organization.

Affective Organizational Commitment

An organization and its staff form a tight connection, and each relies on the other for their own survival and success. On the one hand, an organization possesses the resources to provide financial and psychological safety support to its employees with opportunities to

advance their professional careers. On the other hand, employees' participation in the organization is the driving force for the success of an organization in the long run. Commitment to the organization reflects the devotion of an employee's personal time to organizational activities indicated by the employee's preoccupation to the organization (Wiener, 1982). Organizational commitment entails acceptance and belief in a company's values and goals and a strong willingness to be retained in the organization, developed consistently over a period of time (Porter et al., 1974). It is rooted in the notion of an individual's psychological connection to the organization, the job, or the career, encompassing a deep emotional attachment and a sense of loyalty towards the organization (Still, 1983).

Allen and Meyer (1990) propose that organizational commitment is comprised of three components: affective, continuance and normative commitment. Affective commitment refers to the degree of emotional attachment employees have to an organization and the extent to which they identify and involve themselves in the organization (Meyer & Allen, 2012). Since this kind of commitment is frequently the result of policies, events and actions through which organizations garner a positive emotional connection among employees, in this study only focuses on affective commitment. It is expressed through interactive processes over time and gradually helps in forming a positive attitude towards the organization and its goals (Rhoades et al., 2001). Additionally, affective commitment results in lesser turnover rates, enhanced job performance and an overall improvement of the positive operational aspect of the organization (Meyer & Allen, 2012). It is then imperative for organizations that want to enable specific behaviours and retain their workforce, to first ensure that there is a certain degree of commitment instilled among the workforce which can influences their attitudes, that in turn affects their behaviours and decision to stay in the organization for a long time. This is also supported by environmental management research which implies that organizational commitment is needed from employees to achieve organizational greening (Cramer & Roes, 1993). Employees can experience a congruence or a fit between their own values and the value of an organization (Ostroff et al., 2005). It then follows that if the organization creates a climate based on values of environmental sustainability, employees are likely to try and 'fit' their own values to match that of the organization's. And given that affective commitment is the willingness to exert efforts on behalf of the organization, it means that employees who are affectively more committed will likely engage in green behaviours to maintain this value congruence. Thus, in the current research, it is predicted that organizational green climate can help in EGB, underpinned by affective commitment of

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the employee. If employees are more committed to direct their behaviour to organizational activities in achieving goals such as environmental sustainability, they are projected to devote their time and attention to both in-role and extra-role tasks. Affective commitment can prove to be a necessary link to achieve organizational greening because such a level of commitment can help to achieve environmental sustainability goals. In the management and environment literature, some studies have found a positive relationship between affective commitment and voluntary green behaviour (Temminck et al., 2015; Zientara & Zamojska, 2018). However, some studies argue that affective commitment is not an appropriate factor to measure in EGB, specifically voluntary green behaviours, because it only reflects an employee's willingness to comply with contractual obligations and their intention not to leave (Meyer et al., 2004; Raineri & Paillé, 2016). Many studies have conclusively found that strong organizational values of environmental sustainability can result in positive levels of commitment to act sustainably among employees (Lamm et al., 2013; Ren et al., 2023). Despite these results, it is unclear how affective commitment to the organization can serve employees to perform both types of green behaviours, which is a focus in the current research.
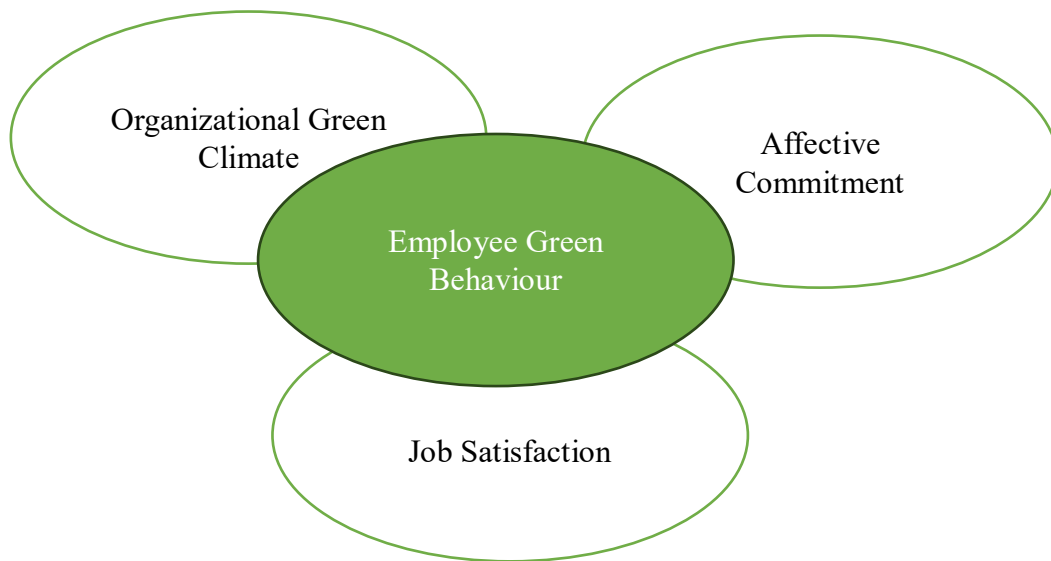
Job Satisfaction

Job satisfaction pertains to the level of individuals' affinity towards their jobs (Price & Mueller, 1981). It is the culmination of positive and negative feelings that workers have towards their work and represents the set expectations of an employee and how much they match and are met by the organization (Diefendorff & Chandler, 2011). The conventional factors that indicate levels of job satisfaction among employees are the levels of security and safety their work provides, a decent salary, and an organizational climate of respect and care towards colleagues by leadership and work teams (Sypniewska, 2014). Along with these factors, job satisfaction is also derived from the job design (Parker et al., 2017). It refers to the content and organization of one's work tasks, activities, and relationships at work (Parker et al., 2017). For example, the more variety of tasks that an employee has, the more satisfied they will be in their work. This is because they make use of and have the opportunity to learn more skills. Similarly, the significance of one's work can contribute towards job satisfaction if they perceive that what they are doing is meaningful (Rothausen & Henderson, 2019). The Job Characteristics Model (Fried & Ferris, 1987) suggests that job satisfaction increases when the job design factors (such as variety and significance) is increased or redesigned. Along the same line of reasoning, pro-environmental behaviours of employees can be

considered as tasks that are part of the job design that contributes to increasing the variety of their tasks and the significance of doing such tasks because it is meaningful to the company but also to the society at large. In the context of this research, job satisfaction is defined as the overall positive (negative) feelings that employees feel towards their work because of their voluntary or required green behaviour. Norton et al. (2015) postulated that EGB might increase intrinsic satisfaction among individuals, but the aspect of satisfaction related to work remains understudied in the literature of EGB (Tang et al., 2023). It will be valuable to study the extent of satisfaction gained from performing (required and voluntary) green behaviours as this will add to the growing literature of EGB and provide companies a placeholder for implementing practices and policies that produce positive feelings towards employees' work.

Theory Summary and Conceptual Model

Employee green behaviour entails the scalable pro-environmental actions and behaviours of employees in an effort to help organizations achieve their environmental sustainability goals (Tang et al., 2023). Such efforts have been demonstrated to positively contribute to an organization's success in realizing its environmental policies (Norton et al., 2012). EGB can be performed as a voluntary extra-role behaviour directed towards the environment and/or as a required in-role task expected by the employer as part of the job description (Norton et al., 2015). These behaviours are motivated by a variety of individual, group, and organizational level factors (Tang et al., 2023). The current research considers organizational green climate as the organizational motivator and affective organizational commitment as the individual motivator to explore the green behaviour of employees in an international transport company. Additionally, this study takes green behaviour research one step forward to explore EGB as a possible explanation in contributing to the job satisfaction of employees. The explanations of green behaviours and its outcomes need to be investigated more if organizations intend to improve their environmental performance. Moreover, investigating such a phenomenon in an industry such as the transportation sector can yield interesting results for both academics and companies. Lastly, majority of EGB research has been conducted with quantitative methods (Abadiyah et al., 2020; Tang et al., 2023; Zhang et al., 2021; Zibarras & Ballinger, 2011), whereas the current research exclusively makes use of a mixed-methodology design, which can yield more in-depth understanding of the topic. Figure 1 summarizes the research model of the present study.

Figure 1

Research Model

Method

Research Design

In order to gain insights into employees' viewpoints and attitudes on their green behaviour, motivations and job satisfaction, organization's green climate, and affective commitment, a mixed-method design was employed. This research design encompassed the utilization of the Q-sort methodology and interviews to collect both quantitative and qualitative data. In doing so, this research applied the deductive (sorting of pre-defined statements) as well as inductive (subsequent interviews) approaches.

The quantitative part of the design was composed of an online task, consisting of a 7-point Likert scale to measure self employee green behaviour and the Q sorting task for the remaining motivators and outcome (job satisfaction). In the Q task, participants were asked to rank pre-defined statements in a bell-shaped distribution, referred to as the Q sort. This method was developed by Stephenson (1935) to understand subjective viewpoints on a given issue among a group of people. It groups together similar subjective viewpoints into meaningful categories, which were not defined beforehand. The factor analysis of the Q sort samples presents factor groups that are grouped together based on similar ranking choices and gives an overview of the perspectives of participants (Coogan & Herrington, 2011). This allowed the researcher to discover and understand the various viewpoints of respondents without forcing them into predefined categories as in traditional surveys (Cuppen et al., 2016; Robbins & Krueger, 2000). Both the EGB scale and the Q sorting task were distributed using the Qualtrics online tool, as it was not possible to schedule the Q sorting task face-to-face with the participants.

In the qualitative part of the study, participants were interviewed based on the results of their Q sorting task. Interviews stand out as a prominent and frequently employed method for the purpose of collecting information from people (Cuppen et al., 2016). In the Q methodology, interviews are used for interpretation of the statistical factors to gain a qualitatively rich perspective from the participants (Coogan & Herrington, 2011). This allows for an open conversation to understand the choice of Q sorts more effectively. This study has been reviewed and approved by the BMS Faculty Ethics Committee.

Development of Employee Green Behaviour Scale and the Q Sample

Employee green behaviour was measured on a 7-point Likert scale to measure employee's own perspective of their green behaviour. It consisted of 7 statements which covered the required and voluntary green behaviours of employees. Required green behaviour statements were adapted from TIP Group's environmental policies which were applicable to its employees. For example, "I am a person who likes to commute to work in an environmentally friendly way (metro/bus/train/electric vehicle/carpooling/ etc)". Voluntary green behaviour statements were adapted from Boiral and Paille's (2012) valid and reliable instrument for Organizational Citizenship Behaviours towards the environment. For instance, "I am a person who volunteers for projects or events that address environmental issues at my organization." This scale was reliable ($\alpha = .767$) and a full list of the items in the scale is available in Appendix A.

The Q sort methodology is composed of a set of statements that are sorted in a bell-shaped distribution, with a scale that represents significance to the respondent. In this research, it consisted of a normally distributed 6-point scale, ranging from 'agree to greatest extent' to 'agree to least extent'. An example of a Q sorting distribution can be found in Appendix B. The set of statements, referred to as the Q sample, are derived from the concourse surrounding the topics of the present study, as these are the essence of the subjectivity that will later emerge from the sorting of statements by the participants (Coogan & Herrington, 2011). The statements were formulated to represent the topics in a way that people could easily agree and disagree with them. The Q sample consisted of the topics of job satisfaction, organizational green climate, and affective organizational commitment. There were six statements for each topic, making it eighteen in total and all were adapted from relevant literature. Items for organizational green climate were adapted from Zibarras and Ballinger's (2011) survey of UK organizations which outline pro-environmental organizational climate. For example, "It is important to me that our company has policies in place aimed at environmental protection". Items for affective organizational commitment were derived from Allen and Meyer's (1990b) affective commitment measurement instrument. For example, "It is important to me that I spend the rest of my career with this organization". Lastly, job satisfaction items were adapted from Thompson & Phua's comprehensively validated and internally consistent index for overall job satisfaction (2012) and Sypniewska's valid factors influencing job satisfaction (2014). For example, "It is

important to me that my work is valued in this organization". The Q sample can be found in the Appendix C.

Interview Guide

The follow-up questions associated with the sorting procedure comprised of inquiries aimed at eliciting participants' rationale for their sorting decisions, probing into underlying motivations and emotions that drove their choices. Participants were encouraged to engage in reflective thinking and to expand upon the reasons behind their arrangement of the statements, prompting them to provide detailed explanations and illustrative examples pertaining to specific statements. The Q sort rankings were utilized as a basis on which participants opened up about their opinions on various topics of this research. The interview guide can be found in Appendix D.

Participants

The participants in this study are comprised of the employees of TIP Group. As of 2023, there are 3,000 people employed at TIP Group consisting of office workers and mechanics in workshops. Participants were chosen through purposive sampling for two reasons. First, some participants were chosen purposively to meet the criteria that their job role required them to perform green behaviour and green tasks. This helped the researcher to include participants who have required EGB in their role. These participants consisted of employees who worked in the Environment, Sustainability and Governance (ESG) department of TIP Group. 8 of them were individually approached via email and out of them, 6 agreed to participate in the study. Secondly, in order to get a good understanding of voluntary EGB, the researcher approached some employees based on her familiarity with them. In this way, 5 people were approached in person at the Amsterdam office who agreed to participate. The remaining participants were selected through Workday, an enterprise cloud application for Human Resources, to get a fair representation of all locations and workers (both office and mechanics) at which TIP Group operates. These selected participants were emailed, out of which 13 responded to participate in the study, making it a total of 24 participants. All the participants were presented with the Q-sorting task to complete before the interview. However, one of the participants could not make the time to complete the task and attend the interview, hence, the sample of the present study consists of 23 participants.

TIP Group operates in 18 countries across Europe and in Canada. The participants in this study worked in the Netherlands, Germany, France, Denmark, and Austria. Participants were identified by the code given to them after the interviews – from P1 to P23. They were aged between 26-56 (M= 39, SD=10.75) and consisted of 11 men and 12 women. They had worked for the company between 4 months and 26 years (M= 4.8, SD= 6.7). All except one participant work in a hybrid manner, with one participant working fully remotely. Participant's occupations were varied and some of their roles were ESG advocacy manager, maintenance and development director, workday analyst, digital marketer, and country sales manager. All participants completed their own assessment of their EGB via the EGB scale before the Q sorting task. A full list of participant characteristics can be found in Table 1.

Table 1

Summary of Participants' Information

Participant	Age	Gender	Time Period of Employment at TIP Group	Current Position	Mode of Work	Place of Work
P1	51	Male	2 years	Internal Communications Director	Hybrid	Netherlands
P2	26	Female	2.5 years	Global Junior Marketer	Remote	France
P3	52	Male	5 years	Regional EHS Leader	Hybrid	Netherlands
P4	29	Female	1 year	Workday Analyst	Hybrid	Netherlands
P5	27	Female	2.5 years	Internal Communications Specialist	Hybrid	Netherlands
P6	43	Male	4 months	Digital Marketing Specialist	Hybrid	Denmark
P7	31	Female	3 years	EHS Leader	Hybrid	France
P8	55	Male	23 years	Regional EHS Manager	Hybrid	Germany
P9	28	Female	9 months	ESG Advocacy Manager	Hybrid	Netherlands
P10	55	Female	26 years	European Strategic Projects Director	Hybrid	Netherlands
P11	32	Female	9 months	Customer Service Specialist	Hybrid	Germany
P12	29	Male	4 months	ESG Assistant	Hybrid	Netherlands
P13	42	Female	6 months	Sales Effectiveness Leader	Hybrid	Netherlands
P14	29	Male	5 years	ESG Assistant	Hybrid	Germany
P15	33	Female	3 years	Operations Project Manager	Hybrid	Netherlands
P16	34	Male	1 year	Process Administrator	Hybrid	Netherlands
P17	51	Male	4 years	International Strategic Accounts Director	Hybrid	Netherlands
P18	29	Female	4.5 years	HR T&D Specialist	Hybrid	Netherlands
P19	38	Female	4 months	Marketing Communications Director	Hybrid	Netherlands
P20	56	Male	8 years	Country General Manager	Hybrid	France
P21	32	Female	1 year	Digital Marketer	Hybrid	Netherlands
P22	53	Male	8.5 years	Maintenance and Development Director	Hybrid	Netherlands
P23	42	Male	8 years	Country Sales Manager	Hybrid	Austria

Procedure

Participants were invited to the online interview via email. Additionally, the link to the online task was distributed among the participants via email one week before their interview was scheduled and reminders to complete the task were also sent out one day before the interview, in case they had not completed the task.

Quantitative Procedure

The online task consisted of the following steps- first, participants were informed about the purpose of the study and the two type of questions (EGB scale and Q sorting task) included in the task. They were also informed about the privacy and anonymity of the task, providing the researcher's and the Ethics committee's emails in case of questions. Second, they were asked to enter their full name and email address of the researcher, which was included on the page. Their full name was required as reference for their Q sorts, which would later be emailed to the researcher's email address. Participants were also allowed to receive a copy of their Q sort responses, if they indicated so. Third, they were asked to fill out the EGB scale. In the following section, the participants were tasked with the Q sorting. It was indicated that they had to divide the 18 statements into two groups and later they would be asked to rank these statements in the further steps. Hence, participants first divided the 18 statements into two groups, "agree to some or great extent" or "agree to less or lesser extent". Once they had finished this, they were asked to rank one statement they agreed with to the 'greatest extent' among the 9 statements they had ranked in the "agree to some or great extent" category. Next, they were asked to rank three statements among the remaining 8 statements which they agreed to a 'somewhat extent.' The same steps were repeated for the statements they had put into the 'agree to less or lesser extent' category, further ranking into the 'agree to the least' and 'agree to lesser extent'. The statements which they did not rank were automatically put in the neutral 'somewhat to lesser' category. At the end, they were thanked for their participation in the task. The online task took about 5-10 minutes to complete.

Qualitative Procedure

Once the participants had finished the online task, the researcher received their Q sorting responses by email, which provided the basis for the interview. Interviews were conducted from 30/8/2023 to 18/9/2023. They were recorded and automatically transcribed

with the participants' permission. The interviews lasted between 10 and 32 minutes, adding up to 84 pages of analyzed transcripts. Participants were asked for active consent before starting the recording of the interviews. The researcher first explained the purpose of the interview. They were made aware of confidentiality and anonymity of the interview and encouraged to express their opinions freely. The first question was about the participant's job and how long they had been working at TIP Group. Then, the interviewee asked them about their age and their mode of work. Next, the researcher moved on to the questions about the Q sorting results. Every participant was asked about the reasoning behind why they had ranked the statement which they agreed with to the greatest extent, statement they agreed with to the least extent and the statements which were ranked to somewhat agreed and agreed to lesser extents. In some interviews, follow-up questions were asked to probe the interviewee into talking more about their answer if the researcher thought there was more to be said by the participant. Moreover, interviewees were also asked to illustrate examples where necessary by the researcher. For participants who had been working for TIP Group for more than 5 years, questions were asked about the trends and evolution of the transportation industry related to environmental sustainability over the past decade. Consequently, participants were asked about their current green behaviour, and any challenges they faced when practicing green behaviour. If the participant had ranked a statement or mentioned something about job design, a follow-up question was asked about whether EGB would make their work more interesting. Finally, all participants were asked how TIP Group could be encouraged to act environmentally friendly at work.

Data Analysis

SPSS was used to analyze the average EGB scores for all participants and factor groups. The factor analysis of Q sorts was done with the help of the software programme PCQ by Michael Stricklin and Ricardo Almeida. This provided for a Centroid analysis for factor extraction and rotation of the factors with the help of Varimax rotation. The factor analysis was used to cluster those respondents who sorted the statements in a similar manner. Therefore, each cluster resulted in a factor.

Due to the open-ended nature and the semi-structured approach, thematic analysis in ATLAS.ti was used to code the data of the transcribed interviews. A thematic analysis allowed for finding similarities and differences in the dataset and generating unanticipated insights (Braun & Clarke, 2014). This seemed the correct choice due to the explorative nature

of the interviews. Additionally, it would provide an understanding of the reasons behind the Q sorts and related opinions that were expressed by the participants.

Before starting the qualitative analysis, the researcher reviewed the transcriptions to get familiar with the data. A coding scheme was created with an inductive approach after getting familiarized with the transcriptions (Braun & Clarke, 2014). After going through the data various times, the collected data were distributed among groups and identified by a code, based on a codebook. These codes provided an overview of the main points and patterns identified by the data. The first three themes emerge from the three research questions in this study. The fourth theme was determined by the data to establish a clear picture of EGB at the company. Table 2 provides an oversight of the themes and sub-themes uncovered in this study. Cohen's kappa in R was used to measure inter-coder reliability. The four main themes and its definitions with examples for each theme was shared with the second coder. Then, the second coder had to code three sample interviews based on this codebook. Both coders' agreements and disagreements were calculated and analyzed in R, resulting in substantial agreement, $\kappa = 0.80$.

Table 2

Coding Scheme: Observed Themes and Sub-Themes

Theme	Sub-theme	Sample comment
Determinants of an organizational green climate	Organizational policy and management support	"If an organization has policies in place, it also indicates that they find it important and that they put an effort around it. Because I think we all have a role to play when we talk about the environment and in this case also the protection of it. Having the policies in places is a signal, doesn't mean that everything will be followed. That's the second part, of course, but at least it's a signal that it's important to the organization."
	Communication	"Also, some inspirational speaking, probably. As I said, first presentation and then just small steps. There are many things that can be done."
Commitment towards the organization	Personal life vs professional life	"You know, because I think it's a bit unhealthy to make the companies problems my own problems. Be it from an environmental perspective, or really any other problem. Because yes, I work for the company, and it is my job to at least not cause any problems for the company of course. But at the end of the day, it's a big organization and I as one person can only do so much. So, I should be able to separate whatever is going on at work with the company from my private life."
Creating a happier workplace	A valued employee	"I want to make sure that I do stuff that adds value. I mean, you sit there for 40 hours, and you get paid. That's not my motivation. It's important that the stuff that you do, gets valued. So that you are actually supporting the organization and what it's trying to achieve."
	Job design	"Because my work is something that I do every day, so I need something interesting every day to be sure that I stay involved it."
Landscape of employee green behaviour at TIP Group	Green behaviours	"So, for instance, when I have to travel to Amsterdam, I tried to take the train and when I can, instead of taking the plane. I ride the bicycle any time I can at home."
	Challenges to EGB	"I think it's just good to point out that even though sometimes when you give people all the right opportunities, for example with the bins or you give them the chance, some people will still not care."

Results

This section is divided into quantitative and qualitative results. The quantitative part discusses the findings of the EGB scale and the Q sorting results. The qualitative part then dives deeper into the findings from the interviews based on the coding scheme and links them to the factor analysis of the Q sort. The qualitative results are discussed separately because of the open coding method applied to the interviews.

Quantitative Results

Prior to analyzing the Q sort data, the scores on the Employee Green Behaviour scale were analyzed. The average score of each statement for all participants is included in Table 3. Hybrid working is the most common green behaviour practiced by participants, followed by commuting with public transportation to work. Participants' self-assessment score on the EGB scale for each statement is more than 3.5, which is half on a 7-point scale, implying that they perceive that they act in an environmentally friendly way at work.

In the Q sorting analysis, two factors, Factor A and B were uncovered consisting of 6 significant Q sorts in each factor. The total explained variance of both factors was 46%, and Eigenvalues of both factors was more than 1. The explained variance is slightly less than the rule of thumb of at least 50%. However, it was equally divided between the two factors (Factor A = 23% and Factor B = 23%), and therefore it is acceptable. To understand similarities and differences between both groups, their average rankings for the Q sample is compared. Table 3 has the average rankings of all statements for both factor groups. The Q sample for job satisfaction has the highest average rankings for both groups. This indicates that overall, participants' ultimate goal is job satisfaction at work. It is followed by average rankings of OGC Q sample, which implies that participants are aware and concerned about the organization's environmental sustainability. The average rankings of Q sample for affective commitment are at the end of the order. This suggests that participants of both factor groups tend to be less emotionally attached to their organization and prioritize other aspects like job satisfaction and organizational environmental sustainability. When the total average ranking of each factor group is compared, it reveals that Factor A has a bigger average rank for job satisfaction compared to Factor B, suggesting that Factor A is a group which prioritizes job satisfaction at work over Factor B group. Whereas, when the OGC average ranking is compared, it is discovered that Factor B has greater averages. This implies that the group emphasizing ecological concern between the two is Factor B. Lastly, both groups have

almost similar rankings for affective commitment samples, which leans towards negative averages. This is congruent to the combined average rankings for both groups and indicates that the significance of affective commitment is not salient for either group in the Q sorting task.

Table 3

Average Q Sample Ranks for Factor Groups

Q Sample	Total Average Ranks for both Factors in Descending Order	Total Average Ranks for Factor A	Total Average Ranks for Factor B
3_4_ It is important to me that my work is valued in this organization[2]	1,83	2,00	1,73
3_2_ It is important to me that I feel a sense of accomplishment in my work[2]	1,75	1,50	1,91
3_3_ It is important to me that I feel happy in my work[2]	1,58	1,83	1,43
3_1_ It is important to me that my work is interesting[2]	1,50	1,83	1,29
3_6_ It is important to me that I mostly feel enthusiastic in my work[2]	1,00	1,67	0,58
1_1_ It is important to me that our company has policies in place aimed at environmental protection[2]	0,67	1,00	0,33
1_2_ It is important to me that our company recognizes its environmental impact[2]	0,42	-0,17	1,00
1_4_ It is important to me that our company is concerned with becoming more environmentally friendly[1]	0,25	-1,17	1,67
3_5_ It is important to me that my organization supports me in achieving my professional goals	0,17	1,00	-0,35
1_6_ It is important to me that our company is interested in supporting environmental causes	-0,08	-0,83	0,39
2_1_ It is important to me to feel a strong sense of belonging to my organization[2]	-0,08	-0,17	-0,03
1_3_ It is important to me that our company believes it is important to protect the environment[2]	-0,17	-0,67	0,33
2_2_ It is important to me that my organization has a great deal of personal meaning for me[2]	-1,17	-1,00	-1,27
2_5_ It is important to me to feel like a 'part of the family' at my organization[2]	-1,17	-1,17	-1,17
2_6_ It is important to me that I enjoy talking about my organization with people outside it	-1,17	-0,50	-1,58
1_5_ It is important to me that I am actively encouraged by the management of my company to act environmentally friendly at work[2]	-1,33	-1,50	-1,17
2_3_ It is important that I feel like my organization's problems are my own[2]	-2,00	-2,00	-2,00
2_4_ It is important to me that I spend the rest of my career with this organization[2]	-2,00	-1,67	-2,21

[1] Distinguishing statement between Factor A and Factor B, marked in red.
[2] Consensus statements among Factor A and Factor B, marked in green.
1_1 – 1_6 represents Q sample for OGC
2_1 – 2_6 represents Q sample for Affective Commitment
3_1 – 3_6 represents Q sample for Job Satisfaction

Among the two factors, there were 14 consensus statements. While the consensus drawn on job satisfaction statements is that they are ranked towards the positive end of the distribution, the consensus for affective commitment is that those statements are ranked at the negative end of the distribution. Among them, there are five statements of OGC that are ranked in the neutral part of the distribution. This is concurrent to the average rankings for both factor groups mentioned previously and further validates the claim that overall, job satisfaction is important to all participants, followed by ecological concern and affective commitment. Only one statement signaled the distinction between Factor A and Factor B, and it pertained to the company's concern in becoming environmentally friendly. Taking this into account and also the comparison of average rankings for both factors, the main difference that is observed between the two groups is the level of concern expressed towards environmental sustainability. In this way they are divided between participants who prioritize self-fulfillment needs at work and those whose concern for the environment reflects in their everyday green behaviour. The consensus statements and distinction statement can be found in Table 3.

Factor A: Self-fulfillment as a priority in the workplace.

This factor includes the sorts where statements related to job satisfaction received high positive rankings. In this group, participants' priority is seeking contention in their work by being valued in the organization, feeling accomplished with their goals, for their work to be interesting and for feeling an overall sense of happiness at the workplace. The implication is that green behaviours don't necessarily explain job satisfaction. This is supported by the fact that OGC statements received a lower average ranking in this group compared to group B.

Upon comparing the EGB scale scores between Factor A and Factor B, it is observed that Factor A exhibits lower scores than Factor B for five out of the seven items. This is peculiar because even though at first glance this group is not ecologically inclined, the two EGB statements on which they score high on indicate the presence of some voluntary green behaviour. The statements cater towards encouraging their colleagues to openly discuss green behaviours among each other and to motivate them to adopt these behaviours. Moreover, the average EGB score for Factor A (M= 4.54) is slightly over Factor B (M= 4.5). This could be explained by the fact that two out of the six individuals in this group are part of the Environment, Sustainability and Governance (ESG) department and because of the nature of their job, they are inclined to perform required green behaviours. However, it is noted that in this group, the lowest average score on the EGB scale is the lowest of the two groups (M= 2.83), which is aligned with the idea that green behaviour is not particularly significant for

this group. When required to make a clear decision, participants in this group tend to prioritize their personal fulfillment needs over their organization's sustainability concerns. The average age (M= 39.8) of participants in this group is slightly higher than those in Factor B, suggesting that younger participants are more environmentally oriented compared to the older generation of participants. The EGB scores for both factors are represented in Table 4.

Factor B: Concerned about the environment.

This factor includes the sorts in which organizational green climate statements are placed at a positively high ranking. In this group, participants are interested in their organization's concern over environmental sustainability. The highest average score on the EGB scale in this Factor group is lower than of Factor A (M= 5.42), but none of the participants scored below the lower than in Factor A. This suggests that the self-assessed scores carry more credibility in comparison to factor A. Even when participants were compelled to decide between prioritizing their own fulfillment versus concern for the environment, they consistently opted for the latter, reinforcing the reliability of their self-assessment in prioritizing environmental considerations. The average age (M= 37.83) of the participants in this group is lower than the average age in Factor A, with three participants falling under 30 years old, again indicating that younger participants are more ecologically concerned. The presence of two individuals from this group in the ESG Department is logical as individuals within the ESG Department are likely engaged in required EGB that necessitate environmentally responsible behaviours.

Table 4

EGB Scale Scores

EGB Statement	EGB Score for all Participants		EGB Score for both Factors		EGB Score for Factor A		EGB Score for Factor B	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
I am a person who likes to commute to work in an environmentally friendly way (metro/bus/train/electric vehicle/carpooling/ etc)	5.0	1.91	4.42	2.23	4.33	2.06	4.50	2.58
I am a person who works in a hybrid manner (partly from home & partly from office)	6.04	1.57	6.58	0.51	6.50	0.54	6.67	0.51
I am a person who acts in an environmentally friendly way at my work	5.78	0.93	5.67	0.77	5.33	1.03	6.0	0.0
I am a person who suggests new practices and policies that could improve the environmental performance of my organization	4.30	1.92	3.33	1.61	2.83	1.83	3.83	1.32
I am a person who volunteers for projects or events that address environmental issues at my organization	3.96	1.68	3.42	1.56	3.33	1.50	3.50	1.76
I am a person who encourages colleagues to adopt more environmentally friendly behaviour at work	4.61	1.63	3.83	1.52	4.33	1.50	3.33	1.50
I am a person who encourages colleagues to express their ideas and opinions on environmental issues	4.65	1.83	4.42	1.88	5.17	1.72	3.67	1.86
Average EGB Scores	4.90		4.52		4.54		4.5	

Qualitative Results

In total, 4 themes and 7 sub-themes were uncovered. The qualitative findings result from discussions with participants based on their Q-sort rankings. The first three themes encompass the linkages of EGB to organizational green climate, affective commitment, and job satisfaction. The fourth theme gives an overview of the current landscape of employee green behaviours at TIP Group, as told by the participants. Together, these themes help in answering the three main research questions. The themes and sub-themes are discussed further.

Theme 1- Determinants of an Organizational Green Climate

Employees discussed the importance and ways in which an organizational green climate influences them to act pro-environmentally at work. A strong foundation of policies, management support and communication can lead the way to establish practices of green behaviour at an organization. These three components serve as means through which both Factor A and B groups can be motivated to adopt environmentally friendly practices in the workplace.

Organizational Policy and Management Support

The existence of policies that address environmental sustainability and the support of the higher management and direct managers were pointed out as key factors of a strong OGC. Perceived policy support sets the intention that the company is concerned with becoming environmentally friendly (Ramus & Steger, 2000) and once these policies are put in place, it is easier for employees to follow them. A participant (P13) said: "If an organization has policies in place, it also indicates that they find it important and that they put an effort around it. Because I think we all have a role to play when we talk about the environment and in this case also the protection of it. Having the policies in places is a signal, doesn't mean that everything will be followed. That's the second part, of course, but at least it's a signal that it's important to the organization." Moreover, being actively encouraged by supervisors and higher management to put these policies into practice is a positive influence for employees. Another participant (P17) said "It's always important that the higher rank employees within any kind of company show the best practice. Alright, practice what you preach, and you have to show that you really care. You have to take actions as senior management and show that to your people and also help them and guide them." Similarly, a participant (P7) said: "Because this is something that I believe personally, so it's good for me to have the support of my manager, to give me direction to transfer in the professional world. I can say in my opinion, this is something that I believe, and I would like to engage in. So it's good to work for a company who supports you in this kind of actions."

The implication for Factor A is that even though there are policies and support from management in place, employees are primarily concentrated on their daily tasks to find job satisfaction. As a result, they may not pay much attention to an environmental framework at work. For Factor B, having well-defined policies serves as a guide, providing a structured

framework for environmentally friendly practices through a collective sensemaking to form their attitudes towards green behaviours. Additionally, supervisory support and encouragement acts as a reinforcement and an acknowledgement to boost to their green behaviours at work. Thus, perceived policy effectiveness and managerial support as part of OGC is a strong motivator or influence for EGB. Leading by example within the organization not only strengthens the commitment of those already aligned with environmental initiatives but also sets a positive standard for the broader workplace culture. This approach benefits both groups by contributing to a collective commitment to environmental responsibility and fostering a culture that aligns with the goals of environmental sustainability.

Communication

Increasing communication around environmental policies and practices is a point discussed often by participants. One participant said (P21): "It is very important nowadays that obviously the company takes some steps in improving their environmental impact, that there is some awareness and that they also make the rest of the people aware of what is the impact that we are doing exactly. Also promote the fact that we need to take steps as employees, also to prevent any further impact or pollution." The method of using cues such as visualizing separate bins as illustrated by a participant, can motivate employees to start with small steps. One participant (P3) said: "Yes, I think it's not that difficult; for example, the waste bins if you can make a visual. What kind of waste we want to see in the wastebin, or we don't want to see in the wastebin. We don't need to tell a story of 5 minutes for that. It's only, assign a small sign 'paper waste bin' or 'metal waste bin'. That could be enough. Only a sign says enough instead of a 5-minute talk to an employee. So, it can be very easy I think." Utilizing concise communication methods like trainings and informative posters can help plant a seed of awareness for green behaviour, especially for a group like Factor A. The nature of these communication tools is likely to capture attention and initiate the process of realization, encouraging a shift toward incorporating EGB into their daily practices.

Another communication method that can significantly contribute towards creating a OGC is explained by a participant (P21): "Also, some inspirational speaking, probably. As I said, first presentation and then just small steps. There are many things that can be done." This strategy caters to both Factors A and B, wherein discussions among colleagues is facilitated by someone knowledgeable who initiates conversations about environmentally friendly practices. This approach provides a shared platform for individuals from both factor groups to engage in constructive dialogues, exchange ideas, and gain insights into sustainable

practices. Communication regarding green practices at the workplace is limited and not fully established as a function at TIP Group (P14): "Training, we're also thinking about it but not enacted yet. And then some communication and culture maybe can make it in a broader way to address these things." Participants refer to the future when discussing their ideas about such strategies. However, there is a shared consensus that effective communication can significantly contribute to shaping OGC.

Theme 2- Commitment Towards the Organization

Q sort statements of affective commitment are commonly ranked at the lower end of the distribution, which is a consensus for both Factors A and B. The interview findings indicate that participants do not consider commitment to the organization as a central justification for their environmentally friendly behaviour. On the contrary, their views on commitment to their organization lean towards establishing a distinct boundary between themselves and their organization. Consequently, affective commitment does not elucidate the process of EGB.

Personal Life vs Professional Life

Participants distinguish between the organization's problems and their own problems (P4): "You know, because I think it's a bit unhealthy to make the companies problems my own problems. Be it from an environmental perspective, or really any other problem. Because yes, I work for the company, and it is my job to at least not cause any problems for the company of course. But at the end of the day, it's a big organization and I as one person can only do so much. So, I should be able to separate whatever is going on at work with the company from my private life." The duration of employment in the organization is not a reliable indicator that commitment will lead to environmentally friendly behaviour (P9): "I never joined this company to be here for so long. 26 years is a long time, but it was never like ohh I have to join a company that I can build my whole career with. I've just been very fortunate that I can, but it was never my aim when I joined the company. I think it's more important to me that the company stays relevant and in the market that it's working in, and it is continuously looking to learn and to improve itself." According to the participants, an organization is not intended to replicate the dynamics of a family, as there exists a fundamental distinction between one's actual family and the professional context of the workplace (P9): "I don't have to feel part of the family. I have to come to work, and I have to enjoy the people that I work with, but I don't have to socialize with them. I don't have to share things. It's more important that we all work

to the same values and norms than we all feel part of a family." It is difficult for participants to fully understand the context of environmental sustainability issue because it appears distant from their day-to-day work responsibilities (P3): "But why should you be aware of all the problems if you can't have any influence on it? So, problems related to health and safety or problems directly related to the Benelux, which I'm working in, that's important. But globally, all the problems of the organization, I'm not that kind of employee who can have an information to those problems."

Theme 3- Creating a Happier Workplace

Participants were invited to reflect on the reasons why they placed the statements under job satisfaction towards a positive ranking. Being a valued employee and job design came out as the two main reasons of job satisfaction for employees. As established in Factor A, a self-fulfilling role is what results in job satisfaction for many participants. Similarly, during the interviews, these participants explained that they derive job satisfaction through a sense of accomplishment, enthusiasm in work, and receiving professional support. Participants do not explicitly state that engaging in green behaviour contributes to their job satisfaction. One aspect which was brought up in some conversations was that of job design. Some participants preferred to individually craft or create their jobs to be interesting for themselves. In the course of this reasoning, the exploration of EGB as a method of job design was explored with these participants, and the responses indicate divergent views.

A Valued Employee

As is expected (Sypniewska, 2014), participants want their hard work to be recognized and valued by their employer. A participant (P13) stated: "I want to make sure that I do stuff that adds value. I mean, you sit there for 40 hours, and you get paid. That's not my motivation. It's important that the stuff that you do, gets valued. So that you are actually supporting the organization and what it's trying to achieve." A second participant (P12) explains the reason why he wants to feel accomplished at work: "So essentially, I need to find value in what I'm doing, and if I don't, then I don't tend to stick around for long at one place. That's one of my primary goals to really have accomplishment and know that I'm doing something that's meaningful." They express that it is easier to face any challenges or hurdles at work if these needs are met by their employer (P16): "Because if I'm happy doing something I believe in, I can overtake almost everything that can come to me. Challenges, wearings. Whatever it may

come, if I'm happy and I'm comfortable about it. I'm confident to go through and to know that I will overcome whatever."

        This sub-theme is consistent with the combined average rankings presented in the Q sort analysis, especially with Factor A, and supports the context that some participants of this study expressed a greater interest in self-fulfillment over the environmental sustainability concern of their organization. Traditional factors driving job satisfaction continue to exert a greater influence compared to environmental considerations as motivators. It is worthwhile to point out that all participants ranked the job satisfaction Q samples at a higher ranking, even those in Factor B. One participant explains (P16): "There are some other things that affect me more directly and I feel like I have to be honest and mark them as more important for me."

Job Design

Some participants shared that having interesting work can contribute towards overall satisfaction at work (P2): "Because for me I have two values; two big values and one of them is fulfillment and accomplishment. Which is why it's important for me to be happy. But on the other hand, I need to have a work that is interesting where I can grow and so on and learn a lot as well. So that's why it's very important for me that it's interesting, otherwise I would not enjoy it." Repetitive tasks become boring and having varied work helps employees stay motivated and learn more (P7): "Because my work is something that I do every day, so I need something interesting every day to be sure that I stay involved it." Despite feeling the need to craft their work themselves, such individuals had split views on whether joining a Corporate Social Responsibility event for the environment would make their work more interesting. One participant's (P15) response was "If a company introduced an initiative for the environment on a Friday evening, I think it would be an interesting event. I don't know if it would make my job more interesting per say." Another participant was asked and said (P18): "Yes, definitely yes, definitely would think so." Yet another employee explained (P23): "No, that would not make my work more interesting. It would probably create an additional sense for my life as a private person, as a human being, as an uncle. But it would not make my work more interesting." Even though these participants hold different views, there is some merit to the idea that it holds value for them as demonstrated by the preceding three interviewees. In accordance with the concept outlined in Factor B, it is probable that these employees are inclined to engage in voluntary green behaviour because of their intrinsic concern for the environment. This is also true with Factor A group, whose members have inclinations to participate in discourse surrounding green practices at work. This is reflected

in their decision to be willing to participate in such activities. Nevertheless, this does not provide evidence to support the idea that incorporating green behavior into job design enhances job satisfaction.

Theme 4- Landscape of Employee Green Behaviour at TIP Group

In this theme, the overall landscape of EGB at TIP Group is depicted by detailing the current green practices and challenges encountered in the implementation of EGB as told by the participants. The idea that their company is concerned with becoming more environmentally friendly is supported by the establishment of the ESG department to the participants. The most commonly practiced activities include travelling with public transport and choosing a hybrid model of working. This is congruent to the scores on the EGB scale previously mentioned in this paper. However, there are certain challenges expressed by participants like budget constraints, technician ignorance and lack of consciousness to do the right thing when it comes to practicing green behaviours at work. These challenges serve as a crucial indicator to the company, signaling an urgency to cultivate a culture that promotes environmental protection. If both factor groups are a representation of the employees of the organization, then it is a pivotal point that TIP Group gets increasingly concerned in encouraging it's employees to become more environmentally aware in order to achieve their environmental sustainability goals in the long run.

Green Behaviours

Participants are aware and informed about climate change (P1): "Environmental Protection is very high on the agenda; if you ask me what the biggest challenge is in this world, I would actually say climate change." In their professional life, they aim to reduce their impact and contribute in small ways to help the environment. This is done by commuting with public transport and a hybrid model of work. As explained by one participant (P2): "So, for instance, when I have to travel to Amsterdam, I tried to take the train and when I can, instead of taking the plane. I ride the bicycle any time I can at home." Another participant mentions (P3): "And yes, one or two days a week at home and three days a week on location. So the more or less hybrid." Workshops have also been made more environmentally friendly (P7): "In the workshops where it is relevant, we installed some solar panels. We launched a kind of campaign for all the sites where it's possible and we changed all the light in the workshop to LED and it was done quickly, within 2 months after the inflation." Even though Factor A

represents a population seemingly more focused on self-fulfillment, it might be accurate to say that while they care about the environment in their personal lives, at work they prioritize self-fulfillment over environmental concerns. One participant said (P17): "But in my opinion our impact is minor if you compare it to the other companies in the world. So that's why for me it's not that important. It doesn't have to reflect in the work. As a private person, and together with my wife and kids, we have also become more and more environmentally friendly." Conversely, for Factor B group, their personal inclinations toward environmental concerns transfer over into the professional life (P9): "I personally have been encouraging people to move off paper for five years. I don't use paper. I do everything on the computer and you know, I try and train anybody that wants to know."

Challenges to EGB

Encouraging mechanics and technicians towards adapting sustainable practices at work is pointed out as one challenge by two managers who work in close proximity of such employees. As mentioned by a participant (P7): "To be honest, technicians are the most difficult population to engage. So, we ask them to do simple actions such as sorting the waste, switching off the lights, etc. But at least they are doing their part and they do understand why. For a technician this is all the simple things that we ask them." In the same wavelength, another participant points out the difference between the older technicians versus the younger ones (P8) "An old technician which is very long in this job is very, very strict in this way and it's absolutely difficult to bring them to a point that they take a step back and think about what they're doing, if it is environmentally friendly or not." Whereas in an office setting, the main drawback is the time and effort it requires to do even a simple task as recycling, as illustrated by a participant (P5): "I think it's just good to point out that even though sometimes when you give people all the right opportunities, for example with the bins or you give them the chance, some people will still not care." The question of whether one's efforts truly make a difference in the grand scheme of things poses as a challenge, as it may discourage individuals who are otherwise inclined towards environmentally friendly behaviours (P13): "I think overall sometimes it's hard to see how you can make an impact. If my contribution will only be very small so why should I do it? Why bother?" Lastly, budget constraints and lack of genuineness shown by the company is a question in some participants' minds. As one participant says (P20): "But you know on other side when we want to take environmental initiative, if there is any money to spend at our level, there is no budget. So, it means that I have to take the money on my own budget, but I also have to reach my targets. I

have the feeling that they decide at the headquarters level, but in the same time I have my own initiative at my personal level, but the company doesn't care."

In light of these challenges, the adoption of environmentally friendly behaviour becomes a complex endeavor for both Factor A and Factor B groups. Participants in Factor A, who may not naturally lean towards green practices, are dissuaded from engaging in such behaviours due to perceived difficulties arising from the company's insufficient provision of resources. This group, already less inclined toward green initiatives, may feel a lack of motivation to overcome these barriers. Conversely, participants in Factor B, who exhibit a willingness and proactiveness in embracing green behaviour, find themselves confronted with hurdles despite their eagerness to engage. These challenges, even in the face of a positive attitude towards environmentally friendly practices, act as deterrents and block the integration of such behaviours into their routine work activities.

Discussion

The main goal of this study was to understand how the process of employee green behaviour can be explained by an organizational green climate and affective commitment of the employee. Additionally, the mixed methodology investigation also helped to understand the possible ways EGB creates job satisfaction among employees. The next sections will further elaborate the main findings, theoretical and practical implications, limitations and recommendations for future research, and conclusion.

Main Findings

Evidence to answer the first research question "*How does organizational green climate explain the process of employee green behaviour?"* was found. Organizational green climate is explained through organizational policies that support the environment, managerial support, and effective communication strategies. Congruent to previous studies (Chou, 2014; Isensee et al., 2020), institutional and managerial support contribute to the formative contents of a green climate, signaling the organization's green values, to in turn inform employees about the behaviours that are expected out of them. These components of OGC tend to create a sense of attachment and responsibility towards corporate environmental goals among employees (Raineri & Paillé, 2016). However, organizational hurdles such as lack of open communication and limited resources offered by the company act as barriers in integrating a seamless OGC. This has adverse consequences because it undermines the organizational environmental efforts (Ramus & Steger, 2000). In turn, it discourages employees' efforts to act environmentally friendly at work (Paillé & Raineri, 2015). For an organization to cultivate an environmentally conscious culture, it has to seamlessly integrate this ethos across the three elements of OGC, ensuring alignment with the company's sustainable vision. An organization whose employees have a mixed attitude towards green behaviours, such as the one in the current study, could then benefit from fully realizing these components to create a salient OGC.

The second research question was "*What are the possible explanations by which affective organizational commitment helps in determining employees' willingness to act pro-environmentally?"*. The present study made a case for affective commitment as an explanation through which employees engage in green behaviour. However, this is not the case for the participants of this research. If their organization encourages them to act in an environmentally friendly way, they will try to find a fit between their personal ecological

values and that of the organization because of sensemaking (Maitlis & Christianson, 2014). However, it is not because of the feelings of emotional attachment they have with their company. Instead, they create a clear boundary between their work and private life. Affective commitment can explain the reason why some participants in this research have been with the same organization for a longer period of time. It influences their decision to stay at their company but cannot explain the reasoning behind green behaviours. For organizations, it is then more valuable to invest in an OGC for encouraging green behaviours instead of relying on participants' commitment to demand such behaviours. There is an extent to which a workforce can contribute to the company's challenges and the aspects beyond their capacity. They refrain from dwelling on the company's issues and avoid becoming overly engaged in them because it can create unnecessary stress for them. This finding is in contrast to a previous finding which suggests that a within-person motivator such as affective commitment underpins the relationship between an OGC and the green actions of individuals (Zientara & Zamojska, 2018). An alternative explanation is that EGB is actually an antecedent to employee affective commitment (Ren et al., 2023). A voluntary green behaviour is positively associated with affective commitment by increasing social acceptance at work and identification with the organization, and enhancing moral credit of an individual, (Ren et al., 2023). This is also congruent to the previous finding related to job satisfaction, which is that engaging in environmentally friendly behaviours at work heightened participants' feelings of self-esteem. Thus, green behaviours at work contribute largely to individuals' esteem and moral credit, leading to affective commitment.

The last research question was "*In what ways does employee green behaviour create job satisfaction among employees*". Performing green behaviours is not a clear justification for job satisfaction. Instead, the explanations for employees' overall satisfaction at work is owed to aspects of being a valued member of their organization and variety in their work. Furthermore, accomplishing set goals, getting professional support by the company, and feeling enthusiastic with their tasks at hand are more ways in which job satisfaction can be explained. This finding is compatible with a previous study about voluntary workplace green behaviours (Kim et al., 2019), where they found no evidence suggesting a justification for job satisfaction concerning EGB. Despite this, both required and voluntary green behaviours are practiced by participants. One explanation for this is that performing green behaviours enhances intrinsic self-esteem and adds value to these individuals rather than contributing to their work satisfaction (Lee & De Young, 1994). EGB has shown to have positive impact on the self-esteem and well-being of employees (Zhang et al., 2021). In the present research it is

conceivable that engaging in environmentally friendly behaviours at work resulted in participants' heightened feelings of self-esteem, instead of contributing to their overall job satisfaction. Another explanation for this is that voluntary green behaviours are a result of an individual's own belief that acting sustainably is important both in general and for one's current organization (Lamm et al., 2013). Many interviewees said they act environmentally friendly both in their personal lives and professional lives. Thus, it could explain why they adopt these practices in private lives and extend them in their work too, but that it lacks clarification for job satisfaction. Job design is one way to enhance job satisfaction as it presents variety of tasks and more opportunities to learn and grow in an organization (Fahr, 2011). This is supported in this study as participants clearly express a desire for engaging in interesting work. However, the inclusion of green tasks in day-to-day work does not evidently reflect in their job satisfaction. As stated by a participant during an interview, it is likely to make their workplace more enjoyable but unlikely to provide variety in their work. Therefore, it is worth exploring further how such activities can be helpful in providing opportunities for employees to practice their personal concern towards the environment at their workplace.

Theoretical Implications

The current study contributes to the ongoing investigation of work outcomes such as job satisfaction for employees practicing green behaviours. It suggests that green behaviours do not explain job satisfaction among such individuals. Instead, the implications are related more to their personal ecological beliefs and suggests that practicing green behaviours provides them a sense of moral credit from which they derive intrinsic satisfaction. Despite the presumption that the combined efforts of individuals' green behaviours have a positive outcome for an organization's sustainability goals (Boiral, 2009), how this can explain job satisfaction is quite often neglected in literature (Kim et al., 2019). And since it was not established in literature whether or not EGB explains job satisfaction, the present research contributed to expanding the scope of this stream of EGB theory.

Present research also confirms that an organizational green climate explains the process of EGB through perceived policy, managerial support, and effective communication. It contributes to the green work climate literature, and specifically to the person-environment fitting perspective (Tang et al., 2023) to support the claim that perceived environmental policies and managerial support, underpinned by effective communication leads to green behaviour by establishing behavioural norms for employees. Additionally, this study also

adds to the component of affective commitment in the green behaviour literature, with findings suggesting that commitment to the organization does not explain the reason for green behaviour. This was in contrast to findings by Zientara and Zamojska, (2018) and thus demands for further research to more closely study this aspect.

By incorporating a mixed-method design of quantitative and qualitative measures, present research has contributed to a methodology perspective through which green behaviour is studied. It is a case study through which many concepts under the EGB literature can be investigated. It provides more in-depth insights into peoples' motivations to act in certain ways and opens up discussions which would normally go undiscovered in traditional surveys and interviews. Lastly, despite the growing increase in research about green behaviour in recent years (Tang et al., 2023), there are limited studies which are based in the transportation industry. For this reason, the current research contributed to the green behaviour literature by leveraging a sector which is seldom explored in this field. Ultimately, the findings of this research indicate a need to study the concept of green behaviour in different sectors in order to provide context through which these results can be applied.

Practical Implications

The results of this research provide some useful implications for organizations that aim to encourage green behaviours. First, organizations need to recognize the importance of a culture that engenders environmental sustainability in order to encourage employees. As this study found an explanation between environmental policy and green actions, organizations can invest in incentivizing policies to encourage green behaviour. Companies can provide subsidies and compensation on travel costs and promote hybrid working policy among its workforces.

Second, for employees in the transportation sector both in-office and in workshops, additional trainings and environmental awareness can be provided to increase their environmental knowledge. Formal trainings and informal group sessions with their managers and colleagues can benefit employees to be persuaded to work environmentally friendly in the long run.

Finally, the results highlighted a need for a communication function to disintegrate policies, strategies, and programs to employees. Promotional campaigns within the organization can enhance employees' perceptions of policy effectiveness. Communication is an important tool to guide employees to comprehend relevant policies and practices and improve their understanding of such behaviours.

Limitations and Recommendations for Future Research

TIP Group's workforce consisted of partly office workers and partly workshop employees. However, the sample in this study only consisted of office employees and did not include any individuals from the workshops. This doesn't fully represent the complete workforce of the organization and is thus a limitation of the present research. Additionally, the statements in the Q sample could be adapted better to interconnect them towards the central concept of EGB. This is a limitation because it restricted a deeper understanding of the interconnectedness of the aspects of this study to understand EGB. In the future, researchers can adapt the statements in a way that reflects the central concept of EGB. Moreover, the interviews of this research were not in-depth, owing to the researcher's limited training to conduct interviews. This limited the researcher to understand the aspects comprehensively and hence provides an incomplete picture of the EGB process. Lastly, the mode of sampling being purposive could have potentially eliminated important groups of employees imperative to understanding EGB. This sampling method is also inclined to have subconscious researcher bias, which could also have led to bias in the findings of the current research.

The findings of this study were analyzed by data collected from office workers at one single company in the Netherlands. Hence the generalizability of these findings is limited and is not a representation of green behaviours across different individual, organizational and societal level. In the future, researchers can choose to conduct the same study in a different context to compare whether the results are similar or vary due to contextual differences. Moreover, numerous green behaviour studies in the past have been conducted in a longitudinal design to better infer the relationships between factors surrounding EGB. The current research was measured at one point in time, and hence only details a single point in case. In the future, it can be worthy to investigate the longitudinal differences of the explanations and performance outcomes of EGB. The present study investigated explanations of OGC, affective commitment and job satisfaction related to employee green behaviour with a mixed-methodology design. Future research can make use of the mixed-methodology design to study other variables in the green behaviour literature such as leaders' supportive behaviours and other performance outcomes for green behaviour. There was no evidence suggesting the explanation of affective commitment on green behaviour and of it on job satisfaction in the context of the current research. However, in the future it can be interesting to study if demographic differences such as country, age, and gender play a part in

determining these effects differently. In present research, both required and voluntary green behaviours are explained by environmental policy, management support and communication as part of OGC. Future research can further investigate how these explanations individually influence required and voluntary green behaviours to deepen the understanding of influences on specific green behaviours.

Conclusion

This research aimed to understand how the process of employee green behaviour is explained through an organizational green climate and affective commitment of the employee. Additionally, it also set out to explore in what ways the process of green behaviour can explain job satisfaction among employees. The proposition was that a green climate encourages individuals to act green at work through learning cues and perceiving what is the right thing to do. This study confirmed that the environmental policies, managerial support, and communication are the determinants of an OGC which encourages employees to act green at work.

This research also showed that affective commitment is not a motivator to act environmentally friendly at work. Green behaviour is practiced in part because of personal ecological concerns about the environment and in part because of perceived organizational policies and management support. Additionally, this research contributed to the need for investigating workplace outcome of job satisfaction for employees but found no concrete evidence to suggest that EGB enhances employees' job satisfaction. Finally, this research contributes to the green behaviour literature from the person-environment fit perspective and is helpful for organizations to understand the ways in which they can achieve their environmental sustainability goals. Taking the results together, what can influence EGB is an organizational culture that values being green and encourages individuals to support the sustainability goals of the company.

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Appendix A- EGB Scale

I am a person who likes to commute to work in an environmentally friendly way (metro/bus/train/electric vehicle/carpooling/ etc)

I am a person who works in a hybrid manner (partly from home & partly from office)

I am a person who acts in an environmentally friendly way at my work

I am a person who suggests new practices and policies that could improve the environmental performance of my organization

I am a person who volunteers for projects or events that address environmental issues at my organization

I am a person who encourages colleagues to adopt more environmentally friendly behaviour at work

I am a person who encourages colleagues to express their ideas and opinions on environmental issues

Appendix B- Q Sample

Statements
1_1_ It is important to me that our company has policies in place aimed at environmental protection
1_2_ It is important to me that our company recognizes its environmental impact
1_3_ It is important to me that our company believes it is important to protect the environment
1_4_ It is important to me that our company is concerned with becoming more environmentally friendly
1_5_ It is important to me that I am actively encouraged by the management of my company to act environmentally friendly at work
1_6_ It is important to me that our company is interested in supporting environmental causes
2_1_ It is important to me to feel a strong sense of belonging to my organization
2_2_ It is important to me that my organization has a great deal of personal meaning for me
2_3_ It is important that I feel like my organization's problems are my own
2_4_ It is important to me that I spend the rest of my career with this organization
2_4_ It is important to me that I spend the rest of my career with this organization
2_6_ It is important to me that I enjoy talking about my organization with people outside it
3_1_ It is important to me that my work is interesting
3_2_ It is important to me that I feel a sense of accomplishment in my work
3_3_ It is important to me that I feel happy in my work
3_4_ It is important to me that my work is valued in this organization
3_5_ It is important to me that my organization supports me in achieving my professional goals
3_6_ It is important to me that I mostly feel enthusiastic in my work

Appendix C- Bell Shaped Distribution
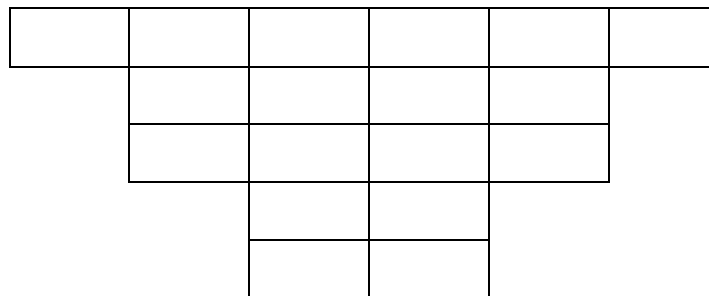
Appendix D- Interview Guide

About the participant

1. What do you do at TIP Group and how long have you worked at TIP Group?
2. What is your age?
3. What is the mode of your work (hybrid/ remote/ from office)?

About the Q-sort ranking

1. [Q sort item] Why did you agree with this statement to the greatest extent?
2. [Q sort item] Why did you agree with this statement to the least extent?
3. [Q sort items] Why did you agree with these statements to somewhat extent?
4. [Q sort items] Why did you agree with these statements to lesser extent?

Others (about EGB)
1. In what ways do you think the employees at TIP Group can be encouraged to act environmentally friendly at work?
2. And could you give me certain examples of how you do that?
3. I would like to ask you a follow-up question. Would you say if there was an element of environmental sustainability task every week added to your work like a small task, not a very big one, it would make your work interesting?
4. Do you think that TIP Group can expedite the process of communicating the impact to all of its employees?
5. And then a follow up question to your answer would be what kind of activities are you aware of that you implement in your work life to act environmentally friendly?
6. Do you think that people would actually contribute if the company would motivate them to act environmentally friendly in their own personal time?
7. If the management of TIP Group would encourage you to act environmentally friendly at work, would you?
8. And do you think that TIP Group currently believes that it is important to protect the environment?
9. Is it your personal value of being environmentally friendly and you want to be supported by your company's management to keep these values at your work?
10. As you are an EHS manager, would you say that for you, the environmental function at TIP Group is quite important for you?
11. Do you discuss environmentally conscious behaviour at work with your colleagues?
12. You are part of the workshops, could you give me some examples in how or what ways you try to become more environmentally friendly at workshops?
13. The employees at the workshops such as technicians, how can TIP Group encourage them to act environmentally friendly in the workshops?
14. How would you say that the transportation industry has changed from the last, let's say, 30 years in the environmental landscape?
15. Has EHS made your work more interesting?
16. And would you say that if you were not working solely in sustainability, but still working at TIP Group, would you still be concerned with the company becoming environmentally friendly?

17. Do big players in the industry such as TIP Group need to convince the customer to be more environmentally friendly and how do you adapt to the regulatory changes as well?

18. How do you ensure you are not dictating this behaviour on your employees?

19. Is TIP Group interested in supporting environmental causes or it's already supporting any environmental causes?

20. Do you think that at current times, the employees are working in the most environmentally friendly way at TIP group, or do you think there is still chance to inculcate that for them?

21. In what ways do you think that ESG initiatives or the ESG function could be improved in the company?

22. Do you think that the culture of a company can influence the behaviour of their employees?

23. You talked about the importance of having a culture and having informal conversations with colleagues. Are these conversations taking place only at Amsterdam HQ or do you also find that people from other regions also talk about this?

24. You are at a higher position in the company. Do you think it is the responsibility of the higher management of the company to improve the culture in the company of environmental sustainability?

25. Is there anything else you would like to share about employees' sustainable behaviour that we haven't discussed?