

UNDERSTANDING THE COMMUNICATIVE ENVIRONMENTAL ROLE OF ECO-
LABELS THROUGH THE APPLICATION OF RECEPTION THEORY

by

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DISSERTATION ABSTRACT

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Title: Understanding the Communicative Environmental Role of Eco-Labels through the Application of Reception Theory

This dissertation research focuses on studying the communicative environmental role of eco-labels. The research shows how eco-labels' certifying organizations and brands communicate their environmental sustainability in general, and in relation to eco-labels in specific. In addition, the research examines how consumers interpret eco-labels and how they could become interested in environmental sustainability. While there are several studies on eco-labels, there has been little focus in relation to their communicative environmental and awareness raiser role. The research used case studies and focus groups as methods to address the three main stakeholders. The Reception Theory was used as the primary framework. The findings suggest that eco-labels' messages can be interpreted differently by the audience, and could have sometimes communicative role regarding environmental sustainability issues, such as forest health. Yet, the previous situation depends on factors related to the audience and the symbols encoded in the eco-labels' messages. Further, social media networks and mobile phone applications could play a role in facilitating communication between consumers, eco-labels, and environmental sustainability information.

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CHAPTER I

INTRODUCTION

Eco-labels are considered marketing and environmental signs that help consumers and businesses at the same time. These eco-labels are also called green labels, environmentally friendly labels, or environmental stamps/signs. Nowadays, brands use eco-labels on their products mostly to promote the brand or to show compliance with some environmental regulations as the research shows in the case of the Dolphin Safe eco-label and how that label is required by law in several countries. Not all eco-labels are mandatory i.e., it is up to the brand to use them or not, for instance, the RainForest Alliance eco-label that appears on Tea and coffee products is not required by law. Not to mention that some eco-labels show in international markets as in the case of Fair Trade International eco-label.

To better understand how eco-labels function in society and in markets, it is helpful to understand their role in sustainability communication and marketing communication. These two fields affect each other when brands use eco-labels. Businesses and non-profit organizations use sustainability communication with different purposes. In relation to businesses, sustainability communication practices have evolved. While many of these practices started as compliance with regulations, nowadays businesses have other goals, such as competition and responsibility toward the environment. Eco-labels' certifying organizations, on the other hand, have used sustainability communication to raise awareness about several environmental issues, such as forest health and biodiversity. Businesses, especially in the developed countries, have found themselves in a position that requires them to communicate their environmental

responsibility to consumers through eco-labels. One of the prominent reasons for that was the effect eco-labels have on consumers, especially in relation to purchase intention (Mattoo & Singh, 1994; Erskine & Collins, 1996; Archer, Kozak, & Balsillie, 2005; D'Souza, Taghian, & Lamb, 2006; Testa, Ivaldo, Vaccari, & Ferrari, 2013; Kamar, Bebek, Carrigan, & Bosangit, 2016; Neto, 2019). Also, there is a reason related to the effects of eco-labels on consumers' attitude toward the brand image (Køhler Hansen, 2015). Another reason is related to regulation as in the case of Dolphin Safe eco-labels (NOAA Fisheries, n.d). Yet, it cannot be ignored that there are several businesses that follow good sustainability practices because these businesses are confident about the benefits of such practices. An eco-label is considered one of several tools used by businesses to communicate environmental sustainability. Other tools, for example, include electricity reduction and the use of renewable energy in stores and in transportation.

Another aspect that needs to be understood is the mixed boundaries between the stakeholders who are involved in eco-labels' production and usage. The relationship between these players can be illustrated as a triangle that have the three main stakeholders (eco-labels' certifying organizations, brands, and consumers). Eco-labels are generated by eco-labels' certifying organizations to endorse brands' compliance with environmental sustainability, and to work as communicative environmental tool when read by consumers. Brands, on the other hand, use eco-labels to achieve their own interests and to show that they care about the environment, which supports the efforts of marketing, public relations, and sustainability. Consumers see eco-labels and interpret them according to factors related to the eco-labels' message, how brands communicate

the labels, and how these labels related to consumers.

Background of the Problem

Eco-labels have been developed and served different roles. Businesses around the world started using eco-labels – mostly in the developed countries – to achieve many goals.

First, marketers found that eco-label was a good way that can enhance marketing efforts due to the labels' effects on consumers. In addition, the use of eco-labels can enhance the public relations' efforts conducted by brands in a way that tells consumers that a specific brand is good for the environment. As a result, that will be beneficial for the brand in terms of reputation and sales. The use of eco-labels was criticized several times because there were situations where brands used eco-labels to overestimate the environmental benefits of the product i.e., greenwashing, or to give misleading information. The previous point has been an issue for a long time despite the accountability measurement and transparency requirements required by eco-labels' certifying organizations. In recent years, the use of eco-labels has become a phenomenon around the world. Consumers can find one or more eco-labels on daily products, ranging from food and beverages eco-labels such as Rainforest Alliance Certified, to energy eco-labels like Energy Star.

However, the use of eco-labels is no longer a clear point of differentiation. The reason is that brands want to avoid accusations of greenwashing, which refers to the overestimating of the environmental benefits. The relationship between eco-labels and consumers cannot be ignored. If the current pattern of eco-labels' development continues, the future will show new capabilities related to eco-labels. These capabilities relate mostly to the communication tools and the amount of information that can be transferred to consumers through eco-labels.

A challenge that faces the study of eco-labels and their environmental communication capabilities is the lack of standardized uses of these labels around the world. There are some standardized measurements for some famous labels like Forest Stewardship Council, FSC (in this study), and the Sustainable Forestry Initiative, SFI (in this study). Another issue is the different regulations and laws that govern the use of eco-labels as it is explained in the literature and the discussion sections. Some countries require brands to show their environmental compliance, where other countries do not have the same regulations. In relation to these two issues, this study shows the effect of communication technologies, especially social media networks and mobile phone application as ways that can bridge communication gaps and provide consumers with better information about eco-labels and the environmental sustainability issues the labels deal with.

Consumers were not totally aware about eco-labels when brands started using them in ninety. Then, due to the reasons of the increased usage and the development in communication channels, consumers have become more educated and more willing to learn about eco-labels, especially if they are interested in sustainability. Other factors include environmental education, whether through schools or through media channels. Regarding social media networks, these sites can create an atmosphere for brands to share their sustainability practices, like in the examples of Tetley Tea brand, where the brand allows consumers to communicate with farmers directly through Facebook. In addition, social media networks created a platform that allows people who are interested in sustainability to discuss sustainability topics with other interested people. Although there are more consumers nowadays who are educated about eco-labels, there are consumers

who are still not aware about the meaning or the role of eco-labels. These differences are shown in the discussion section of this study.

Although there is still misunderstanding and ambiguity about eco-labels, the communicative environmental role of these labels exists but there are factors that relate to the eco-labels' message and the targeted audience. Not to mention that there are many opportunities to better develop these labels in a way that help brands to better communicate these labels to consumers. On the other hand, eco-labels certifying organizations' efforts can be transferred through different communication channels to better serve different audiences. With the developing trends in communication channels, eco-labels could serve a communicative and awareness raiser role about environmental sustainability and can enable businesses to promote their products in a better way.

Purpose of the Study

This research explores the various meanings encoded on to eco-labels by non-profits, how these meanings are leveraged by brands, and how consumers interpret these meanings. Specifically, it explores the ways in which these labels have been used to provide information about environmental sustainability and how the audience (consumers) interpret the labels differently. From a marketing perspective, eco-labels can encourage consumers to make better purchase decisions and can enhance brands' reputation. Brands are considered one of the audience groups of eco-labels. From a communicative environmental perspective, an eco-label could serve as a medium that transfers environmental sustainability information to consumers. This study explores the communicative environmental part and sheds the light on the extent in which eco-labels

have such impact in addressing environmental sustainability issues like forest health as in the case of the two labels in this study (FSC & SFI)

To better understand the role of eco-labels, this study looks at eco-labels from three different angles (non-profit organizations, consumer brands, and consumers). Each one of the previous three players affect the other two. Eco-labels' certifying organizations create eco-labels and develop them. Brands use eco-labels mostly because these labels can serve different purposes and influence consumers' purchase intention. Consumers use eco-labels to mainly understand about the product they are buying. While previous studies focused more on the marketing side of eco-labels and dealt with one of these players, this study explored the communicative environmental role of eco-labels while exploring the triadic relationship between brands, eco-labels' certifying organizations, and consumers.

The research used the Reception Theory as a framework to understand the encoding/decoding process and the audience interpretation of eco-labels. The research used four case studies and two focus groups' discussions to explore several areas related to eco-labels, brands, and eco-labels' certifying organizations. The four case studies include two case studies related to eco-labels' certifying organizations, and two case studies related to brands. The two case studies related to eco-labels' certifying organizations are Forest Stewardship Council, FSC, and Sustainable Forestry Initiative, SFI. The two case studies related to brands are Walmart and Boise Paper.

Research Questions

This study has three research questions that explores the relationship between brands, eco labels' certifying organizations, and consumers.

Q1. What are the communication strategies used by eco-labels' certifying organizations to create awareness about environmental sustainability?

Q2. In what ways did brands use eco-labels to communicate environmental sustainability?

Q3. What kinds of environmental information do consumers take away from eco-labels?

Significance of the Study

A few previous studies (Rametsteiner & Simula, 2003; Leire et al., 2004; Lewis et al., 2010; Perelet, Mason, Markandya, & Taylor, 2014; Taufique, Vocino, & Polonsky, 2016) mentioned the potential effect of eco-labels in addressing environmental problems and transferring environmental information. Other studies focused on the marketing side of eco-labels i.e., the benefits of eco-labels in affecting purchase intention (Mattoo & Singh, 1994; Erskine & Collins, 1996; Archer, Kozak, & Balsillie, 2005; D'Souza, Taghian, & Lamb, 2006; Testa, Ivaldo, Vaccari, & Ferrari, 2013; Kamar, Bebek, Carrigan, & Bosangit, 2016; Neto, 2019). This dissertation study explores the communicative role of eco-labels in relation to environmental sustainability while understanding the triadic relationship between brands, eco-labels' certifying organizations, and consumers. In addition, the study explores the role of communication technologies and how these advances in the communication field can benefit consumers, brands, eco-labels' certifying organizations, and the environment.

Eco-labels' certifying organizations can benefit from this study by developing their communication practices and improving the current eco-labels' messages. The study can help brands in improving their uses of eco-labels in a way that helps consumers to make informed purchase decisions and to have correct sustainability information that

affects consumers' life and the environment. This effect on consumers includes areas of consumption, waste reduction, and sustainability practices such as reusing and recycling. Finally, the study – with other studies in the field- contributes to the current works that aim to save the environment and find better ways for production and consumption.

Definition of Terms

There are several concepts related to the topic of this study. The main concepts are eco-labels. The eco-label's term is used in the coming chapters to refer to green labels or environmentally friendly labels, or green signs, or green stamps, or eco-seals, or eco-certifications. To start with, eco-labels are defined as signs and logos located on products' packages to provide some guidance for consumers. These signs are supposed to transfer information about an environmental aspect a product deals with. Products carrying these signs are expected to be environmentally friendly. In other words, the production and the life cycle of such products are expected to be less harmful for the environment. Perelet, Mason, Markandya, and Taylor (2014) defined eco-labels as “easily identifiable seals on product packaging. They [eco-labels] inform consumers about the effects that the production, consumption and waste of products and services have on the environment” (p. 66).

This study also explored how consumers deal with environmental information found in eco-labels. Environmental information could refer to the facts and knowledge consumers can have regarding an environmental issue, such as water scarcity, global warming, and responsible production and consumption. Environmental knowledge refers to “the level of knowledge about environment and negative effects of human being on environment” (Dima, 2014, p. 320). Environmental knowledge varies depending on

several factors, such as environmental interests, education, and society. Environmental knowledge is also related to attitude toward the environment.

In relation to sustainability, the World Commission on Environment and Development (1987) defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (p. 41). Moving from the general meaning to more specific one, corporate sustainability can be defined as “meeting the needs of a firm’s direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders as well” (Dyllick & Hockerts, 2002, p. 131). The two previous terms reflect a wide range of practices that go beyond the environment to include social and economic issues.

This study focuses on the environmental aspect of sustainability, which could be defined as “sustainability of the ecological services on which humans depend, directly and indirectly. These services include the provision of food and other raw materials, and the ecological services required to support agricultural production” (Perelet, Mason, Markandya, & Taylor, 2014, p. 86). Regarding corporate sustainability communication, Signitzer and Prexl (2007) defined it as “an evolving concept that refers to corporate communications about sustainability issues” (p. 2). The term environmental awareness refers to “the growth and development of awareness, understanding and consciousness toward the biophysical environment and its problems, including human interactions and effects. Thinking "ecologically" or in terms of an ecological consciousness” (GEMET, n.d., para.1).

Another term related to this study is corporate social responsibility, which “aims

to ensure that companies conduct their business in a way that is ethical. This means taking account of their social, economic and environmental impact, and consideration of human rights” (The University of Edinburgh, 2017, p. 1). Although the previous term is relatively old, it reflects practices done by a company as a way to give back to the community. Social responsibility, on the other hand, “refers to businessmen’s decisions and actions taken for reasons at least partially beyond the firm’s direct economic or technical interest” (Davis, 1960, p. 70). Among other related terms, there is the triple bottom line, or people, planet, profit (PPP). The previous term "captures the essence of sustainability by measuring the impact of an organization's activities in the world. A positive triple bottom line reflects an increase in the company’s value. Including both its profitability and shareholder value and its social, human, and environmental capital” (Savitz, 2012, p. xiii).

Another related area is green advertising, which is defined as “promotional messages that may appeal to the needs and desires of environmentally concerned consumers” (Zinkhan & Carlson, 1995, p. 2). According to Fowler III and Close (2012), it is “any advertising that explicitly or implicitly promotes an awareness of environmental issues and/or suggests behaviors useful in minimizing or correcting these environmental issues. Green advertising may be associated with either commercial for-profit enterprises or not-for-profit initiatives” (Fowler III & Close, 2012, p. 121). Another term related to corporate social responsibility is clean capitalism, which is the “economic system in which prices incorporate social, economic and ecological benefits and costs, and actors know the full impacts of their actions” (Corporate Knights, n.d., p. 1).

Eco-labels’ certifying organizations refer to organizations that issue eco

certificates and eco-labels. These organizations could be non-governmental as in the two cases in this study (Sustainable Forestry Initiative, SFI and Forest Stewardship Council, FSC), or governmental such as USDA Organic. In addition, eco-labels certifying organizations could have global presence or a regional presence. Generally, each eco-label certifying organization focuses on a specific environmental issue to deal with in addition to several subcategories related to the main issue. For example, the main work of (FSC & SFI) is sustainable forest management. The subcategories include biodiversity, soil erosion, clean air, carbon emission, and water pollution. Eco-labels' certifying organizations vary in criteria required to get certified or to get an eco-label. In most cases, individual products and brands are certified when they adhere to specific criteria as in the two labels in this study (FSC & SFI). However, in a few cases, an eco-label certifying organization can label an entire business as certified as in the case of B Corp Certified label.

Apart from the scope of eco-labels organizations, the labels produced by these organizations vary in terms of the visual and verbal cues. Some eco-labels are produced with more cues, such as color, animals' pictures, shape, and text. A good example of the previous situation is the Rainforest Alliance Certified label, which has a green color and frog picture in addition to some text cues. In contrast, some eco-labels' certifying organizations may produce eco-labels with fewer cues. A good example is B Corp Certified label, which has the capital letter B, Certified, and Corporation words. Finally, eco-labels most of the time are voluntary. In other words, it is up to brands and products to use some eco-labels. On the other hand, some eco-labels are mandatory by law and regulations, which could vary from one country to the other as in the case of Dolphin

Safe eco-label. In this dissertation study, eco-labels refer specifically to the type-1 eco-labeling schemes, “refers to the multi-criteria, life-cycle seals of approval...The principle of this standard includes the following stipulations: Environmental labeling programs should be voluntary. Compliance with environmental and other relevant legislation is required. The whole product life cycle must be taken into consideration” (International Organization for Standardization, 2012, p. 16).

This dissertation study mentions (communication strategies) term, which refers to the varied methods used by an organization to deliver or transfer information for stakeholders. These communication strategies include basic interpersonal communication like the one happens face to face. In addition, these strategies include communication that happens through mass media channels, such as T.V., and radio. Further, communication strategies include digital ways that use the Internet as a facilitator in the communication process. In this research, the use of “communication strategies” term refers to digital communication through the Internet, mainly through social media networks and websites.

In this research, commercial companies refer to companies that sell products for profit reasons. These companies could have one brand or more. Investopedia (2019) defined a company as “a legal entity formed by a group of individuals to engage in and operate a business—commercial or industrial—enterprise” (para.1). According to Business Dictionary (n.d.), a company is “a voluntary association formed and organized to carry on a business. Types of companies include sole proprietorship, partnership, limited liability, corporation, and public limited company” (para.1). In addition, “brand” term will be used to refer to “the name given to a product or a service from a specific source” (McLaughlin, 2011, para.3). Branding refers to “the marketing practice of

creating a name, symbol or design that identifies and differentiates a product from other products” (Entrepreneur, n.d.).

Consumers’ term in this study refers to the person who buys a certain product for a certain amount of money. The term is also used to refer to people who are in the market even if they do not buy a product. Business Dictionary (n.d.) gave two distinctive definitions of consumer: “1. A purchaser of a good or service in retail. 2. An end user, and not necessarily a purchaser, in the distribution chain of a good or service” (para.1). Market Business News (n.d.) defined consumers as “people or organizations that purchase products or services. The term also refers to hiring goods and services. They are humans or other economic entities that use a good or service” (para.1).

A part of this study was related to social networks sites, SNSs, or social media networks. The term refers to digital networks that connect people by the means of the Internet, and where these networks provide a virtual place for users to express and share information. Boyd and Ellison (2007) defined social network sites as the following:

Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. (p. 211)

While social media networks bring the two famous platforms Facebook and Twitter to the mind, other networks are included in the definition and should be considered. These networks include blogs for example. Social media networks have been evolving since 1997 (Boyd & Ellison, 2007). The era of birth for the current famous networks, Facebook and Twitter, was in 2006. A year before that (2005) was the birth of YouTube.

In relation to mobile phones applications [apps], these apps are software that performs specific tasks on portable mobile devices. Examples of apps include the Calendar, Emails, Pages, and Messages apps. This dissertation study uses the term (apps) to refer to mobile phone applications. A simple definition by Cambridge Dictionary (n.d.) about mobile phone applications is “a software program that runs on a mobile phone” (p.1). The majority of current mobile phones are considered smartphones because they can perform several tasks at the same time. The number of mobile phone applications has increased with the development in the technology industry. Mobile phone applications can be free or paid. Not to mention that most current downloads from mobile apps’ stores are for the free apps.

Theoretical Framework

This study uses the Reception Theory introduced by Stuart Hall (1973), which explores the ways in which meanings are encoded into particular media texts and how those meanings are decoded by audiences of those texts. Also referred to as Audience Theory, the consumer of these messages is considered active rather than passive receiver of the text. The active audience refers to people who are able to interpret messages differently according to their ideals, views, life experiences, mood at the time of viewing, age, gender, cultural background, ethnicity, and beliefs. The two important concepts in this theory are the encoding and the decoding, where the sender is the one who encode the message, and the receiver is the one who decode the message. As a result, a message sent by one sender with a specific content can be interpreted differently by the message receivers. The same message can be seen as good by some audience, and as bad by other audience.

The Reception Theory has been used in several kinds of research including communication, semiotics, architecture, film, television, and advertising. The theory shows how audiences are considered a part of the meaning creation because of their relationship to the text (message). The coming paragraph shows how the Reception Theory provides theoretical frame for this study and how the theory relates to the audience (consumers) and their relationship to eco-labels' messages.

As it relates to this study, non-profit organizations encode eco-labels with meaning, utilizing a set of symbols with shared cultural meaning. Consumer brands will carry those labels and, in the process, carrying that meaning to a broader audience, while at the same time transforming the meaning. Finally, various audiences, who include consumers, legislators, and donors, receive those messages and decode their meaning differently. First, the theory shows the distinction between the encoding and decoding of eco-labels' messages by consumers and the reasons for differences in the interpretation of eco-labels' messages. Second, the theory shows the three distinctives audiences and how each group of the audience could relate to the topic of eco-labels. The Reception Theory has three groups or positions of audiences: the dominant, the negotiated, and the oppositional position (Hall, 1993). The dominant audience is those who interpret the message as it was intended by the sender. The degree of misunderstanding is very little in this position because the sender and the receiver shared multiple factors such as views and interest. Issues of the clarity of the message, the culture, relevance to society, also play a part here in a way that the receiver can understand the intended meaning sent by the sender. This position is considered good for the sender because the message is interpreted well.

A negotiated reading is one in which the audience agrees with some, but not all, parts of the message. In this position, the sender and the receiver of the message could have different age, beliefs, or life experiences, in a way where those factors may affect the audience understanding of the message. In other words, the audience can see some points of the message, but also can create their own inputs. To some extent this position is considered good because the audience was able to understand part of the intended meaning in the message. The oppositional position includes the audience who create their own meanings apart from the intended meaning in the message sent by the sender. In this position, the audience could see unintended meaning of the message because of the wide gap in personal and life experiences (Hall, 1993). This position is considered bad in several scenarios – like in advertising - because the audience interpretation does not match the sender’s goal of the message. There are several factors in this position that affect the audience interpretation of the message, such culture and relevance to society.

The Reception Theory can provide insights regarding what consumers take away from eco-labels’ messages and how consumers interpret eco-labels differently. In this scenario, eco-labels’ certifying organizations are the sender of the eco-labels’ messages, where these organizations encode the messages of eco-labels through symbols, visual and verbal cues. The audience of the message are the consumers who are supposed to understand these message as the sender intended so they can have a better purchase decision. It can be said also that there are other audiences like businesses and legislators; however, the audience who will be divided into the three categories in this theory are consumers. It is less likely for brands to misinterpret eco-labels’ messages because most

brands do extensive research about an eco-label prior to deciding to get certified by an eco-label's certifying organization.

Although the sender of the message is considered eco-labels' certifying organization, there is also the effect of the brands which deal also with the eco-labels' message without changing the eco-labels' content. Brands, for example, may add an explanation to an eco-label in a way that makes the label clearer. In addition, brands can provide signs, such as social media signs (hashtag). Importantly, brands can decide the placement of the message (eco-label) on their products in a way that can affect the message clarity, relevance, the level of importance, and its meaning, especially when it is placed next to other labels on the package as it is explained in the discussion section of this study and as it is shown in the figures 7, 8, and 9. Yet, brands does not always have the ability to add to eco-labels' messages because there are different rules govern that process and usually set by the original message creator i.e., eco-labels' certifying organizations.

The three categories in the Reception Theory are the dominant reader, the negotiated readers, and the oppositional readers. Looking closely at how these three groups are applied to consumers, we can find that there are differences emerged from the fact that the audience (consumers) have different ages, ethnicities, cultural backgrounds, life experiences, and relevance to the message. While eco-labels' certifying organizations aim to provide business with environmental certifications that makes the brand more competitive and in compliance with the environment, these certifying organization have different goals in relation to consumers. One of the goal is to promote the label and spread environmental sustainability awareness about the topic an eco-label deals with at

the same time. For example, in this study, the two eco-labels (FSC & SFI) deals with forest management and sustainability. Yet, brands are mostly interested in eco-labels because of competition, marketing, and public relations purposes although some brands use these labels to better serve the environment by adhering to environmental sustainability practices.

From eco-labels' certifying organization's side, there have been two prominent conditions that lead to the spread of eco-labels' messages. First, these organizations' campaigns through traditional and contemporary media platforms have contributed to consumers' understanding of eco-labels' messages and their effects in relation to sustainability. Second, eco-labels' certifying organizations have been benefiting from feedback from consumers and brands whether through surveys or through engagement in social media networks. From the consumers' side, differences that exist among consumers, including demographics, has affected how eco-labels' messages are perceived in ways that can differ from the main goal of the sender of the eco-labels' messages.

Conclusion

In conclusion, this study contributes to the general research on eco-labels and sustainability communication. The study explored the different stakeholders involved with eco-labels' production and consumption. These stakeholders are eco-labels' certifying organizations, brands, and consumers. While most previous studies focused on the marketing side of eco-labels, this study focused on the communicative and awareness raiser role of these labels and the extent the role can be pushed through communication platforms such as social media networks and mobile phone applications. The communicative environmental role of eco-labels could be an advantage for the

stakeholders if it is communicated well. The results of this study showed that eco-labels could be used as tools to transfer environmental sustainability information to consumers in a way that helps consumers to act responsibly toward the environment and contribute to environment saving in the long term. Yet, the previous idea depends on several factors related to how eco-labels' messages are encoded, how brands use the labels, and how consumers interpret the labels. Eco-labels' certifying organizations can benefit from the results of this study by improving the current eco-labels' encoded messages to make these messages clearer. Brands can benefit from the results by considering issues related to how these brands use the labels on their products. Such issues include the placement of eco-labels, providing more information, and the use of social media networks' signs. In addition, both eco-labels' certifying organizations and brands can benefit from implementing clear and interesting communication activities to make consumers aware about eco-labels and their meanings. One of the prominent issues mentioned in the literature and during the focus groups' discussions is the issue of ambiguity of eco-labels. There are consumers who are not aware about eco-labels and do not understand the purpose or the meaning of the labels. Further, the study's results showed that social media networks and mobile phone applications could be effective communication tools in spreading information about eco-labels and environmental sustainability.

CHAPTER II

REVIEW OF THE LITERATURE






The previous research provides a foundation for this study. I begin with research on sustainability communication and environmental communication as they are the wider themes of this study. Also, the literature includes previous research that showed the different communication tools used in transferring information to the audience, especially consumers. Then, the literature moves to the research related to brands and corporate sustainability communication as that relates to brands' responsibility. The literature also includes discussion of the issues of greenwashing and green marketing. Other included issues are the importance of communication clarity and brands' ethical duty. My review of the literature also includes research related to the ways in how brands used sustainability communication and the relationship to brands' positions in the sustainability practices' levels i.e., passive, or proactive position (Marrewijk & Werre, 2003).

In addition, the literature includes a brief history of eco-labels' and their development in addition to the different roles eco-labels have served so far. Further, there is an explanation about the types of eco-labels and several examples from different brands (Table 2). To understand the elements of eco-labels, the literature includes research on eco-labels and consumers' understanding; importantly, in relation to the issue of ambiguity regarding eco-labels. More, previous research discussed in the literature showed the importance of visual and verbal cues in reducing consumers' ambiguity. In addition, studies of eco-labels and consumers' purchase intention were included. The previous eco-labels' studies used several research methods, including surveys, interviews,

and experiments. Different industry sectors were covered in the literature, especially in relation to forest health and management. The last part of the literature shows the previous research related to eco-labels and social media networks and mobile phone applications as contemporary communication tools.

Table 1

Examples of Labels' Types – RICOH's brand

Type	Explanation
Type I Eco-labeling schemes	 <p>Eco mark – Japan</p>
	 <p>Singapore eco-Label - Singapore</p>
Type II – Self-declared environmental claims	 <p>The RICOH recycle label</p>
Type III Life-cycle data declarations	 <p>EcoLeaf Environmental Label - Japan</p>
	 <p>JEMAI CFP Program - Japan</p>

Note. Adapted from RICOH.com (Ricoh, n.d.)

Sustainability Communication

Communication plays a vital role in several important issues including sustainability and the environment. Sustainability communication can refer to the process of communicating environmental information or scientific information to the public. The role of media in sustainability has been a rich area of study for years. Yet, the communication process is complex because there are several factors that affect the process. One important factor is the characteristics of the message recipients, or the audience. In addition, sustainability needs collaboration from different sectors in society since it is unlikely to promote sustainability through communication strategies only (Chahal & Kaur, 2015). The growth of the economy and mass production has increased the pressure on the environment. As a result, there have been several problems such as the decrease in natural resources, global warming, endangered species, ozone layer depletion, soil erosion, and forest fires.

With environmental communication, society can deal with environmental issues related to humans and nature (Adomßent & Godemann, 2011). In terms of the severity of environmental problems, there are differences among regions and countries. The differences could be results for natural reasons, laws, and legislations, or due to the social structure that might be supportive for the environment. In addition, there is the business sector, which operates trying to balance legislation, profits, consumers' needs, and sometimes responsibility. For example, global corporations have been challenged to practice sustainability more in the developed countries compared to developing ones. Finally, there are consumers, whose decisions are likely to depend on their attitudes

towards the environment (Chahal & Kaur, 2015). One challenge to keep in mind when dealing with the environment is the uncertainty issue (Pralle, 2009).

Companies use different platforms to communicate about the environment. Such platforms include traditional media like magazines, radio, and T.V., and new media, such as social media networks and mobile phone applications. The new media communication could provide a higher level of transparency compared to the traditional media. One reason for such transparency is the nature of new media that provides accessibility and two-way communication instead of the traditional one way. For example, Tetley Tea brand has a page on Facebook that enables consumers to connect directly with farmers in tea farms. Providing the Facebook page could contribute to the trust building process the brand aimed for.

Villarino and Font (2015) analyzed many sustainability messages coming from top businesses in the world. The analysis showed that those messages showed facts rather than emotions. Yet, those messages are passive. As a result, the message might not affect the image of a business. The authors noted that there are many opportunities that can enable businesses to tailor more persuasive and effective messages. The literature, for example, showed that consumers are more attracted toward environmental messages that show emotions because such kinds of messages enable consumers to relate to them. In addition, consumers can relate to messages that have emotions because such messages do not require effort from consumers (Villarino & Font, 2015). The argument of the previous notion is based on the idea that rational messages may need more cognitive processing. The authors also stated that a balance between facts and emotions is necessary. Yet, they argued that there is a difference between communicating

sustainability to people who are environmentally educated and with general consumers. Apparently, in the later case, messages should be more emotionally based to relate to consumers. Godemann and Michelsen (2011) defined sustainability communication as:

a process of mutual understanding dealing with the future development of society at the core of which is a vision of sustainability. It is both about values and norms such as inter- and intragenerational justice and about research into the causes and awareness of problems as well as about the individual and societal possibilities to act and influence development. (p.6)

In addition, the authors mentioned culture as an important part that could affect people's perception about risk, or what is called "cultural relativity of risks." In other words, it is difficult to isolate the cultural components and deal only with the three famous areas of sustainability (economy, society, and the environment). Parguel, Benoit-Moreau, and Larceneux (2011) explored the effect of sustainability ratings on greenwashing and consumers' response to corporate social responsibility, CSR. The results showed that a weak sustainability rating has a negative effect on consumers. According to the authors, sustainability ratings could be a good strategy to fight greenwashing because sustainability ratings allow consumers to evaluate products before making a purchase decision. The authors of the previous study mentioned several limitations that could affect the results. Such limitations include the use of less realistic stimuli. When studying sustainability communication, Adomßent and Godemann (2011) started with differentiating between concepts that are related to sustainability communication and have some similarities. Other concepts are environmental communication, risk communication, and science communication. The environment could be considered the

focal point of the previous terms. Not to mention that the concepts have dimensions and implications, which go beyond the local level to the global one.

The success of brands' environmental communication depends on various factors. An important factor is vision, where Kotter (1995) considered it a keystone that leads and moves an organization toward the desired direction. Pralle (2009) emphasized the importance of communication clarity that leads to a better understanding. Another part is the context and society where environmental communication takes place. According to Töpfer and Shea (2005), "Communication styles have to be positive and tailored to different circumstances and cultural contexts" (p. 6). Cox (2007) raised a question about the ethical duty of environmental communication.

Corporate Environmental Communication

Corporate sustainability could refer to the practices used by a company in relation to the environment, society, and economy. Dyllick and Hockerts (2002) derived a definition of corporate sustainability from the United Nations definition of sustainability; "Meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders as well" (p. 131). Salzmann (2008) discussed corporate sustainability management as a strategic response to sustainability issues caused by the different activities practiced by an organization.

A company or a business cannot practice corporate sustainability if it does not believe in it. Hence, executives in power have responsibility to promote the related values to achieve a sustainable business. Senge, Smith, Kruschwitz, Laur, and Schley (2008) emphasized the importance of long-term solutions instead of short-term fixes. Although

several companies follow sustainability for the purpose of profit and competition, Zinkhan and Carlson (1995), noted that business owners “may decide to pursue a socially responsible business policy, motivated by personal commitment” (p. 2).

The goal of corporate sustainability includes competition (Baumgartner, 2014) and benefits related to stakeholders, customers, and the environment. Signitzer and Prexl (2007) grouped motives into three categories: Marketing case, business case, and public case. In the marketing case, corporate sustainability communication is looked at from the perspective of its contribution to the goals of sustainability management like increasing the sales of green products (Signitzer & Prexl, 2007). In the business case, corporate sustainability communication is seen from the perspective of its ability to contribute to the overall sustainability management. In the public case, Signitzer and Prexl (2007) asked the following question: “What can corporate sustainability communications directly contribute to the general communication about the issue of sustainable development within a given society, and how can it help societies move towards sustainable development?” (p. 6). Fowler III and Close (2012) went further and argued that to be environmentally friendly, companies need to go beyond the corporate green image and green consumers’ targeting efforts.

Companies use several ways to show their environmentally friendly efforts. For example, annual reports are used to show general progress and how the brand dealt with sustainability challenges. Credible reporting activities affect positively the credibility of a company (Herzig & Schaltegger, 2006). While some companies talk extensively about their environmental efforts, there is a thin line, which could transfer the process into public relation efforts that can affect a brand image negatively. Such a previous approach,

which depends on short gains, is not suitable for achieving long-term goals that are considered more beneficial for the brand's survival and success.

One solution is to have an external organization to audit the brand environmental practices. Companies in the previous case can receive a green certificate or an eco-label. One example of the previous scenario is the B Corp Certified label. B certified companies could have tax benefits in some states in the U.S. while they produce social and environmental benefits (Marquis, Klaber, & Thomason, 2010). In addition, companies can use their self-declared eco-labels that are designed to transfer an environmental message. Yet, self-declared eco-labels were criticized because they have less transparency regarding who assesses the brand environmental practices. Also, some self-declared eco-labels showed illustrations that tell environmental stories, which stick to some consumers' minds as in the case of Kettle potato chips brand.

Another thing that could affect adopting an eco-label is the requirements issue of getting certified, which differs worldwide (Lueckefett & Binder, 2012). Issues that affect a company's decisions to be a sustainable business include location, region, and the level of development in society. Marrewijk (2003) argued:

If, for instance, societal circumstances change, inviting corporations to respond and consequently reconsider their role within society, it implies that corporations have to re-align all their business institutions (such as mission, vision, policy deployment, decision-making, reporting, corporate affairs, etcetera) to this new orientation. (p. 97)

Success in corporate sustainability communication includes looking at markets as a key for solutions as Kiker and Putz (1997) noted. Although corporate sustainability provides

several benefits, there are still many doubters of the efficacy of triple bottom line i.e., profit, planet, and people (Dyllick & Hockerts, 2002). Davis (1960) noted, "To the extent that businessmen or any other group have social power, the lessons of history suggest that their social responsibility should be equated with it" (p. 71). Ottman (1992) talked about factors that affect the environment; such factors include information, technology, and regulations. To better understand the green concept, it is good to look at it as situated in a specific place and time.

Looking closely at eco-labels, they can be effective tools to communicate a company's environmental practices to consumers. Yet, the previous effort faces the issue of greenwashing if it is done excessively. For example, there are some companies that believe in sustainability while other companies use eco-labels to amplify the environmental benefits. In addition to greenwashing, there is the credibility issue. Some eco-labels may have a higher level of credibility because they are from external sources, such as governments, or standardizing organizations. Other labels could have credibility issues because they were issued by companies themselves (self-declared labels), or by small organizations.

An important point that helps to further the understanding of how eco-labels function is to look at the value system that exists within corporations. Such a value system is not only affecting corporations' attitude about the environment, but also it affects how these corporations look at customers. Marrewijk and Werre (2003) wrote about six ambition's levels of corporate sustainability. These levels represent the values' system of a corporation. The first level is called Pre-CS [Pre-Corporate Sustainability], where there is no corporate sustainability at all, or it is practiced mandatory because of

law requirements. The second level is Compliance-driven-CS. It is relatively like the previous level and represents corporations that practice good environmental practices because they are required by laws. The third level is profit-driven-CS. In this level, corporations are interested in sustainability if it brings more profit by selling more products.

The shift in application starts emerging from the fourth level (Caring CS) and the subsequent levels (synergistic CS, and holistic CS). Yet, the holistic CS level can be seen as an ideal level. Only a few corporations function at this level. In addition, Marrewijk and Werre (2003) explained how a corporation's view to customers differs from one level to the other. For example, in the first level (Pre-CS), customers are seen as victims. In the coming levels, they are a source of profits. But in the caring CS level, for example, companies start the "discovery of human being behind the customer" (p. 116). In the synergetic CS level, corporations are more customers oriented. In the higher level (holistic CS), customers are integrated in the production system. In other words, the integration of customers into these levels increases from the lower levels to the upper ones, where it reaches the highest degree in the holistic CS level.

Green Marketing and Advertising

The world of advertising has experienced many changes with a large portion of the advertising's budget devoted to social media networks and mobile phone applications. Further, many brands have started to advertise through influencers, who are paid to promote brands through podcasts and YouTube. Advertising is still fulfilling the same mission in attracting and persuading consumers, but recently more responsibility messages have emerged in advertisements. Similar to traditional advertising, green

advertising uses different appeals to affect attention, feelings, and attitudes (Chahal & Kaur, 2015). It is good to look at green advertising as a concept that is “evolving as a result of changes in firms’ internal and external forces” (Leonidou, Leonidou, Hultman, & Palihawadana, 2011, p. 25). So far, there have been rich theoretical contributions, complex models, and implications in relation to green advertising (Sheehan & Atkinson, 2012). Companies have started caring about the environment with different degrees of environmental interests. Fowler III and Close (2012) wrote about three levels in relation to green advertising. These levels are *macro*, *meso*, and *micro*. It is supposed to see saving the planet campaigns in the *macro*-level. Campaigns that promote brands and green products are in the *meso*-level. The *micro*-level includes consumers who are interested in a green lifestyle through their daily practices.

In relation to consumers’ attitude toward green advertising, that attitude differs among individuals. People who are living a green lifestyle are more likely to be exposed to green advertising (Haytko & Matulich, 2008). As mentioned before, Green lifestyle or sustainable living could refer to consumers’ practices that support the environment, including recycling and buying environmentally friendly products and using energy saving transportation like eco-cars and bikes. Although green advertising could be seen as an appealing approach, some consumers are skeptical about it (Fowler III & Close, 2012). An important issue affecting the attitude is the level of the consumers’ environmental knowledge.

Green advertising has been also confused with green washing, which is a negative use of persuasion about the environmental aspects of a product, i.e., amplifying the environmental benefits of a product. Not to mention that green advertising could take

several forms, including a direct statement about the environmental benefits. Another form is through eco-labels. Schuhwerk and Lefkoff-Hagius (1995) argued that the degree of involvement with the environment is likely to affect consumers' purchase behavior. Although the appeal's type could make no difference to green consumers, it has an important role for other consumers.

The benefit of green advertising is a controversial issue. In general, green advertising has benefits for consumers, which could become more aware of the environmental-related aspects of a product. There are also companies that see in green advertising a competitive advantage that helps them to compete with other companies. Finally, there is the environment itself with issues like responsible production and consumption and saving energy. Kilbourne (1995) argued that green advertising is "useful in promoting environmentally-oriented consumption behavior" (p. 17). Yet, the process of promoting such behavior is complex. Green advertising could make a positive company's image; yet, misused green ads could ruin trust with products (Dai, Goh, & Cheng, 2014). Further, Zinkhan and Carlson (1995) argued about the ability of green marketing in raising consumers' awareness of environmental issues

A difference between consumers' intention and their real behaviors could create a green gap (Fowler III & Close, 2012). Among the reasons for the previous gap are the level of environmental knowledge, the level of persuasion in the message, the credibility of the sources, and the price of the product. An important factor that could affect people willing to buy a green product - although they know its benefits - is the price. In general, environmentally friendly products are expected to be more expensive than traditional products. Yet, some products have similar prices to the traditional ones or even lower

prices. Chahal and Kaur (2015) stated, “Consumers’ knowledge to identify environmental clues also has a significant impact on perception of the appeal of green ads. Presence of clue and trust in clue source results in favorable attitude formation that results into green product purchase” (p. 95). Lin, Lobo, and Leckie (2017) explored the functional and emotional benefits of green brands and how consumers perceive them. Through an online survey, the authors also wanted to know how green brands’ image affects purchase decisions. The results showed that self-expressive benefit is one of the factors that affect the green brands’ image.

Consumers' attitude toward green products varies although studies showed that in most cases consumers have a positive attitude towards green products. Cherian and Jacob (2012) studied the concept of green marketing and how consumers relate to it. The study showed that consumers- in general - still lack environmental knowledge to ask for more sustainable products. The previous result was derived from reviewing the literature in addition to a conceptual model. Yet, the authors stated that the situation is changing, and consumers are going more and more to ask for sustainable products. As a result, companies are also changing their approach toward environmentally friendly products. Advertising according to the authors – can promote sustainable products (Cherian & Jacob, 2012).

Chen (2010) studied the relationship between the green brand equity and three constructs: green brand image, green satisfaction, and green trust. The research used a survey in Taiwan regarding information and electronic products. The results showed that the three constructs have a positive relationship with the green brand equity. More, the author argued that by enhancing the three suggested constructs, the green brand equity

would get better. The previous study focused on one kind of product. As a result, more studies are needed to support the suggested relationship.

Ansar (2013) explored the effect of green marketing on consumer behavior, specifically on purchase intention. The results of the study showed that age and education are important factors that affect consumers' environmental knowledge. In contrast, socio demographics do not have a similar effect. In relation to advertising, the study found that environmental advertising and packaging and price affect purchase intention. Although the previous study recommended companies to invest more in corporate social responsibility and advertising, such investment could be counter-productive nowadays since many consumers are becoming more skeptical about CSR campaigns that are led by businesses. In relation to green branding, Sarkar (2012) studied the previous concept in addition to eco-labeling. The author also investigated the effect of cross-cultural differences that could affect consumer behavior. The author compared between countries in Europe, Latin America, and Asia. According to the author, eco-labeling and eco-foot printing can leverage the eco-market. According to Wymer and Polonsky (2015), green marketing by itself is not a solution to environmental problems.

Another study that explored the effect of green marketing on consumers' purchase intention was conducted by Saini in 2013. The author also wanted to explore how companies can benefit from green marketing to compete in the market. According to the study, environmental responsibility does not have much effect compared to price and product quality. The author urged businesses to increase their communication about their sustainable practices. The previous study has 100-sample size and was conducted as a survey instead of in-market real experience. The statistical findings showed that

awareness of green products alone is not enough to urge consumers to make a purchase decision.

According to Fuentes (2015), green marketing is conducted usually through complex marketing practices including decoration. The author argued, “promotion of green products is a performative project” (p.202). Commenting on the Nordic Nature Shop, the author wrote “in this performance of green marketing, the green products promoted were framed primarily as tools aimed at solving specific cultural and material problems and enabling the (pleasurable/rewarding) green consumption of the outdoor” (p.202). In relation to sociocultural green marketing, the author argued that green marketing performative role is both discursive and material. Zhu (2012) studied the effect of green advertising on consumer purchase intention in Shanghai, China. The results emphasized the importance of claims credibility in green advertising. More information about the benefits should be provided to consumers. In addition, the study recommended advertisers to avoid exaggeration and use specific details.

Kong and Zhang (2014) studied the moderating role of product type in relation to green advertising, specifically; products that have less or more environmental impact. The study used an experiment 2*2 (more harmful vs. Less harmful) (green appeal vs. non-green appeal). The results showed the importance of a product’s impact on the environment; “a green appeal may benefit a product with high environmental impact more than a product with low environmental impact” (p.208). The results also showed that environmental associations should be used wisely; these associations “can add value to products that can evoke more environmental concerns in consumers’ minds” (p.208).

In relation to fashion and beauty products, Cervellon, and Carey (2011) conducted

a study to explore consumers' perception of green as a concept. The study used focus groups and in-depth interviews as a methodology. The results indicated that there is some ambiguity regarding eco-labels' terms and meanings. Surprisingly, to protect the environment was not the main prototype for consumers who buy green fashion and beauty products. The first priority is related to health. Also, by purchasing these green products, consumers will feel less guilty. The authors also noted that the study's participants mentioned their motivations of buying eco-fashion. In North America, it is self-expression. In Europe, it is a status display.

Shrum, McCarty, and Lowrey (1995) conducted a study to explore the relationships between buyer characteristics and advertising strategy. The authors analyzed data from 3264 respondents. The results showed that consumers who buy green products see themselves as opinion leaders. In addition, these consumers considered reading magazines more interesting than watching television. Further, the results showed that green consumers are considered information seekers.

Eco-Labels

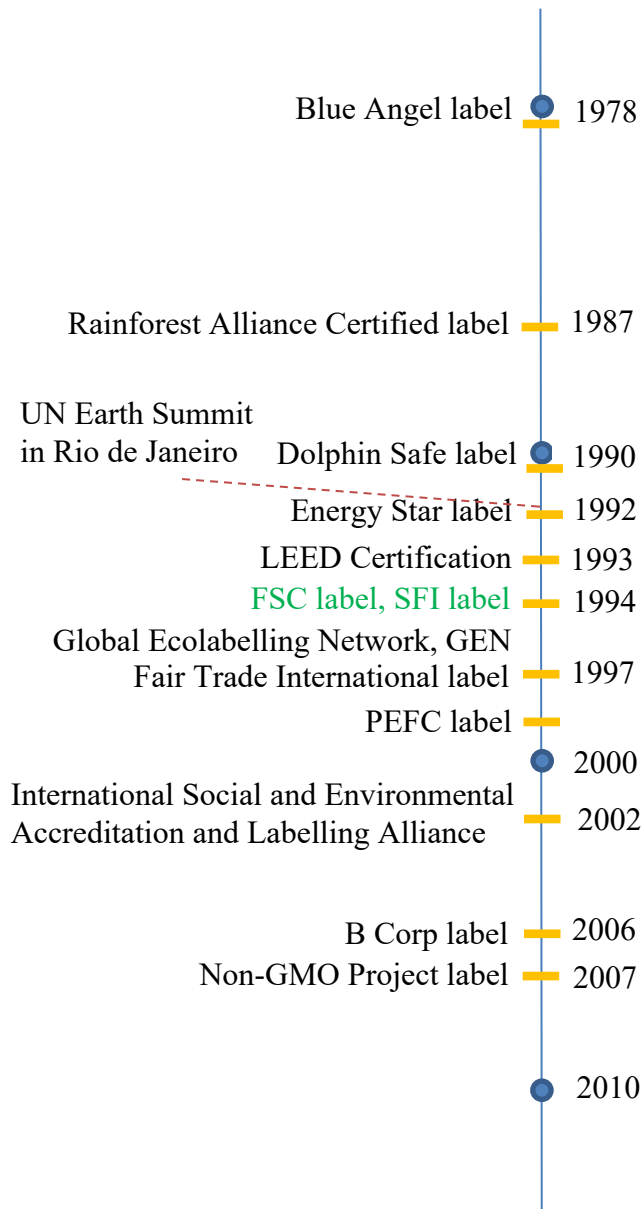
History and Uses. Products can carry several labels on them like nutrition labels, warranty labels, quality labels, and eco-labels. After 1990, there has been an increase of eco-labels' number (figure 1). Figure 1 represents a timeline that shows the establishment dates of some famous eco-labels, such as Energy Star, Dolphin Safe, and other eco-labels. The figure also shows some important events related to eco-labels, such as the UN Earth Summit in Rio de Janeiro in 1992. An eco-label could serve as a communication tool that transfers information to consumers, but that depends on how a label is situated in a product's package and depend on other factors as discussed in the

discussion section of this study. Some brands use eco-labels because they are required to do so by regulations, which differ from one country to the other. There are also differences in eco-labels' placement on products' packaging. Companies may put an eco-label on the front side, backside, bottom, or on each unit of the product, such as in Lipton Tea bags and the Rainforest Alliance eco-label that appears on each small tea envelope.

The historical development showed that eco-labels have evolved mostly in developed countries. The main reasons are market competition, the effects these labels have on consumers' purchase intention, and environmental responsibility. While there are some famous eco-labels used worldwide like the 'recycling eco-label' [three arrows], other eco-labels like the organic farming one is less popular. The importance of eco-labels emerges from the benefits these labels provide. Mattoo and Singh (1994) wrote, "Labeling may stimulate concern for the environment and increase the demand for environment-friendly products" (p. 54). According to Perelet, Mason, Markandya, & Taylor (2014), eco-labels serve two goals. First, they provide environmental information and encourage eco consumption. Second, they raise environmental standards set by different stakeholders, such as companies and governments. In their study about the paper product industry, Erskine and Collins (1996) argued that eco-labels are likely to serve the marketing efforts; environmental issues are less likely to motivate adopting an eco-label (p. 45). Horne (2009) stated, "a key question posed is whether eco-labels have influenced consumer choice and led to the purchase of greener products and, if so, is this likely to reduce our global environmental footprint, now or in the future?" (p. 175-176).

Figure 1

A Timeline that Shows Some Famous Eco-labels



There are positive and negative sides of using eco-labels. Although eco-labels help companies and consumers, some eco-labels are confusing because they do not carry enough information. As a result, consumers are likely to guess the meaning depending on their perception of the label's visual and verbal cues, such as shape, color, name, and words. The number of eco-labels is growing and nowadays consumers may see several eco-labels on one product. Ottman (1992) stated:

Consumer environmental concerns are shaping a trend called environmental or green consumerism, generally defined as individuals looking to protect themselves and their world through the power of their purchasing decisions. In their efforts to protect themselves and their world, they are scrutinizing products for environmental safety. (p. 1)

In relation to eco-labels governance, expert, and media, Castka and Corbett (2016) conducted a study to evaluate assurance practices that could affect eco-labels' perception – by experts and media - as better governed. The results showed that “reassurance’ practices (governmental control, independent accreditation, and open- and consensus-based standard setting) are the most important practices for eco-labels to be considered well governed” (p.322). In addition, the study emphasized the role of external assurance practices. Grolleau, Ibanez, Mzoughi, and Teisl (2015) analyzed the gap between the design of eco-labeling schemes and their implementation. The study aimed to provide policy makers with behavioral interventions for better design.

The table next page (Table 1) shows the categories of eco-labels as described by the International Standardized Organization, ISO. The table shows three main types of eco-labels: Type I Eco-labelling schemes, Type II Self-declared environmental claims,

and Type III Life-cycle data declaration.

Table 2

International Standardized Organization, ISO, Categories for eco-labels

Type	Explanation
Type I Eco-labeling schemes	“Refers to the multi-criteria, life-cycle seals of approval...The principle of this standard includes the following stipulations: Environmental labeling programs should be voluntary. Compliance with environmental and other relevant legislation is required. The whole product life cycle must be taken into consideration” (International Organization for Standardization, 2012, p. 16).
Type II – Self-declared environmental claims	“Wide in its application. It deals with all environmental claims voluntarily made for products. While self-declared claims are often made on products and/or their packaging, they are not restricted to on-pack claims, but include all environmental claims however they are made, for example, in advertising, on the Internet or in trade reports” (International Organization for Standardization, 2012, p. 9).
Type III Life-cycle data declarations	Used in business-to-business commerce. “Limited application to the consumer market...Declarations present the environmental performance of a product to enable objective comparisons between products fulfilling the same function...Are based on independently verified life-cycle assessment” (International Organization for Standardization, 2012, pp. 21, 22).

Testa, Iraldo, Vaccari, and Ferrari (2013) explored the marketing effect of eco-labels, specifically, in relation to purchase decisions. The quantitative survey was conducted upon Italian consumers and confirmed results from previous studies that talked about the effect of eco-labels on consumers’ purchase intention. The authors highlighted the importance of making clear and correct information in eco-labels so these labels can

perform their role properly “to prevent vague and misleading assertions and attract those target consumers whose choice depends on variables such as trust and reliability of the producer” (p. 261). Importantly, an eco-label awarded by a third party could increase company competitiveness.

Breard (2017) studied how consumers’ misperception of eco-labels affects market structure. The results showed that consumers’ misperception could affect the greenest product negatively. According to the author, consumers’ misperception through imperfect information for the competing products that have eco-labels could affect the environmental benefits of these labels. Thus, companies should do their effort to prevent consumers’ confusion. The author stated, “Imperfect information tends to damage the quality of the environment when the perceived quality of eco-labeled products is not too high. However, it can enhance the quality of the environment when consumers believe that both eco-labels signal high environmental quality” (p.18). Another study conducted by Langer, Eisend, and Ku (2007), explored a general assumption about eco-labels. This assumption argued that eco-labels confused consumers rather than benefiting them. The study used an experiment that had 226 participants. The study results showed that the more the eco labels, the more the consumers’ confusion. Yet, source credibility could decrease confusion. According to the authors, confusion about eco-labels could lead to further consequences including dissatisfaction. The study reveals the importance of certainty when consumers are exposed to eco-labels. Brands, as a result, should be careful what to put on their products.

Another study was conducted by Harbaugh, Maxwell, and Roussillon (2011) in relation to eco-labels and consumer confusion. The results indicated that even a low level

of certainty regarding an eco-label could create confusion for consumers. According to the authors. The suspiciousness of an eco-label can be increased if it is on a product that has a bad reputation. Importantly, the more the eco-labels on a product, the higher the degree of uncertainty. The authors emphasized the role of managers in supporting the mandatory labels. According to the authors “‘Look for the label’ promotional campaigns that induce consumers and firms to focus on a particular label...can increase certification incentives, reduce the problem of strategic uncertainty... and improve consumer learning by eliminating firm incentives to choose among labels strategically” (p.1524).

Moon, Costello, and Koo (2017) conducted a study to explore also eco-labels and consumers’ confusion. The study used a quasi-experiment with food and detergent products in South Korea. The results showed that “consumer overload and similarity confusion have a positive effect on negative emotion... [and] the effect of similarity, overload, and ambiguity confusion on the dependent variables was mediated by negative emotion” (p.266). The study encourages managers to use different strategies of communication to avoid consumer confusion and erase ambiguity, including confusion of wording such as natural. Importantly, the study urged managers “to alleviate negative emotions that influence post-choice evaluations and behaviors such as trust, satisfaction, and WOM [word of mouth]” (p.266).

In relation to the role of eco-labels and sustainable consumption, Horne (2009) reviewed and evaluated eco-labeling schemes to better predict their future potential. The study’s results showed that government-based labels are favored compared to other kinds of labels. The author argued that the role of eco-labels as a part of sustainable consumption is still not clear, “in some circumstances the most environmentally sustain-

able option is no purchase at all, and in this case there is nowhere to place the label” (p.181). Horne agreed with other authors that eco-labels alone are not sufficient tools toward sustainability. Big famous corporations have started paying attention to this fact and those corporations are using multiple sustainability approaches to avoid being classified in the category of ‘trying to save the environment through a label’. Yet, there are other companies that still use a traditional approach of pushing their labels to the front whenever there is a chance.

Tang, Fryxell, and Chow (2004) explored the effect of visual and verbal communication cues on purchase decisions. The study used an experiment to investigate how visual and verbal cues vary in their effect. The results showed that combined approach that has both cues could be more effective than depending on visual approach only. Yet, the author stated that the previous result should be seen in a specific context since it reflects results from Hong Kong Chinese consumers.

In relation to recall of verbal and visual cues, Kaplan, Kaplan, and Sampson (1968) conducted a study to explore how participants recall the research stimulus: words vs. simple lines. After testing the recall in different time frames, the researchers found that visual cues – the simple line – recall was greatly higher than the words, specifically $p < .001$. In addition, “the mean immediate recall for pictures was 47% and for words 32%” (p.73). The study also concluded “an item that shows poor immediate recall and good long-term recall is associated with a larger arousal reaction than an item that is recalled only initially” (p.74).

Another research in relation to visual and verbal association was conducted by David (1998). The author used experiment as a method to explore the effect. The results

showed high potential for visual items in enhancing the recalls capabilities in participants. For instance, by adding a picture to news, the recall of that news is improved. In addition, the effect of adding a picture to concrete news was significant because this news was recalled better than the abstract news. Although the research was conducted on news items, it showed that concrete news has more interesting photos. The previous research showed the importance of choosing different elements for better recalls and emphasized the importance of concrete items and visuals for a better recall. Bahrick and Boucher (1968) conducted an experiment to explore the effect of visual retention and the effect to enhance memory recalling. The results indicated, “recall probability is unrelated to the accuracy of the visual storage as measured by the recognition tests” (p.421). The authors also noted “the retrieval of and verbal recoding potential of visual storage depends on characteristics of the storage essentially uncorrelated with the encoded degree of visual detail” (p.421).

In 2006, D’Souza, Taghian, and Lamb conducted a study to explore the effect of eco-labels on consumers who have different levels of interest in the environment. The study was conducted in Australia through a questionnaire with a sample of 155 participants. The sample size is relatively small to derive generalizations. Yet, the study showed some insights. The results indicated that eco-labels are not always understood. In addition, consumers’ willingness to buy green products could be affected by the environmental information provided in the labels. The research also indicated that there are three connected parts that influence consumer purchase decisions: price sensitivity, reading labels, and the existence of sufficient information on labels.

Stokes and Turri (2015) conducted a study on carbon neutral eco-label to explore

consumer perception of that label on print advertising. As a framework, the authors used the congruity theory and Deighton's two-step model of advertising effectiveness. In relation to companies that used the label, the study aimed to know the level of credibility consumers see in those companies in addition to these companies' environmental concerns. In relation to consumers, the study aimed to know the effect of the carbon neutral label on consumers' purchase intention. The results indicated a positive effect of the carbon neutral label on consumers' perception of the environmental concerns of companies that use them. Further, the previous relationship is not related to the product type. Importantly, the study indicated, "the presence of the label alone does not appear to have an effect on either company credibility or purchase intentions" (p.312). The study recommended advertisers to provide information explaining the meaning of the used labels.

Gosselt, Rompay, and Haske (2019) studied eco-labeling in relation to CSR initiatives. The study aimed to figure out how eco-labels should be used to avoid the issue of green washing and increase consumers' evaluation. The experiment included five areas related to consumers' attitude: brand, corporate credibility, purchase intention, scent perception, and perceived CSR motives. Among the study's results, "internal claim will only be effective to the extent that it is backed up by an extrinsic CSR label" (p. 421).

In relation to eco-labels and consumer emotions and purchase intention, Kumar, Bebek, Carrigan, and Bosangit (2016), conducted a study to explore positive and negative emotions evoked by eco-labels and how these emotions affect consumer purchase intention. The study used a survey with a sample size of 255 consumers, and included three eco-labels: Fairtrade, FSC, and Red Tractor. The results indicated the importance of

positive emotions, which were strongly related to purchase intention. The dominant positive emotions were interest and enthusiasm.

Teisl, Rubin, and Noblet (2008), conducted a study to explore the relationship between consumers' characteristics and the information that affect a program's success. The results mentioned the importance of the perceived credibility of the eco-information – which reminds about the difference between self-declared labels and third-party labels. According to the authors, a well-design label is important because it affects the perception of a product. The authors noted, “the perceived credibility of the label is positively related to the respondent's faith-in-the information source and negatively related to individuals' perceptions of the product” (p.153). Finally, education was considered a key variable among the socio-economic variable (Teisl, Rubin, and Noblet, 2008).

In relation to pro-environmental consumer behavior and eco-labels, Taufique, Vocino, and Polonsky (2016) conducted a study to explore the effect in emerging markets. The study used mixed methods, specifically; it used in-depth interviews and surveys with a sample of 370 participants in Malaysia. The results showed that “both general environmental knowledge and specific knowledge of eco-labels have positive effects on consumer attitudes towards the environment” (p.523). To avoid confusion, the study encouraged companies and policy makers to increase eco-labels' credibility. The study emphasized the importance of doing campaigns that increase eco-labels' credibility and consumers' awareness of eco-labels.

Lihhavtshuk (2015) studied eco-labels and the effect of visual design and co-branding on credibility. The study used three methods: interviews, survey, and focus

groups. The study results indicated that eco-labels by themselves could be perceived as brands. Consequently, the author argued that branding strategies used with brands could be used with eco-labels to better promote them. In contrast to some studies that emphasized the importance of environmental signs on eco-labels, this study said that eco-labels should be different from environmental signs. In addition, the study indicated that “in most co-branding cases eco-labels positively influenced the credibility of a product’s brand and in some cases this influence could be mutual” (p.104). Yet, some rare cases indicated, “products with a negative brand image could also negatively influence the credibility of eco-labels” (p.104).

Køhler Hansen (2015) conducted a study to explore the effect of eco-labels on consumers’ attitude toward brands in an apparel company in Denmark. The study used in-depth interviews to explore consumers’ attitudes toward two brands: Nike and H&M. The results were similar to previous studies where they indicated that eco-labels could play a role in affecting consumers’ attitude toward the brand image positively. Yet, such effect depends on several variables including the eco-label itself; a third-part label showed the most positive correlation. In addition, the study indicated that eco-labels by themselves could be not an effective strategy; other communication strategies are recommended.

Costa (2016) studied eco-labels of food products and the relationship to environment-conscious consumers’ perception and interpretation. The study used Signaling Theory as the primary theoretical framework, and semi-structured interviews to explore the proposed areas in the study. The results indicated how the level of consumers’ interest in the environment affects their perception of eco-labels. For

example, environment-conscious consumers were found to know several eco-labels and the environmental issues these labels deal with. On the other hand, consumers who have less level of engagement in the environment showed that they depended on eco-label itself to understand it. Importantly, the study indicated, “when prompted to study the design and text of the eco-label, all participants were able to interpret a fuller meaning of the certification” (p.86). In addition, consumers showed trust toward labels that were perceived as accountable by the public. The study tried to benefit from the Signaling Theory: “effective communication happens when a person receives relevant and credible information, eco-labels can act as signals of environmental benefits of the product they certify” (p.88). Yet, the study indicated, “many eco-labels fail to be effective signals for consumers” (p.88).

In relation to green purchase intention, eco-labels, environmental attitude, consumers’ personality traits (including cultural factors), Hasnain, Raza, and Qureshi (2020) conducted a study using a survey with a sample of 434 participants. The results indicated the importance of the environmental attitude that affects the purchase intention of green products. The study also indicated how culture, specifically the concept of collectivism in Pakistan [where the study conducted] affects the purchase intention. Neto (2019) studied eco-labels colors and claims’ impact on purchase intention through a survey in Portugal. The results showed that consumers’ purchase intentions are affected first by claims of eco-labels, then, by the awareness of eco-labels, and then by the green color. In other words, the study proved that eco-labels’ claims are more important than green color. This study did not give much weight to the demographic factors regarding purchase intention.

The Role of Eco-labels. The communicative and awareness raiser role of eco-labels is a challenging area because there are many issues affecting consumers' ability to be informed about environmental sustainability from eco-labels' messages. Also, there are two situations here. First, eco-labels can communicate information about a specific environmental issue. Second, eco-labels can communicate a symbolic meaning about the carrier of the message i.e., brands. While communicating about an environmental issue could be one goal of eco-labels' certifying organizations, brands mostly use eco-labels to tell consumers that these brands care about the environment, which support brands' marketing and public relations efforts, and sustainability. Looking closely at eco-labels, there are issues that affect the interpretation of these labels. Some of these issues include eco-labels' design and readability (how it is easy to read the words on the label). Another issue is how the audience (consumers) interpret the labels. Also, there could be a lack of motivation to go beyond eco-labels and get more information about the sustainability issues the labels deal with. While an eco-label could provide quick information for a purchase decision, it may fail to increase knowledge. Leire et al. (2004) considered the communicative environmental role as a secondary effect of eco-labels. An eco-label can "reminds consumers of the environmental dimension of production and consumption. The information is claimed to serve both as an awareness raiser and fact provider" (Leire et al., 2004, p. 58). By examining many eco-labels and brands that use them, I found that most of the current labeling schemes carry the following situations:

1. Self-explanatory labels: A label in this category helps to explain itself by the verbal cues used in the label, such as "Fair Trade", and "Rainforest Alliance" (Figure 2).

Figure 2 shows the side of a Lipton Tea package, where there are words and designs

that help consumers to understand the label. For example, it is mentioned on the package that the tea is 100% sustainably sourced. Also, the meaning could be transferred by visual cues or the familiarity of a symbol, such as the (Recycling's symbol with the three arrows). A Label in this category provides relatively quick information about its impact. Yet, it does not provide a lot of information.

2. Non-self-explanatory labels: A label in this category needs extra thinking to be understood, such as B Corporation certified label (Figure 3). Figure 3 shows how B Certified Corporation eco-label has the minimum number of visual and verbal cues, just the letter B, Certified, and Corporation. But its location on the package - close to other labels - could make it easier to be understood by consumers. This type of eco-labels needs more work from the consumers' side. In most situations, consumers will depend on other cues to understand its meaning. Also, consumers may find it helpful to compare such labels to other labels or to statements on a product packaging so they can understand the general meaning or purpose of the label.
3. Labels that are accompanied by verbal cues such as text, or a short paragraph (Figure 4). Figure 4 shows how Tetley Tea brand used the Rainforest Alliance Certified eco-label on the package side with a text that explains the label and the brand sustainability practices. These labels have an advantage because they include more information about the environmental benefits. Although a label in this category is appealing, it may not be suitable for some products that have limited space on the package.
4. Labels with a smart QR code (Figure 5), or labels that can be scanned directly by mobile phone applications. Figure 5 shows how Organics brand positioned a smart

code label on the package's back in addition to a text related to the brand sustainability practices above the QR code. A label in this category works as a proxy between the original label and the information available on the Internet. Yet, there is a need for a smartphone in this situation, which makes this a challenging issue for people who do not have a mobile phone, or those who do not have mobile phones during shopping. A label in this category needs an effort from consumers' side i.e., scanning the eco-label. In addition, having a QR label does not guarantee its success. Other factors like the attraction's elements in the label are also important.

Figure 2

Rainforest Alliance Certified Eco-label. This figure illustrates an eco-label that shows a frog [visual cues] and related environmental text [verbal cues] on the label



Figure 3

B Certified Eco-label. This figure illustrates an abstract eco-label that has minimum number of cues

Supplement Facts
Serving Size 1 Cup Brewed Tea Servings Per Container 16

	Amount Per Serving	% DV
Calories		2
All Herbal ingredients:		
Organic valerian root (PhEur) **	450 mg	†
Organic passionflower herb (PhEur) **	300 mg	†
Organic lemon balm leaf (PhEur) **	300 mg	†
Organic propolis resin (PhEur) **	300 mg	†
Proprietary Blend:	150 mg	
Organic caraway fruit *		†
Organic licorice root		†

† Daily Value (DV) not established.

Made By TRADITIONAL MEDICINALS
4515 Ross Road, Sebastopol, CA 95472
Certified by the California Certified Organic Farmers (CCOF)

All Ingredients Certified Organic

USDA ORGANIC NON GMO Project VERIFIED nongmoproject.org K Certified Corporation B

Consult your healthcare practitioner: if sleeplessness persists continuously for more than 2 weeks; if you are taking medications with sedative properties; if you have depression and/or related diseases, or if you are **pregnant or breastfeeding**. Consumption with alcohol is not recommended. Some people may experience drowsiness. Exercise caution if operating heavy machinery, driving a motor vehicle or involved in activities requiring mental alertness within 2 hours of consumption. Gastrointestinal symptoms (e.g., nausea, abdominal cramping) may occur. In this case or in the event of allergy, please discontinue use. **Not recommended for use with children under 12 years of age.**

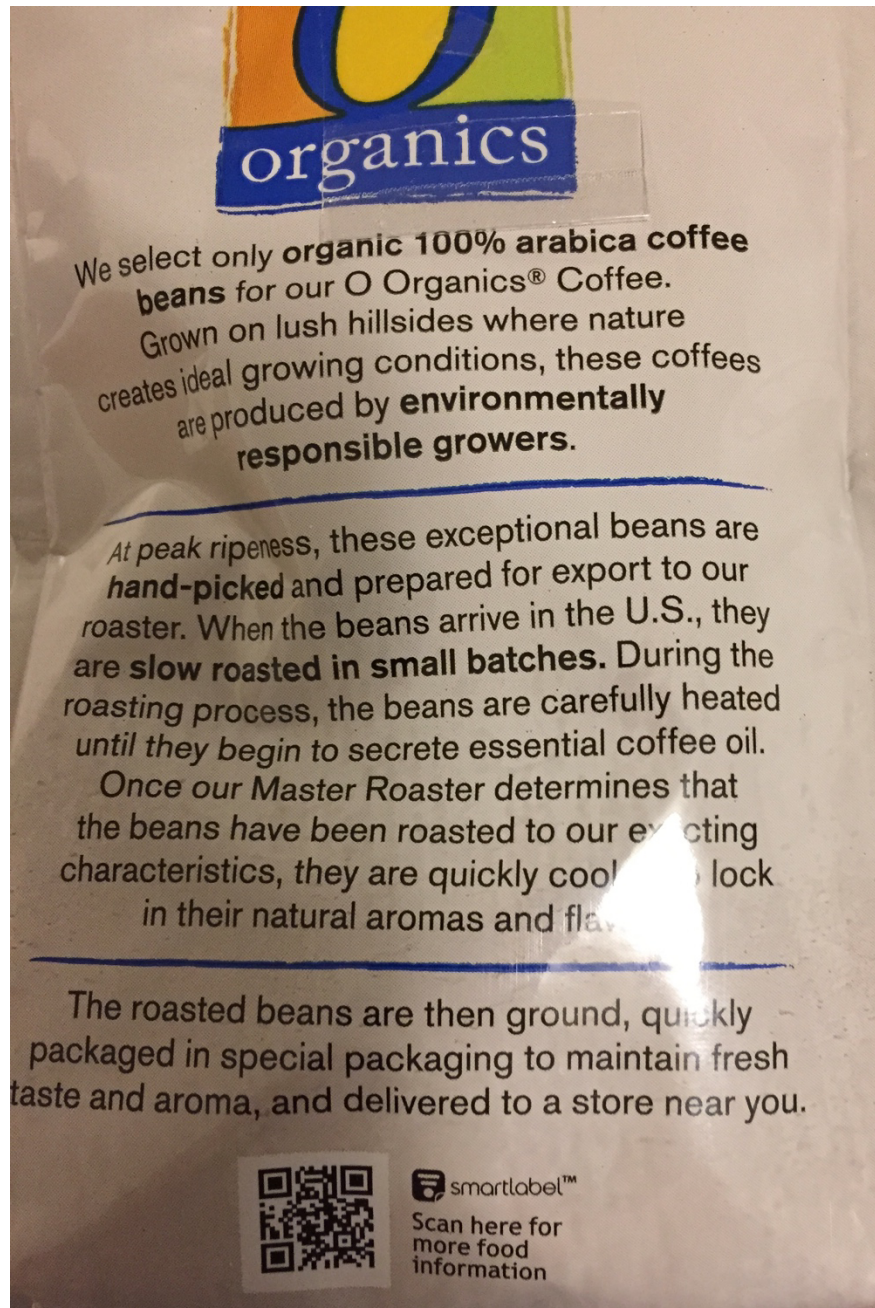
Figure 4

Rainforest Alliance Certified Label. This figure illustrates an eco-label with accompanied text [extra verbal cues] related to the label's field of work



Figure 5

Smart QR Label. This figure illustrates a smart QR code that can be scanned by mobile phones



The issue of uncertainty is prominent with eco-labels. Gutierrez and Thornton (2014) shed light on the importance of the context in relation to the Dolphin safe label for example. They stated, "the recent emphasis to promote eco-labels without presenting the larger context of fisheries management domestically and globally has made eco-labels an end instead of a means" (Gutierrez & Thornton, 2014, p. 19). Eco-labels could go further by "contribute to people's wider education about the sustainability of food production" (Lewis et al., 2010, p. 47). Although eco-labels can play an important role regarding the environment, the communicative environmental and awareness raiser part is poorly researched (Leire et al., 2004). It is unlikely that consumers will go beyond an eco-label to search about it online, or to search about the environmental issue that label deals with. Gregan-Paxton (2011) argued, "consumer judgments are also influenced by knowledge associated with more specific mental representations, such as exemplars. The evidence suggests that exemplar-based knowledge transfer is most likely to occur in a situation in which it is possible to map the novel product and existing representation in terms of attributes, but not relations" (p. 155).

Eco-labels and Mobile Phone Applications. Consumers can read and understand eco-labels in different ways. One solution that supports the current eco-labels' schemes is to include more verbal (text) information beside each eco-label. The solution may work for some products, but other products may lack the space to write on. Also, it is not clear whether consumers will read the accompanied text or not. Eco-labels with text might be a good option when green products target consumers who are interested in the environment. Those consumers need more information and are more likely to read the information on the package. Although eco-labels accompanied by texts, or with QR code

provide more educational opportunities, “there is a general lack of knowledge on which channels appeal and lead to increased awareness and knowledge among consumers” (Leire et al., 2004, p. 58).

Lewis et al., (2010) mentioned an experiment about eco frozen fish brands, the consumers’ group suggested basket-based technology that calculates the sustainability of all items at the checkout. It was also suggested that the previous process could help consumers learn about sustainability and food production more than the brand-based approach. Lueckefett and Binder (2012), raised a question in relation to eco-labels, “how can environmental education of customers be further improved?” (p. 1).

There are currently two categories for mobile applications related to eco-labels. First, most of the current apps focus on nutrition’s labels and how they relate to health in general or to a specific health issue, such as gluten sensitivity. Second, there are apps that focus on environmental issues that are not designed well to respond to the current eco-label schemes, for example, EcoReader mobile app. The previous category has limitations, such as the lack of updated versions and the narrow scope of products covered by the mobile phone application. Figure 6 shows seven examples of mobile phone applications that are related to eco-labels. There are two famous eco-labels in figure 6: Non-GMO Project eco-label, and Certified Human eco-label. Some companies like Nestle launched “Beyond the Label” QR code to provide nutrition and environmental information (Nestle, 2015). While the previous example is from a famous corporation, there are several mobile phone applications related to eco-labels but not provided by corporations. For example, Non-GMO Project has its own mobile application, which shows many features related to different brands and categories. The previous mobile

application has also a barcode scanner. Among other mobile applications, there are Food Scores, Carbon Trim, and Certified Human. According to VisionMobile Developer Economics' report (2013), "app developers lack a clear understanding of the customer at critical stages in their app development" (As cited in Salz & Moranz, 2014, p.233).

Benefiting from the uses and gratifications theory, Atkinson (2013) explores the potential of green QR codes in advertising in relation to purchasing sustainable products. In the research, Atkinson wanted to know consumers' willingness to use QR codes. The research showed a positive relationship between consumers' willingness to use QR codes advertising and government trust, boycotting, and market mavenism (market mavens refer to market experts). On the other hand, there is a negative relationship between consumers' willingness to use QR codes and corporate trust is negatively related. Importantly, Atkinson (2013) recommended that QR code should be designed carefully to provide consumers with sufficient information.

While technology can provide products' information, it can be used as a transparency tool. Kozhushna (2018) suggested a mobile phone application that helps consumers to get information about their products, so consumers are aware about the source of their products. In addition, consumers will be aware about the conditions of laboring that come with products. The survey results showed a high interest regarding the suggested idea, where the mobile application provides information about companies and their stakeholders. Although the previous study used a small sample size; 154 answers, it sheds some light on the growing interest in integrating technology into consumers' life.

In contrast to the belief about the promising role of technology, Moller (2019) explored the relationship between eco-labels, consumers' pro-environmental behavior,

and purchase decision. The previous research found that QR codes did not affect the number of purchases greatly. While the previous results came from using a quantitative method (survey), the later qualitative method showed how each group focused on a general theme (A group was focused on price. B group focused on ingredients). Importantly, environmental awareness as a factor did not affect the purchase responses for both groups. The decision-making process is complicated and could change due to factors like consumers' characteristics and products' attributes.

In relation to wood products, Appelhanz, Osburg, Toporowski and Schuman (2016) suggested a traceability information system for product information. In addition, the previous research suggested a cost-benefit model. The study concluded that the traceability system is feasible and can be applied at the item level in a way that delivers related information to consumers. Additionally, the previous study argued that the traceability system could help the decision-making process related to eco-friendly products. Consequently, consumers' trust in products may increase.

Hsiao (2014) explored the effect of mobile phone applications and consumers' decision and behavior regarding environmentally friendly products. The proposed project aimed to let consumers compare between products' merits from an environmental point of view. In the research, a high percentage of participants were aware about environmental conservation and would like to support through their purchases. In addition, the research suggested a loyalty points system for recycling efforts. Although the previous research integrated several technology tools (like Near Field Communication, NFC, and Radio-Frequency Identification, RFID), its practicality – especially in the rural market- seems off sight.

Asensi Conejero and Kaulins (2019) explored the motivations and barriers certification organizations could find by adopting technology like QR code that can provide transparency and products' traceability. The research used interviews with eco-labels organizations. According to the research, businesses can use emerging technologies to enhance brand trust in addition to achieving sustainability goals. In addition, these tools can provide companies with information to evaluate their corporate social responsibility practices. The motivations to use emerging technology are consumer demand, planning, and usefulness. On the other hand, the barriers are lack of consumer demand, lack of funds, legislation, miscommunication, knowledge and interest in emerging technologies, fear, and complexity.

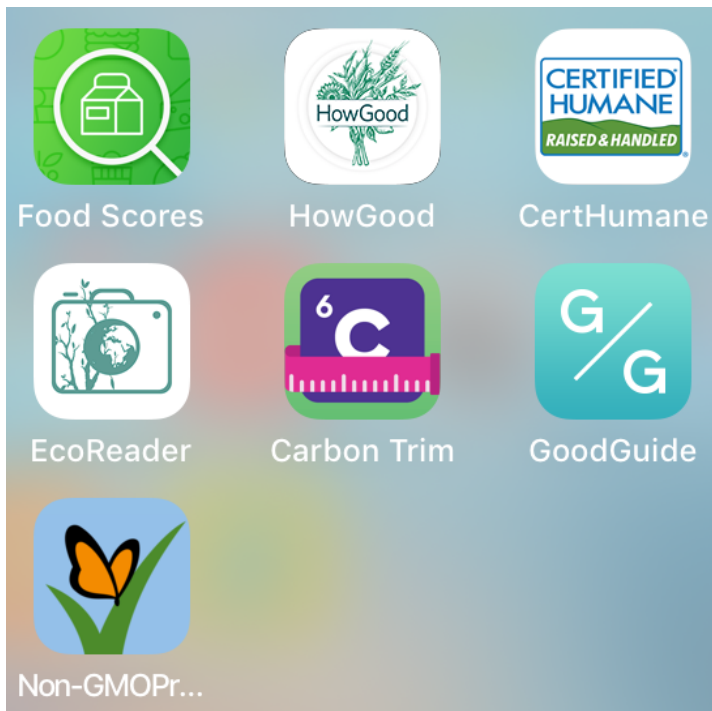
From the previous literature, it is clear how different factors affect the decision of integrating technology in a way that helps consumers. From a theoretical perspective, several things can be done. Yet, from a practical point of view, consumers are not expected - and do not come to stores - to use complicated methods to purchase products. In addition, communication technologies are not supposed to work alone apart from the traditional communication platforms that have been used for a long time. Further, it is more feasible to create different models that can fit different locations and societies taking into the account the level of infrastructure development, consumers' characteristics, and products' attributes.

Mobile phone applications may attract many people especially from the young generation who are familiar with apps. In addition, mobile phone applications can be updated easily compared to the process of updating eco-labels on products' packages, which are designed to stick on packages for a long period of time. Although there are

advantages to using mobile phones applications, there are also limitations. One important question is related to who will provide environmental information related to eco-labels. Generally, such information can be provided by brands, and/or by eco-labels certifying organizations. Each provider has its advantages and disadvantages. Having information from a credible source like scientific organizations or governments could create more credibility. The second limitation is related to customers who may not have a mobile phone or who have an old mobile phone that cannot run new applications. Lastly, the process might be lengthy due to some technical issues, such as the availability of the Internet.

Figure 6

Mobile Applications of Eco-labels. This figure illustrates some mobile applications related to eco-labels



Forest Management Eco-labels. Kiker and Putz (1997) argued that green certifications could provide information, but it is not “the ultimate solution to forest depletion” (p. 50). Nidumolu, Prahalad, and Rangaswami (2009) argued that the next decades would put more pressure on the environment with the increasing number of consumers and producers. Galarraga Gallastegui (2002) emphasized the role of consumers in contributing to environmental saving. Lewis et al. (2010) considered an eco-label as “a mechanism for raising awareness of environmental issues and driving behavioral change” (p. 4).

Through an email survey conducted by Moore, Cabbage, and Eicheldinger in 2012, the authors examined the impact of FSC and SFI certifications in relation to forest practices. The researchers found that forest certifications caused several changes in forest practices. In addition, forest managers favor the advantages although there were some disadvantages. The previous study targeted the organizations and companies that use one or the two labels (FSC & SFI). Hence, from a perspective of these companies, forest certifications can be a good choice.

Teisl (2003) explored the communication performance of some forest labels. The author found that detailed labels might have some advantages compared to simpler labels from consumers’ perspective. Importantly, the previous study found that a minor change in an eco-label may enhance the communication capabilities of a simple eco-label. The study used a mail survey that asked consumers to do several tasks. Yet, it was not clear how these changes on simple eco-labels would work in the real market.

Another study conducted by Archer, Kozak, and Balsillie in 2005 explored the effect of eco-labels and advertising on consumers’ purchase decisions in relation to wood

products including paper. The authors used a telephone survey to examine consumers' responses in Canada. The results indicated a positive consumers' attitude toward the forest certifications. Further, the respondents said that eco-labels could affect their purchases more than advertising. Yet, advertising was suggested to be a strategy to increase consumers' awareness about forests labels.

In relation to developing countries, Carlson and Palmer (2016) conducted a qualitative meta-synthesis to explore the benefits of two eco-labels: Forest Stewardship Council, FSC, and Marine Stewardship Council, MSC. Their study also referred to eco-labels as environmental certifications. The main advantage of using these labels in developing countries were related to their role in community empowerment, reputational management, governance, and learning. It was also suggested that although eco-labels cost a high price, these labels could provide several benefits.

A study conducted by Gullison in 2003 explored the effect of forest certifications on biodiversity conservation. The author found that there could be some conservational benefits of using forest certifications like FSC. Yet, there are challenges related to the promotion of forest labels among producers in tropical countries. Although there were several studies that talked about the benefits of forest certifications, a study conducted by Rametsteiner and Simula in 2003 argued that these certifications failed in their mission to maintain tropical biodiversity. Yet, these certifications were able to raise awareness and spread knowledge in relation to sustainable forest management, and other related social and economic issues.

Social Media Networks and Pro-sustainability Consumer. In studying the effect of social media networks and behavioral change, Young, Russell, Robinson, and

Barkemeyer (2017) conducted a research regarding food waste. The research used three interventions: retailer's Facebook pages, retailer's print/digital magazine, and e-newsletter. Through the previous interventions and three national surveys, the results revealed unique patterns. Social media and e-newsletter interventions were able to affect food waste significantly for customers who self-reported their food waste. On the other hand, retailer's magazines did not have the same effect on behavior.

In relation to social media networks and greenwashing, Lyon and Montgomery (2013), argued that these networks might be effective in reducing corporate greenwashing. After setting clarifying differences between social media and traditional media, the authors set a theoretical framework that explains corporate environmental communication and the possible negative effects if it is excessive. The research suggested that firms should use social media wisely, and that usage should depend on the firm's level of greenness as well as products. The authors mentioned that the previous suggestion was derived from a theoretical study. Consequently, empirical works are still needed.

Dessart, Veloutsou, and Morgan-Thomas (2015) explored consumer engagement within online brand communities in two dimensions: engagement with brand, and engagement with other members. The authors used semi-structured interviews as a methodology. The research results indicated that consumers engaged with online brand communities both with brands, and with other members. The authors suggested three engagement dimensions: cognition, affect, and behavior. One limitation of the previous study is the narrow approach to brands and social media networks. As the authors mentioned, future studies should consider a wide range of networks and brands.

In relation to consumers' purchase decision of eco-friendly products and social media environment, Delcea, Cotfas, Trica, Craclun, and Molanescu (2019), used a questionnaire to explore the previous relationship. The sample size was 409 respondents. The results showed that a high online media exposure is related to a high "positive impact on the eco-friendly products adoption, in both cases, by doubling the current media exposure, the adoption time is decreased by more than 37%" (p. 22). The study also mentioned several variables that should be considered when having online media activities.

Studying social media metrics, Peters, Chen, Kaplan, Ognibeni, and Pauwels (2013) provided an interdisciplinary framework that explores the elements of social media networks. The authors suggested nine guidelines regarding social media metrics. The guidelines are: Transition from control to influence, shift from (states & means) to (process & distributions), shift from convergence to divergence, shift from quantity to quality, leverage transparency and feedback-loops on metrics, balance the metrics, cover general to specific, shift from urgency to importance, and balance theory and pragmatism. The previous guidelines may have implications and benefits to marketing and advertising professionals.

Hanna, Rohm, and Crittenden (2011) provided a perspective regarding what they considered social media networks as integrated elements in an ecosystem rather than isolated elements. The study delivered five lessons that have practical implications: visualize the ecosystem, identify and track key performance indicators, begin with your story, social media does not require elaborate budgets, and be unique. The study

emphasized the importance of using social media as a part of a holistic media campaign that combines both social media networks and traditional media.

Heinonen (2011) examined the motivations behind consumers' activities on social media networks, where the research used square boxes to show these activities. The two axes of the square are consumer input and consumer motivation. The consumer's input axe includes three areas: consumption, participation, and production. The consumer's motivation axe also includes three areas: entertainment, social connection, and information. When these areas from both axes are integrated together, the emerging squares show how different areas can serve different purposes. For example, consumer input (production) with consumer motivation (entertainment) produces self-expression. Also, when consumer input (consumption) integrates with consumer motivation (information), it produces retrieving product information.

Kaplan and Haenlein (2010) explores social media concepts in addition to other close concepts, such as user-generated content. For firms that want to integrate social media networks in their businesses, the authors provided ten pieces of advice. First, companies should choose consciously instead of using all the available networks. Each social media platform has a main purpose although it can have similarities with other networks. An example of the previous scenario is Facebook and YouTube, where Facebook is more about sharing. Second, companies should decide whether to use an existing application or start its own platform. An example of the previous situation is Fujifilm. Third, companies should be sure that social media activities are aligned in the network it uses. Fourth, social media should be seen as a part of a holistic media plan approach that also includes traditional media. Fifth, social media networks should

provide access to all those involved including employees. The previous five points relate to using social media networks. For being social in these networks, there are another five points: be active, interesting, humble, unprofessional, and honest.

In relation to social media networks and their effects on behavior, studies showed several results. Laranjo et.al. (2015) explored the relationship between social media and health behavioral change through a meta-analysis study. Through a deep analysis, the authors found that Facebook was the most used network followed by Twitter. Social media networks interventions showed a positive effect on changing health behavior. Yet, the authors stated that there was heterogeneity (variation). The number of studies matched the search criteria and included in the meta-analysis was twelve studies. The total number of participants in those twelve studies is 7411 participants.

Apart from exploring social media network interventions' effect on health, other researchers explored the effect of those networks on environmental learning and behavior. Robelia, Greenhow, and Burton (2011) conducted a study on an application within the Facebook platform. The survey revealed that the users of the application reported higher knowledge. In addition, self-reported responsible behavior was increased among the users of the application. The motivation behind pro-environmental behavior was peer role modeling.

Centola (2010) studied how social media networks affect the spread of behavior through exploring the effect of online social network structure on the spread of health behavior. The author found that "individual adoption was much more likely when participants received social reinforcement from multiple neighbors in the social network." The previous research relates to studies on the effect of weak ties and how

social media networks are usually clustered. The author provided an example of a public health campaign in which a specific behavior is desired - could do better if that campaign targets residential networks instead of contact networks, especially when the desired behavior is complex.

In relation to social media networks and their potential in educational interventions, Greenhow and Askari (2017) conducted a review for the educational literature. The goal was to understand how k-12 learners and teachers use social media networks. Also, the study aimed to explore the effect on the learning process. The literature review showed that only a few studies explored the effect of social media networks in formal learning environments. Several studies showed that there was a noticeable use of social media networks by learners and teachers out of school time. The authors reported some limitations regarding the ability of social media networks for education. Another study conducted by Ekici and Kiyici (2012) found that social media networks could affect students' performance positively. The previous study was conducted on students who age between 18 and 24 years. The study used an application through the Facebook platform.

To better understand the structure of social media networks, scholars from different fields of studies talked about the concept of homophily, which refers to the idea that like attracts like or birds of the feather flock together. McPherson, Smith-Lovin, and Cook (2001) studied homophily concepts from different angles. The authors discussed the causes of the concept and how they affect the way people formulate relationships. The listed causes are geography, family ties, organizational foci, which refers to institutions like school and work. In addition, the list includes isomorphic sources that

include family and occupational positions. To sum, the demographic factors play a key role in how people perceive other people and who they associate with.

As discussed in the literature, previous research (Mattoo & Singh, 1994; Erskine & Collins, 1996; Archer, Kozak, & Balsillie, 2005; D'Souza, Taghian, & Lamb, 2006; Testa, Ivaldo, Vaccari, & Ferrari, 2013; Kamar, Bebek, Carrigan, & Bosangit, 2016; Neto, 2019) talked about the relationship between eco-labels and consumers' purchase intention. There are some studies (Teisl, 2003; Testa, Teisl, Rubin, & Noblet, 2008; Ivaldo, Vaccari, & Ferrari, 2013; Stokes & Turri, 2015) dealt with the characteristics of eco-labels and the importance of design to eliminate confusion. A few studies (Rametsteiner & Simula, 2003; Leire et al., 2004; Lewis et al., 2010; Perelet, Mason, Markandya, & Taylor, 2014; Taufique, Vocino, & Polonsky, 2016) mentioned the potential awareness raiser effect eco-labels have. Lueckefett and binder (2012), raised a question in relation to eco-labels "How can environmental education of customers be further improved?" (p. 1). The previous research showed gaps related to the communicative environmental role of eco-labels within the context of the triadic relationship between brands, eco-labels' certifying organizations, and consumers. Additionally, there is a gap in understanding the communication channels that consumers prefer about eco-labels. This study answers the following questions:

Q1. What are the communication strategies used by eco-labels' certifying organizations to create awareness about environmental sustainability?

Q2. In what ways did brands use eco-labels to communicate environmental sustainability?

Q3. What kinds of environmental information do consumers take away from eco-labels?

CHAPTER III

METHODOLOGY

Overview

This research used four case studies and two focus groups' discussions to answer three research questions related to the three stakeholders: brands, eco-labels' certifying organizations, and consumers. Each research question helps to see the role of eco-labels from a different angle. The case study research method was used to answer the first and the second research questions. The focus group research method was used to answer the third question related to consumers.

Using case studies provided insights regarding the environmental practices and communication activities used by brands and eco-labels' certifying organizations. There are several definitions of case study research. MacDonald and Walker (1975) defined case study as "the examination of an instance in action. The choice of the word 'instance' is significant in this definition because it implies a goal of generalization" (p.2). Merriam (1988) defined case study as "an intensive, holistic description and analysis of a single entity, phenomenon or social unity...Case study relies heavily on inductive reasoning in handling multiple data sources" (p.16). Yin (1994) described case study as, "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p.13). Simon (2009) defined case study as "An in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program or system in a 'real life' context" (p.21). According to Simon (2009), "the primary purpose is to generate in-depth understanding of a specific topic, program,

policy, institution, or system to generate knowledge and/or inform policy development, professional practice or civil or community action” (p.21).

While the case studies provided perspectives from the side of brands and eco-labels’ certifying organizations, focus groups’ discussions explored the role of eco-labels from consumers’ perspective. **Q3:** What kinds of environmental information do consumers take away from eco-labels? While the previous research questions could be answered quantitatively, the exploratory nature and the novelty of the topic led to use a qualitative approach. Greenbaum (1993) argued that conducting focus groups requires science and art. Krueger and Casey (2000), defined focus group as the following, “A focus group is a special type of group in terms of purpose, size, composition, and procedures. The purpose of a focus group is to listen and gather information. It is a way to better understand how people feel or think about an issue, product, or service” (p.4). Kamberelis and Dimitriadis (2013) stated, “focus groups can mitigate or inhibit the authority of the researcher, allowing participants to ‘take over’ or ‘own’ the interview space, which can result in richer, deeper understandings of whatever being studied” (p. 41). In addition, focus groups can “fill in gaps in understandings derived primarily from observations and other methods such as surveys and one-on-one interviews” (Kamberelis & Dimitriadis, 2013, p.48). Focus groups can be also defined as a way to bring a small group of people together to discuss a specific topic (Edmunds & American Marketing Association, 1999).

While focus groups’ discussions can provide deep insights, there are some challenges. Providing in-depth understanding is one of the most compelling reasons to use focus groups (Edmunds & American Marketing Association, 1999; Kamberelis &

Dimitriadis, 2013). Another prominent advantage is that focus groups' discussions can show "how participants agree and disagree in the group" (Morgan, 1988, p.29). Another benefit of using focus groups is the ability to create an environment that motivates participants to ask questions and respond to other participants' opinions. On the other hand, a significant challenge was described by Morgan (1988), "the problem with relying on interaction in groups is never knowing whether or not it would mirror individual behavior" (p.21).

In relation to validity and reliability, focus groups could have challenges. In relation to validity, several procedures can be taken to ensure validity, accuracy, and trustworthiness. This included pilot-test for focus groups' questions, moderator training, skills related to listening to participants, asking participants for clarification about unclear ideas, asking participants to verify the summary comments, and using systematic analysis procedures (Krueger & Casey, 2000). Hennink and Leavy (2013) argued that "reliability is often seen as less important than validity in qualitative research because replication, which at the heart of reliability, is not a goal of qualitative research" (p.188).

Research Design

The study includes four case studies to explore two research questions related to eco-labels' certifying organizations and brands. The two eco-labels' cases in this research were chosen according to a set of criteria. Among hundreds of eco-labels, each eco-label has its scheme and environmental coverage. To narrow down the number of labels, the research focused first on the topic the eco-labels deal with (for this research it is forest health and management). Then, the eco-labels must be voluntarily labelling and from a third-party organization i.e., not issued by brands (self-declared labels) because such

issuance will make it difficult to audit the brand work and decide the level of transparency of the environmental practices. Also, the eco-labels must be from non-profit and non-governmental organizations. Both SFI and FSC meet these criteria. The two labels were chosen from different geographical areas although there are some intersections. SFI eco-label is mostly used in North America, and FSC eco-label is more used internationally.

The two brands used in this study are Walmart and Boise Paper. Before choosing the two brands, the database of both FSC and SFI eco-labels was searched to find brands that carry one or both eco-labels. The study used the two brands because they have close relation to forests and offer two different perspectives related to the same issue, which is using eco-labels of forest management. While Walmart is considered as consumers-oriented model, where the corporation has stores, Boise Paper is not a retail store but sell its products to retail store like Walmart and Amazon. Boise Paper was chosen because papers depend - to a great extent - on wood that comes from trees. This previous point put the brand in a position to get certified from eco-labels' certifying organization, and to better communicate with retail stores and consumers about its products. In addition, the brand is a leading one in the United States, and it is easy to find its products in the market. On the other hand, Walmart is a famous international brand. The purpose of choosing Walmart was to put a big name close to a small brand so the comparison of communication activities can make sense. In addition to using SFI eco-label on paper bags, Walmart uses eco-labels on several other products including Walmart' own products like Great Value facial tissues.

Data Collection

The data for the four case studies was collected from the online public data available on the Internet. In addition to the social media networks, data was collected from the eco-labels' certifying organizations' websites and brands' websites. The cases' websites include several types of data, such as annual reports, news releases, information about eco-labels and certificates, events, and stores that sell related promotional materials (as in the case of SFI). Also, the data included events' data, such as conferences and forums. While most data were in English, a few documents were in other languages (French and Spanish). The documents, which were in other languages, were in most cases a translation for the original English versions.

In relation to social media networks' data, the approach depended on recognizing the main theme related to this study (i.e., environmental sustainability and eco-labels) in addition to other related themes, such as corporate responsibility advertising and activities. Qualitative Internet research was defined as "the study of multiple meanings and experiences that emerge around the Internet in a particular context" (Markham & Baym, 2009, p. 34). The previous approach helps to see the topic of eco-labels in its context whether it is a business context - as in the case of Boise Paper and Walmart - or eco-labels' certifying organizations context - as in SFI and FSC. The context of both eco-labels' certifying organizations (FSC & SFI) was expected to include the environment generally, with some focus on one or more of the related issues. The previous issues included cases of partnering with local communities, and collaboration with other organizations. Further, the collected data includes texts, images, sounds, and videos.

Data of social media networks came from Facebook, Twitter, YouTube, LinkedIn, and Instagram. Not every case study had a presence on the previous five networks. The cases had presence on the main three networks: Twitter, Facebook, and YouTube. Posts and images were explored from the establishing date of each case study's account. Posts and texts that were related to the themes of this research were collected through screen shots. In addition, the research collected other metrics related to users' engagement, such as number of followers, likes, and views.

Regarding the online documents, SFI documents included news articles (from 2015 to August 2019), press releases (from 2009 to August 2019), progress reports (from 2015 to 2019), and "In brief" reports (2018 and 2019). FSC documents included annual reports (from 2000 to 2018), and media kits. Online documents from Walmart included global responsibility reports (from 2005 to 2018). Boise paper online documents included one responsibility report (2018) from Packaging Corporation of America, PCA, which is the parent company of Boise paper brand.

This study used two focus groups' discussion to answer the third research question. Focus groups' participants were students in the School of Journalism and Communication at the University of Oregon. The participants were recruited from a large undergraduate class. There was one graduate student though. Most focus groups' participants were women from different states that are in the east and west coast, and some participants were from different countries. The research included two focus groups' discussions that lasted one hour for each group. At the beginning of the focus groups' discussions, participants were introduced to the research topic and to their voluntary participation criteria. Samples of FSC and SFI eco-labels were introduced by providing

packages that carried the labels. A paper bag from Walmart and a facial tissue paper (Great Value brand) carried the SFI label, and a copy paper box carried the FSC eco-label. The figures (7, 8, 9) show the used packages in this study. Figure 7 shows a paper bag from Walmart. These bags are usually available for consumers at the checkout, and the bags usually carry an eco-label, such as SFI label. Figure 8 shows a Great Value brand package that carries several labels on the front cover of the package, including SFI eco-label. Figure 9 shows the front and the back side of the Boise Paper package, where this package carries several labels, including the environmental labels FSC and Project Up initiative label (mentioned in the case study of Boise Paper). After the completion of the focus groups' discussions, all participants received credit for one class in addition to two gift cards given to two winning participants.

Data Analysis

The focus groups' analysis was qualitative in nature. In relation to eco-labels (FSC & SFI), the analysis looked at the elements of the symbols in the two eco-labels, where these elements can work together to create meaning. Although the two eco-labels have the green color when they are created by the two certifying organizations, the two brands use them with different color (black) on some of the packages. Both eco-labels have some iconic meaning, where there is a tree in each label. The shape of the trees in both labels plus the green color are the main symbols used in these labels to communicate about the certifying organizations' works in the field of forest sustainability and management. In relation to the focus groups' discussions, I started with transcribing the interviews entirely by using Ms. Word as a word-processing program. The transcription included the length of each discussed topic by indicating the start and end time of the

questions and answers. During transcribing, the research's notes were included within brackets and with different colors. In addition, notes that were taken during the interview were checked to see if there is anything missed or unclear. Yet, transcribing the focus groups' discussions depended on the raw recording materials without correcting grammars or words. There were notes added to clarify ambiguity and indicate the level of emotion and agreement regarding the topics. All the questions were transcribed and highlighted to distinguish them from the answers. Then, the general themes (main ideas) in the focus groups' discussions were identified. After that, all the emerging themes from the focus groups' discussions were identified along with the participants' positive and negative emotions toward the main points in the discussions. Then, representative statements (participants' quotes) were chosen to indicate the emerging themes from the focus groups discussions. When interpreting the data of the focus groups' discussions, there were considerations for the general themes, sub-themes, common responses, and less common responses. The results of the focus groups' discussions were integrated with other data from the four case studies in the discussion's section in this study.

Analyzing case studies' data happened during and after collecting the data of these cases. This method was described in Yin (2003). The method allowed to collect data and reexamined the collected data after the completion. After collecting the data of the case studies, there was a description of the collected data to allow recognizing the patterns and categories in the case studies. Then, the data was organized by the themes (main ideas) that relate to each research question. Yin (2003) mentioned that data analysis of case studies includes "examining, categorizing, tabulating, testing, or otherwise recombining both quantitative and qualitative evidence to address the initial

propositions of a study" (p.109). Case description was the main tool for data analysis in this study. This strategy for data analysis was described by Yin (2003) as one of three data analysis strategies for cases studies. The results of the case studies along with the results from the focus groups' discussions and previous literature was integrated together in the discussion's section in this study.

Conclusion

The exploratory nature of this study, which includes three different stakeholders (eco-labels' certifying organizations, brands, and consumers) led to using of case studies and focus groups as methods of inquiry. The case studies were chosen to explore two research questions related to eco-labels' certifying organizations and brands. The question related to eco-labels' certifying organization aims to figure out how these organization communicate environmental sustainability in general, and in relation to eco-labels' messages. The question related to brands aims to find out the ways in which the two brands in this study use eco-labels on their products and how the brands affect eco-labels' messages. The focus groups were chosen to handle the third research questions that deals with consumers and what they take away from eco-labels. The research's design includes four case studies. There are two case studies for eco-labels' certifying organizations (FSC & SFI), and two case studies for brands (Walmart & Boise Paper). In addition, the research's design included two focus groups' discussions. The data for the case studies was collected from several sources available on the Internet in which these sources have public access. These sources included mainly annual reports and social media networks (Facebook, Twitter, YouTube, LinkedIn). While qualitative research cannot generalize its

findings, this study's dependence on qualitative research provided deep insights in relation to the three research questions.

Figure 7

Walmart Paper Bag. This figure illustrates a paper bag with the Sustainable Forestry Initiative, SFI, label on the bottom of the bag

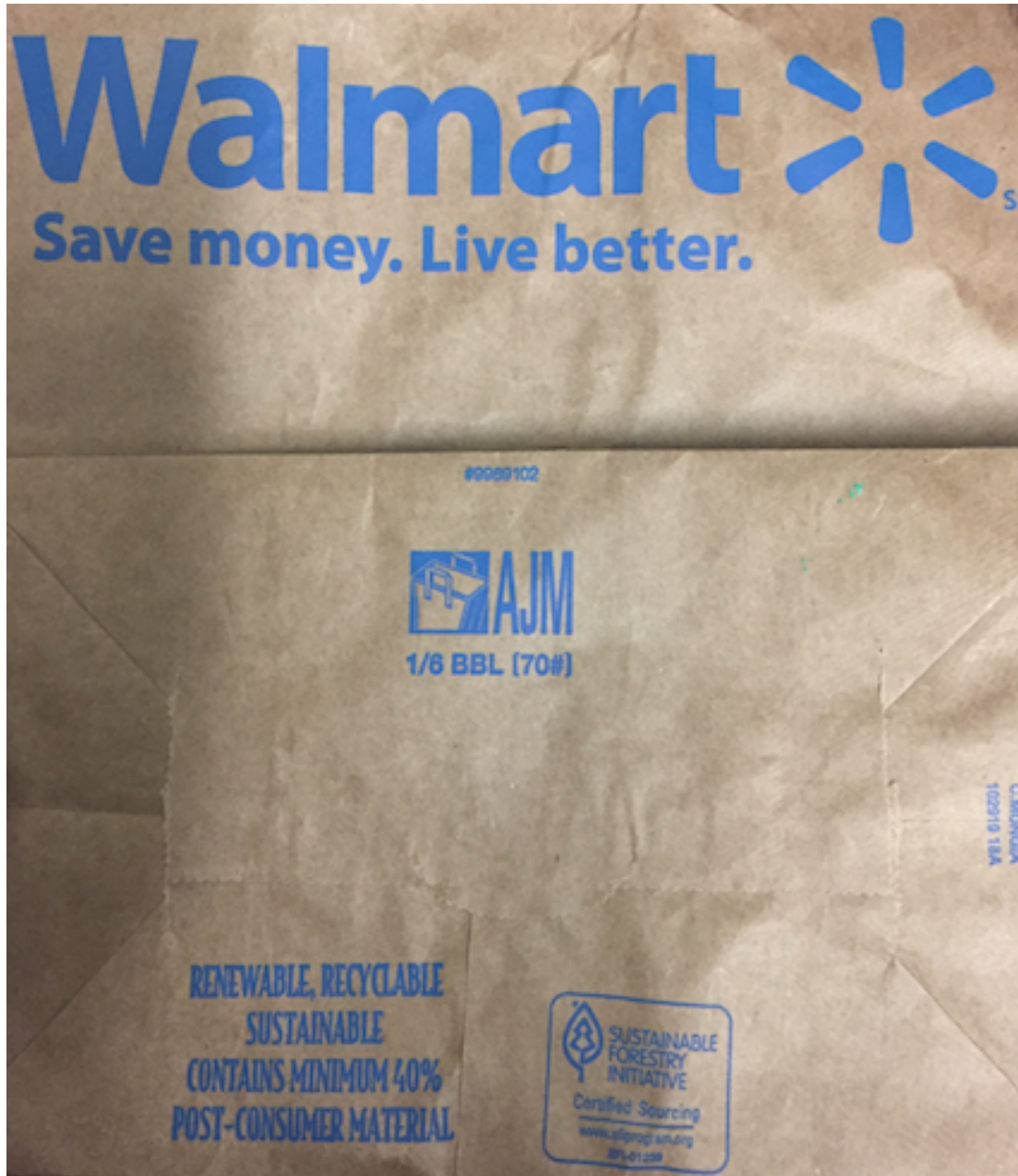


Figure 8

Great Value Facial Tissue Box. This figure illustrates the Sustainable Forestry Initiative, SFI, label on the front side (the removable part) of the box



Figure 9

Boise Paper Box. This figure illustrates the Forestry Stewardship Council, FSC, label on the front side (on the left), and on the back side (on the right)

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CHAPTER IV

FINDINGS – ECO-LABELS’ CERTIFYING ORGANIZATIONS

Introduction

This chapter focuses on certifying organizations’ use of eco-labels as a way to generate meaning with various stakeholders. I focus on two organizations: Forrest Stewardship Council (FSC) and Sustainable Forestry Initiative (FSI). The two case studies showed how eco-labels’ certifying organizations established partnerships with other environmental organizations and brands to better communicate the environmental messages of eco-labels. The data of the two case studies of FSC and SFI include annual reports and progress reports that are available online. The available communication on social media networks allowed to have better understanding about these two certifying organizations and their sustainability communication practices in general, and in relation to eco-labels’ messages in specific. The social media networks used in the analysis are Facebook, Twitter, YouTube, Instagram, and LinkedIn. In addition, the cases showed how the two certifying organizations encoded several symbols in their eco-labels’ message to create meaning connected to these organizations’ work in the field of forest sustainability and management.

Forest Stewardship Council, FSC

The Forest Stewardship Council is an international non-profit and non-governmental certifying organization that has several locations around the world. The headquarter is in Bonn, Germany. However, the first legal entity of FSC was in Mexico (FSC, n.d.a). The organization was established in 1993 by a group of businesses, environmentalists, and community leaders in response to agreement failure of the Earth Summit in Rio de

Janeiro in 1992, which aimed to stop deforestation (FSC, n.d.b). The FSC has several environmental logos; three of them appear in construction, publishing, and retail products. FSC depends on a voluntary market-based approach system. The organization has ten principles, which are applied to ensure better success for the organization's mission (FSC, n.d.b).

Mission Statement

According to FSC international website, the mission of FSC is "FSC will promote environmentally appropriate, socially beneficial, and economically viable management of the world's forests" (FSC, n.d.b). As seen in the mission statement, the organization works in three areas: the environment, economy, and society. The vision of the FSC organization stated, "FSC is the leading catalyst and defining force for improved forest management and market transformation, shifting the global forest trend toward sustainable use, conservation, restoration, and respect for all" (FSC, n.d.b).

Stakeholders

The stakeholders of the FSC organization include community members, conservation organizations, workers' unions, donors, development organizations, brands, and indigenous communities. Other partnerships include partnering with governments and private sectors (FSC, 2012). FSC was able to build partnerships with several stakeholders. These partnerships include international organizations, such as the United Nations, European Union, and United Nations Environmental Program, UNEP, and brands. These previous stakeholders can provide insights and inputs for FSC organization. In addition, the FSC organization can keep itself updated about the best environmental practices and regulations around the world. Consumers are not the main

stakeholders for this organization because the organization does not deliver to them directly but through brands. Besides, the partnerships with brands and other labels' certifying organizations were noticeable. For example, the FSC partnership with World Wildlife Fund, WWF (figure 19) (FSC, 2000), and Fair Trade International (FSC, 2011). Figure 19 shows a package of Scott brand, where FSC eco-label appeared with WWF label, and with a message that shows a heart with "Your Planet" phrase i.e., Love Your Planet. The figure also shows how the brand accompanied the previous labels with an explanatory paragraph that can help consumers to understand more.

Historical Development

In 1994, the FSC was born and FSC AC was established legally in Mexico (FSC, n.d.a). Between 1996 and 1997, the first general assembly took place, and the ten principles were ratified (FSC, n.d.a). By 1998-1999, the organization certified ten million hectares of forest around the world. In this era, the first labeled product was a chewing gum – Chicle gum, in Mexico (FSC, n.d.a). The first book that has certified FSC papers was "A Living Wage" by Lawrence B. Glickman" (FSC, n.d.a). Between 2000 and 2002, the organization won the City of Götheberg's International Environmental Prize (FSC, n.d.a). Between 2000 and 2004, the organization had several changes, where the organization's location moved from Mexico to Germany in 2003. In addition, the number of certified products reached 20,000 by 2003 (FSC, n.d.a). By 2004, FSC won the ALCAN prize for its contribution to forest sustainability. By 2005, about ten million hectares of forests were certified. By 2008, around 100 million hectares of forest were certified in more than seventy-nine countries (FSC, n.d.a).

By 2011, FSC had regional offices around the world and the number of memberships reached 800 (FSC, n.d.a). By 2012, FSC had thirty national offices and by 2013, the Permanent Indigenous People Committee was established. In 2015, the organization launched a global campaign to enhance its brand 'Forests For All Forever' (FSC, n.d.a). In 2016, most of the wood construction used in the Rio Olympic and Paralympic Games was certified by FSC (FSC, n.d.a). By 2017, The Vancouver Declaration was created to allow worldwide organizations to align with the UN's Sustainable Development Goals. By 2019, FSC has around 200 millions of forest certified (FSC, n.d.a). The previous number shows the expansion of the certifying organization, which took place mainly by the increasing demands of forest management's certifications by brands and corporations.

International Websites

FSC has forty-seven international websites that represent the countries where FSC operates. While some of these websites are in English, the majority has the language of that specific region, for example, Spanish for the website in Spain, and French for the website in France. The same is applied for the social media networks; several sites publish translated posts and texts. The analysis showed that there are some similarities in posts when the issue has a large theme, such as the rights of forest workers. Several posts have the same text but translated to another language. However, the FSC branches' websites' posts have their own character in terms of local and regional posts and issues. Decentralization of social media networks could achieve two goals. First, it can create intimacy since it is localized to the issues and tastes of each country. Second, it reduces duplications of languages and posts in the main FSC website.

Annual Reports

The annual reports covered FSC activities, and these reports are available from 2000 to 2018. The 2006 report was not available in the reports' page on the organization website. Also, the 2004 report was a financial report only. Some reports have titles that reflect the general theme of a specific year; for example, in the 2003 report, the title was Looking to the future - Because Forests matter. Some reports are in English and Spanish; some of them are in English only. While most reports are available as PDF files on the FSC website, some reports available as interactive reports, which can be accessed through the FSC web page directly. Each report starts with a message from the director general and a message from the chairperson. In addition to the news of FSC expansion around the world, the reports include treasure reports and statistics. In addition, the reports include information about events and conferences held yearly.

Expansion and Development. There are two areas mentioned in the expansion: expansion in forests covered by FSC certificates, and the expansion of FSC organization, which attracted more members and opened more offices around the world. The reports mentioned three areas of development: policy development, FSC logo development, and FSC principles development.

FSC Label. The reports showed how the FSC label had been developed to its current design. In addition, the reports mentioned the FSC online platform, which can customize the labels into forty-five languages (FSC, 2012). The reports mentioned how more people recognize FSC labels i.e., brand awareness. The method used to test the brand's recognition was survey (FSC, 2012). The reports talked about several initiatives

by FSC to increase the FSC brand's recognition, and FSC label's recognition in countries around the world like Sweden and Netherland (FSC, 2001; FSC, 2003).

Environment, Society, and Economy. The annual reports' analysis showed that FSC tried to achieve balance in covering the three areas the organization works on: the environment, society, and economy. Looking at the environmental part, the annual reports mentioned the following issues repeatedly: forests health, high conservation forests, ecosystem, animal and biodiversity, climate change, and pesticides policy. While the reports covered several areas from around the world, the reports did not talk in detail about each country's progress i.e., the updates were a snapshot from the development process of FSC work from around the world. Further, the reports linked the environmental part to the production's aspect of goods and construction materials.

The economic part was less prominent compared to the environmental one. The reports mentioned the FSC as a tool to alleviate poverty and helps smallholders' programs (FSC, 2008; FSC, 2012; FSC, 2013; FSC, 2015). The economic part was linked and mentioned in the reports with the social part, where issues like indigenous people rights are mentioned as well (FSC, 2012; FSC, 2015). The 2012 report mentioned how FSC established a permanent indigenous people committee. Another issue was the workers' conditions and how FSC work to improve workers' rights (FSC, 2008).

Construction, Publishing, Paper, and Retail. FSC organization's works cover three areas that have some similarities. These areas can be classified into construction, publishing and paper, and retail. The reports mentioned news about events and building that used FSC certified products. When talking about construction, that mostly means the use of timber wood in building foundation and furniture. For example, there are updates

about green building in the United States., and updates about the use of certified building materials in Olympic events such as Rio de Janeiro Olympic (FSC, 2016), London Olympic (FSC, 2012), and Canada Olympic venue (FSC, 2010).

Figure 10

Partnerships with Famous Organizations. This figure illustrates a partnership between FSC and WWF, where the two labels appeared together on one product



Looking closely at the publishing and paper sector, the reports mentioned several uses of its certified papers. Some of these uses are related to famous products, such as Harry Potter certified papers (FSC, 2003; FSC, 2005; FSC, 2007), and certified rail tickets (FSC, 2005). One report mentioned a Nobel Prize winner in literature recommended FSC for publishing companies (FSC, 2005), and certified paper for BBC

magazine (FSC, 2005). Among other certified products, a children book that tells a story about forests (FSC, 2009), and the inauguration of President Barack Obama that printed on certified FSC papers (FSC, 2009), and a Sao Paulo newspaper printed in certified papers (FSC, 2009). The retail sector includes news about famous brands and stores that use certified products. Such brands include Gucci, Kimberly Clark (FSC, 2009), and IKEA (FSC, 2015).

Sustainability Education Materials

While there were no dedicated resources designed specifically as an educational curriculum, social media networks were used as platforms to spread environmental and sustainability knowledge globally. Facebook and Twitter provided the largest content of sustainability information; the other platforms Instagram and YouTube had less information. YouTube, for example, provided videos recorded from inside forests, in a way that helps viewers to visualize how forests function.

Social Media Networks

Social media networks allowed Forest Stewardship Council, FSC, organization to reach a wider audience due to the nature of these social media networks which provide high level of accessibility. Among these audience are partner, donors, environmental groups, and consumers. FSC has a presence on four social media networks: Twitter, Facebook, YouTube, and Instagram. The official organization's website does not show the YouTube icon; yet, FSC has a channel on YouTube. The analysis below shows how each social media network was used and shows the communication strategies used to communicate FSC news. The FSC account on Instagram focuses on presenting photos from nature,

including forests, plants, animals, and indigenous people. There were a few posts of products that used the FSC logo.

In relation to Twitter, FSC Twitter account's engagement metrics include about 3,000 tweets and around 18.7 thousands followers, 895 likes, and 882 photos and videos by Sep 24th, 2019. The Twitter account includes posts that can be divided into six categories: environmental, social, economic, advertising, outreach, and events. For example, Twitter includes tweets relate to tree support campaigns, such as #myRoots (figure 11). Each #myRoots post includes a letter from a tree, where a tree introduces itself to people. These trees include, for instance, sugar maple tree, Brazilian Pine tree, and Australian Cider Gum tree. Another example related to trees is a tweet about a giant unique tree in California, which weighs about 15 blue whales. The tree is called Del Norte Titan.

In addition to campaigns, FSC tweeted in relation to international days' celebrations, including the Earth Day on April 22nd, World Book Day on March 1st, World Environment Day on June 5. Other celebrations include International Day of Indigenous People on August 9th, International Day of Forests on March 21st, World Animal Day on October 4th, and World Rhino Day on September 22nd. Further, there are posts that show how forests management contributes to the UN sustainable development goals, such as the goal that talk about the "Life on Land".

Several tweets were about the social part of the organization's work, which includes the relationship between good forests management and community engagement (figure 14). Figure 14 shows a tweet that has a link to how trees were represented in folklore of ancient civilizations. Also, there were posts that include women and girls'

empowerment in addition to event celebrations, such as the indigenous people day celebration. Several examples with short stories were introduced from different countries. FSC posts used Twitter as an advertising platform about FSC in use i.e., the FSC eco-label on products. These products were mentioned in context in which they were used. The main three areas in which FSC eco-labels were used are construction, publishing, and retail. In relation to construction, for example, the posts showed how Olympic games used timber wood materials to build venues. Olympic games include Pyeong Chang 2018, and Rio 2016 Paralympic medals' wood cases and ramps. Also, the posts showed how some game equipment was certified; an example is a snowboard for the snowboarding game and a football for soccer game (figure 12). Figure 12 shows how the organization used the FSC eco-label on a soccer ball with including a hashtag of #FairRubberAssociation because rubber is also a product of trees.

Some examples from the retails include Patagonia, which used FSC labels on products made from rubber – the world's first neoprene-free wetsuit. Also, there is an advertisement that linked the soccer world cup football to a specific kind of rubber that is certified by FSC – in partnership with the Fair Rubber Association. The certified-paper and publishing part was shown through products that use packaging, such as milk, and paper-based products like books. Books were shown as a recommended reading about a topic, or a story related to the environment. These books include, for instance, John Steinbeck's 'East of Eden' book, 'How to Stay Alive in the Wood' book by Bradford Angier, and the 'Hidden Life of Trees' book by Peter Wohlleben. Among other advertisements, there are ads about musicians and FSC certified guitars. An example is Martin & Co guitars and James Valentine, in which FSC label appeared with RainForest

Alliance label in one advertisement. Some retail companies include McDonalds and its campaign #SclaeForGood. One post stated that the FSC label was seen about 6 billion times in advertising in 2015 in Germany.

In relation to brands' advertising through FSC Facebook page, there are several occasions, where the posts showed advertisements directly as in fruit juice products, or indirectly through brands' corporate responsibility. The use of videos on Facebook was higher compared to the use on YouTube. Most Facebook's videos showed a high level of engagement metrics in terms of likes, comments, and shares. The previous situation appeared in several posts. Another example is FSC campaigns, such as #myRoots (figure 11). Figure 11 shows one of the #myRoots campaign where the brand used this campaign to introduce several kinds of trees to social media followers. In figure 11, for example, there is a greeting message from a lime tree. The previous message talks about the lime tree, its benefits, and its location around the world. FSC also used art in promoting the FSC logo on several occasions. The art includes photographers' works, movie industry in British Columbia in Canada, and actors such as Miranda Richardson. Most posts are related to the FSC label, but in most situations does not mention the label directly. For example, several posts align the work of FSC with the United Nations Sustainable Goals, this includes 'Life of Land', 'Climate Action', and 'Good Health and Well-Being'. Some FSC posts advise customers to buy certified products; for example, in the retail category there were posts about brands that used the FSC logo and how those brands advance their sustainability practice. Such brands include McDonalds and H&M.

From a marketing communication perspective, FSC on Facebook made efforts to follow other brands' uses of the FSC label – as in the Air Canada case, in which plastic

stir sticks were eliminated. In addition, there were posts about the use of FSC labels in daily products, such as coffee cups (Figure 15). More, some posts showed quotes of famous people, such as Vincent Van Gogh. Among other things, there are posts related to productivity issues like stress management. For instance, FSC made a link between stress management and the positive effect of forests on mood.

Partnerships' news was also posted; for example, there is a post about the collaboration between the World Wildlife Fund, WWF, FSC, and McDonalds. The previous campaign was named #ScaleforGood. Another example is Patagonia, Fair Trade, and FSC certified wetsuit. Some posts include science news, such as how rain forests provide the medicine industry with the basic ingredients (figure 13), and how a tree age is calculated. Figure 13 shows how the FSC organization linked the benefits of rainforests to medicines because some of rainforest's plants are used in manufacturing of medicines. Facebook showed many forest photos, which received a high level of engagement. There was also integration of environment and science videos from famous news sources like BBC, the Guardian, Medium, and CNN. News about FSC webinars was also posted on Facebook.

In relation to the YouTube channel, it has videos that cover several areas of FSC work. There were many videos about the general assembly's meetings. The channel also has videos in relation to the environment, including videos about animal life, climate change, and biodiversity. One video, for instance, was about protecting the habitat of tigers. While both Twitter and Facebook showed more posts in relation to celebration of several International days, YouTube showed less posts in relation to that kind of events. The YouTube channel has also promotional videos and news about one of the FSC

environmental contests: “What is your connection to the forest?” and the winners of that contest. Additionally, YouTube videos showed some of the forests where FSC work. For example, one forest was in Nepal and the other one in British Columbia in Canada.

YouTube videos include discussion with community people who are involved in forest work. An example of the previous situation is a video titled “Can humanity fashion a way to coexist with nature?” Most videos on YouTube are in English language. Yet, there are some videos in Spanish and some videos in English and Spanish. The YouTube channel also has a video that was originally produced by BBC; the video talks about the importance of forests and how FSC relates to forests management. The videos’ techniques on YouTube include three types: traditional video recording, stop motion videos, and video scribe that uses markers on a white board. The stop motion video was used in combination with traditional video animation to create a mix that was suitable for the advertising campaigns “Something new is on its way”, and “Forests for all forever.” Some endorsements videos came from people such as the Olympic torchbearer Mario Mantovani.

FSC Label Versions

Forest Stewardship Council showed three labels, which appear on certified products’ packaging. Each label has some visual and verbal cues that are designed to help consumers to understand the label. FSC stated, “whichever FSC label is on your product, you can be sure that you’re purchasing a product that has not been manufactured at the expense of the forest, or the animals, plants, and people who rely on it” (FSC, n.d.c). The Trademark Portal allows FSC certificate holders to generate FSC labels in different languages, details, and colors to suit their needs (FSC, n.d.d). The logos and trademark

guideline provides a detailed explanation on how to use the labels and trademarks, including colors and locations of the labels on packages (FSC, n.d.f). The Table 3 next page shows each label’s meaning.

Table 3

FSC Labels’ meanings




FSC Label	Explanation
 <p>The label features the FSC tree logo at the top, followed by the text: "FSC www.fsc.org", "100%", "From well-managed forests", and "FSC® C000000" at the bottom.</p>	<p>“The wood within the product comes entirely from FSC-certified, well-managed forests” (FSC, n.d.c).</p>
 <p>The label features the FSC tree logo at the top, followed by the text: "FSC www.fsc.org", "RECYCLED", "Made from recycled material", and "FSC® C000000" at the bottom.</p>	<p>“All the wood or paper in the product comes from reclaimed or re-used material” (FSC, n.d.c).</p>
 <p>The label features the FSC tree logo at the top, followed by the text: "FSC www.fsc.org", "MIX", "From responsible sources", and "FSC® C000000" at the bottom.</p>	<p>“The wood within the product is from FSC-certified forests, recycled material, or controlled wood” (FSC, n.d.c).</p>

Figure 11

#myRoots by FSC Campaign on Twitter. This figure illustrates a campaign by FSC, where several kinds of trees tell stories about themselves

FSC International @FSC_IC · Sep 3

Say hello to this very polite lime tree! **#MyRoots**



#myRoots
by FSC®

Dear friend of the trees,

You can meet me anywhere in temperate Europe, from Britain to as far as Turkey. I grow in forests, but humans invite me closer to their homes. When autumn comes into their alleys and gardens, I'm the one blazing in bright yellow. Wherever I grow, I improve the soil under your feet. I treat humans with my flower tea, and their cold recedes. I'm a healer.

I host the best parties! Humans rest in my shade and praise the fragrance of my flowers. Guess who else loves me? Honeybees! They dive among my blossoms and make the most delicious golden honey...

My roots grow deep, and my branches stretch up to 40 meters high. I do not fear heat waves, draughts, or harsh winds. Climate change is no biggie for me, but my friends in the ecosystem are suffering. I do my best to keep them healthy and resilient, but I need your help. Together, we can ensure a bright future for future generations of trees, bees and humans!

Yours.

2 10

Figure 12

FSC Eco-labels on a Football. This figure illustrates the FSC eco-label on a football. This post appeared on Twitter FSC page



FSC International @FSC_IC · 17 Nov 2017

Enhorabuena Perú por la clasificación al #Mundial! Sabías que entre muchos productos con el sello FSC de gestión forestal responsable también hay balones de fútbol? #FairRubberAssociation



Figure 13

Knowledge about Forest Health and Management. This figure illustrates a message by FSC about the importance of rainforest and the forest responsible management. The post appeared on Facebook

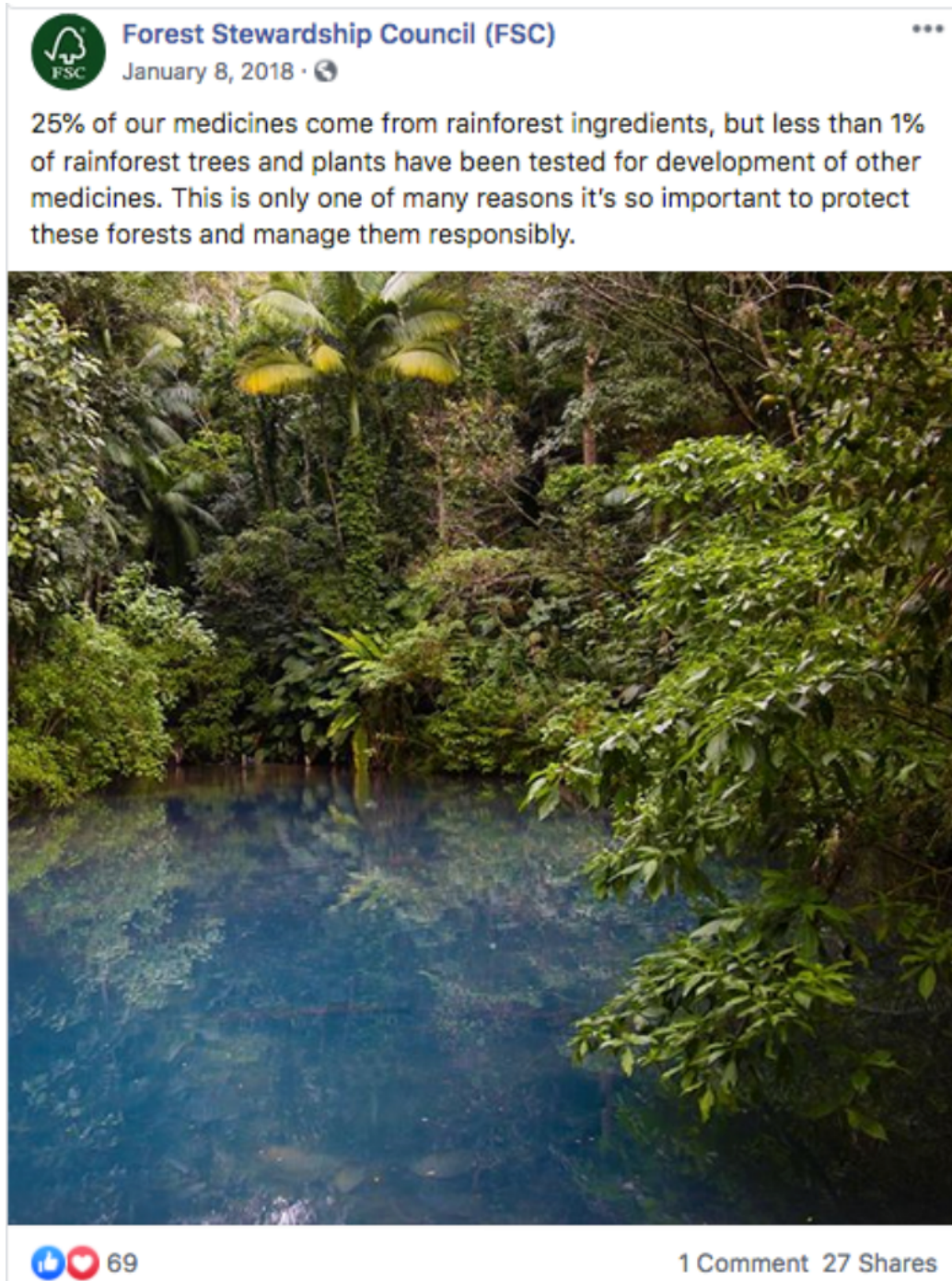


Figure 14

Integrating Forests Messages with Community Engagement. This figure illustrates a message by FSC about trees in folklore – American Forests. The post appeared on Facebook



 **Forest Stewardship Council (FSC)** ...
January 20, 2018 · 

A fun and interesting read about trees in mythology and folklore:
<http://ow.ly/3AyH30hSNxT>

 AMERICANFORESTS.ORG
Sacred Roots: Trees in Folklore - American Forests
Did you know the Vikings believed the world was supported by a giant ash tree? Read about how trees fit into the folklore of ancient civilizations.

 37 1 Comment 9 Shares

Figure 15

An International Event Day with a Product that Carries FSC eco-label. This figure illustrates a message by FSC about the World Environmental Day. The post appeared on Facebook



Sustainable Forestry Initiative, SFI

The Sustainable Forestry Initiative, SFI, is a non-profit and non-governmental organization that contributes to forest conservation and provides community initiatives in relation to trees. The organization was established in 1994-1995 and it has headquarters in Washington D.C. in the United States, and in Ottawa in Canada. The organization standards are recognized by the Programme for the Endorsement of Forest Certification, PEFC, the largest forests certification system. SFI works with several stakeholders and has been able to build partnerships with different sectors in society, including academic institutions and local communities (SFI, n.d.a). While products with SFI labels are distributed worldwide, the forests covered by SFI standards are in the U.S. and in Canada (SFI, n.d.a).

The forests covered by SFI represent a quarter of the entire certified world forests (SFI, n.d.g). The covered forests area is about 147 million hectares. SFI Inc. has three chambers: the environmental sector, the social sector, and the economic sector (SFI, n.d.a). Currently, there are three SFI standards: The SFI Forest Management Standard, The SFI Fiber Sourcing Standards, and SFI Chain-of-Custody Standard (SFI, n.d.d). The third-party certification bodies include American National Standards Institute (ANSI), ANSI-ASQ National Accreditation Board (ANAB), and Standards Council of Canada, SCC, (SFI, n.d.e). SFI has a strict auditing system that is done by the previous accredited certification bodies (SFI, n.d.f). The SFI organizations' works are supported by four pillars of standards, conservation, community, and education (SFI, 2019).

Mission Statement

The SFI mission is “To advance sustainability through forest-focused collaborations” (SFI, n.d.a).

Stakeholders

The SFI organizations have several stakeholders that relate to its work like community organizations, brands, research partners, and universities. Each stakeholder has different interests and can add insights to SFI organizations. The governance model shows that several stakeholders are included in the decision-making process. For example, the organization has a model that includes diverse Independent Board, which consists of eighteen members (SFI, n.d.b), whose jobs is to set the strategic direction of SFI, “SFI Board members include executive-level representatives of conservation organizations, academic institutions, aboriginal/tribal entities, family forest owners, public officials, labor and the forest products industry” (SFI, n.d.b.). In addition to the Independent Board, SFI has an External Review Panel; ERP that consists of interests’ groups, such as forestry and academics. The ERP was established in 1995 and its main mission is to provide recommendations to SFI (SFI, n.d.c). In relation to brands, for example, the SFI organization had a partnership with: Time Inc., the National Geographic Society, Macmillan Publishers, and Pearson, to establish SFI Forest Partners Program (SFI, 2015). Among other partnerships is a partnership with the Leadership in Energy and Environmental Design, LEED (SFI, 2016). Research partnering organizations came from different sectors, such as government, conservation, community, academic, and others such as brands owners, consultant firms, and consultant groups. The educational section of SFI organization’s work was mentioned several times in the progress report. The main

leading project is Project Learning Tree, PLT. The PLT outcome was shown in numbers, which reflect the widespread of the program across schools in the U.S. and in Canada.

The organization also integrates some parts of its work with the United Nations Sustainable Development Goals.

Progress Reports (Annual Reports)

The available progress reports covered the period from 2015 to 2019. Each progress report has a distinctive title, and it is available in English as well as in French. The length of the progress reports varied, and the reports were relatively similar in terms of the structure, where each report started with the president and CEO message; the External Review Panel message appeared later in the reports. The progress reports are rich visually, where SFI used many infographics that communicate the organization's progress and the areas of sustainability, including the conservation sector, community sector, and education sector. In addition, there was coverage of the market sector.

The progress reports mentioned three areas of SFI certification: forest management, fiber sourcing, and chain-of-custody. An important part in all the progress reports is the SFI organization's requirement for SFI program's participants to support research. Some reports had a list of SFI certifications' holders. The SFI organization conducted surveys to measure the recognition of its labels and the results were an increase of the labels' recognition and understanding with time. For example, in the (SFI, 2015), the report mentioned that the label recognition was more than 23%, in (SFI, 2016); the percentage is 35%, and 36% in the (SFI, 2017). The estimated area of SFI coverage is about 25% of the global certified forests as mentioned in the (SFI, 2017), and 42% in the (SFI, 2019).

In relation to the conservation sector for example, the progress reports covered news of conservation grants' recipients in several states in the U.S. and provinces in Canada. Also, the reports mentioned SFI organizations' efforts in relation to biodiversity and animals' habitat, such as the Woodland Caribou, amphibians, and birds. Another topic related to the conservation section is the issue of water and how forests contribute to that issue. The reports showed that SFI organization awarded many grants as conservation and community grants - around 405 conservation and research's projects reported by participants in 2017 (SFI, 2017). In addition, there were many collaborative activities with organizations, universities – such as Michigan State University, and University of Georgia - and community partners, in a way that maximized the benefits of SFI organizations' work.

Several community projects were mentioned in the progress reports mainly to link forests to small and large communities. Among the partnerships is the collaboration with the Habitat for Humanity Canada (SFI, 2015), the Habitat for Humanity International (SFI, 2015), and National Wild Turkey Federation (SFI, 2016; SFI, 2017). The reports also included a list of the community grants recipients. The reports mentioned how SFI contributed to the training of loggers, harvesters and indigenous people who work in the forest industry and how SFI connected landowner to some brands (SFI, 2016).

In Brief Reports

The In-Brief reports covered eight months in 2018, and eight months in 2019 (data collected by October 14, 2019). The months covered in 2018 are January, February, March, April, May, August, September, and December. The months covered in 2019 are February, March, April, May, June, July, August, and October.

Educational Initiatives

There are three main areas in which SFI got involved in environmental education: partnering with Project Learning Tree, working with Project Learning Tree Canada - as an initiative of SFI - and partnering with scouts' organizations. Project Learning Tree is a stand-alone non-profit organization that leads a wide range of environmental educational activities tailored for kids and schools (Figure 16). SFI youth program's partners showed twenty partners (SFI, n.d.i.). Some examples of these partnerships include Cornell University Lab of Ornithology, Pacific Education Institute, Young women for Nature, Boy Scout of America, and Girls guide of Canada.

SFI Blog

The SFI blog has more than two hundred and fifty entries. While there are several authors, there are many contributions by the SFI president and CEO.

Social Media Networks

In relation to Twitter, the age of SFI Twitter account is about five years, starting from November 2016. SFI Twitter page has 8,139 tweets, 2,852 following, 47.1 thousand followers, 6,025 likes, and 15 lists (by October 16th, 2019). Twitter was used to update followers about SFI organization's works and related environmental issues, such as sustainability education for kids. Several posts showed the use of infographics to communicate scientific knowledge in relation to conservation and research news. In addition, the SFI Twitter posts were used as a way for celebration for international and national days, including Arbor Day, Mother's Day, World Environment Day, Father Day, National Read a Book Day, World Water Day, and International Forest Day. Although the range of species covered by SFI was wide, the most repeated issues in relation to

animals are turkey, birds, amphibians, caribou (figure 17), and duck. Figure 17 shows how the SFI Program contributes to research related to Caribou conservation, where caribou depends on forests to live and grow in number. There was also a post talking about SFI achievement in setting the world record of Guinness for “One Tree at a Time” on May 20th, 2015, where SFI planted 202,935 trees in one hour (figure 18). Among other things, there are posts for conferences’ announcements, mainly the SFI annual conference.

Other themes are: Indigenous people, women empowerment in forest work, and kids and youth environmental education. Twitter posts showed several ways kids and youth can use to participate in SFI educational activities. Some of these activities can be used as a curriculum. Other activities and resources were available in the Project Learning Tree, PLT. The posts showed SFI organization’s efforts in encouraging kids to get out of their homes through campaigns like Screen-Free Week. Among other things, PLT’s related posts have updates regarding the benefits of environmental education.

The science news appeared in SFI Twitter posts several times. Most of these posts came from external media sources, such as Science Magazine, and National Geographic. Besides, SFI posted news in relation to the potential of wood in areas like replacing the building steel and mitigating climate change. The integration of the United Nations Sustainable Development Goals was prominent through several posts, where each post was devoted entirely to link the SFI work in relation to one UN Sustainable Goal at a time. The total number of UN SDGs integrated into SFI Twitter posts was eight. For example, “Life on Land” goal was linked to deforestation and well-managed forests. The “Clean Water and Sanitation” goal was linked to forests’ role in providing clean water in

the U.S. and Canada. The “Responsible Consumption and Production” goal was linked to SFI efforts in relation to consumers’ purchase decisions. The “Quality Education” goal was linked to the SFI Project Learning Tree. The “Climate Action” goal was linked to SFI research in relation to carbon storage in forests. The “Good Health and Well-being” goal was linked to SFI activities that encourage people to go for outdoor activities i.e., to be in forests and nature. The “Affordable and Clean Energy” goal was linked to agriculture and forest biomass. The “Partnerships for the Goals” goal was linked to SFI Community Partnerships Grant Program.

In relation to market and retail, there were three areas: Timber wood, papers, and retail. The timber wood was posted as a potential replacement for steel in building; a step which can revolutionize the construction industry (wood & glue skyscrapers). While publishing news was not prominent, the collaboration between SFI and publishing houses (Time Inc, Pearson, National Geographic, & Macmillan) was mentioned in several Twitter posts in addition to the benefit of reading paper-based books over e-books. Among other things, the SFI label was featured on a cartoon cup. Forests for fashion was another post that revealed multiple partners: United Nations Economic Commission for Europe, UNECE, Food and Agriculture Organization, FAO, United Nations Forum on Forests, UNFF, Programme for the Endorsement of Forest Certification, PEFC. One of the posts featured a product that achieved the SFI chain-of-custody certification – Marcal, a Soundview paper company. Among other things, there was news about a partnership with Canadian Council Aboriginal Business logo, and a photo contest.

Regarding Facebook, the SFI Facebook page has some similar aspects to the Twitter page. The Facebook page has a level of engagement as the following: 16,375

likes, and 16,688 followers (by October²⁰, 2019). A few posts from external accounts were in French. While there were several posts copied the same content of some Twitter posts, the Facebook page has additional videos related to the environment. The posts showed how SFI partnered with other organizations to advance its mission. Partnerships also aimed to advance the research for conservation animals, such as grizzly bear and caribou. The caribou news appeared several times in the Facebook posts. The posts showed SFI efforts in supporting research related to caribou. The posts also included infographics that carry specific issues, such as the reasons to buy SFI certified products. Similar to Twitter posts, there were posts celebrating international and national events that directly and indirectly relate to forests. Such posts included the International Biodiversity Day, Canada National Forest Day, Squirrel Appreciation Day, International Day of Forests, Earth Day, Arbor Day, Valentine Day, and the World Environment Day. One important post was about the SFI achievement in setting a new score in the Guinness World Record, where the most trees planted in one day was achieved by SFI. The previous post also appeared on Twitter. Among other things, the Facebook's posts showed the annual SFI conference invitation and registration. There were also posts that showed the relationship between the UN SDGs and SFI works; an example is the Quality Education goal in UN SDGs and PLT programs by SFI. In addition, there was news related to a photo contest organized by SFI. There were many posts related to environmental education and how Project Learning Tree, PLT, helps kids to enjoy the learning process through fun-based activities. Some kids' related initiatives included activities to encourage kids to be outside and be Screen Free. Also, there was a free download for mobile applications from Project Learning Tree.

In relation to retail and consumers, there are three themes: showing products that carried the SFI labels, posts about the importance of SFI labels, and news from other related Facebook accounts. For example, the following products and brands appeared in the posts: Subway paper bags, Dunkin' Donuts, Milk boxes, coffee and teacups, paper bags, Angel Soft brand, and Florida Natural. The posts about coffee cartoon cups appeared several times. One post integrated from YouTube showed the importance of the SFI label. In relation to publishing, one post mentioned the importance of reading from paper-based books. Related news from other Facebook accounts was included, for example, National Geographic, Ducks unlimited Canada, Mosaic Forests, National Forest Foundation, Arbor Day Foundation, Treehugger.com, and Shape.com. In relation to construction, the posts showed news about the promising future of using wood in construction and the benefit in the long run. There were also posts related to green jobs. Among other posts, there are posts that showed the SFI label on a paper bag (figure 19), and on a product packaging (figure 20). Figure 20 shows how SFI Program explained the benefits of the SFI eco-label through text and video.

The SFI YouTube channel has 236 subscribers (by October 21st, 2019). The first video was published about eleven years ago. The total number of videos on the channel is ninety-nine; with 43,380 views for all videos. The YouTube videos were an opportunity to watch SFI and community members in action. For example, one video showed how SFI personnel worked with “Habitat for Humanity” to build a house. Most SFI videos on YouTube were related to SFI news updates and events like annual conferences. Yet, there were a few videos focused solely on some environmental issues, such as forest health,

climate change, and species at risk. One video was about SFI achievement in relation to the highest number of trees planted in one day.

The SFI LinkedIn account showed a fewer number of posts compared to Twitter and Facebook. The LinkedIn account was used also to advertise for job opportunities available at SFI. Similar to Facebook and Twitter, LinkedIn showed posts about several international days, such as Earth Day, Arbor Day, World Environment Day. Other themes include indigenous people, SFI participants investing in research, conservation grants, and congratulating SFI chain-of-custody holders.

Conclusion

The two case studies of FSC and SFI showed how these two certifying organizations communicate the messages of their eco-labels to a wide range of audience, including brands and consumers. In addition, the cases showed how the two certifying organizations have expanded since the establishment date (1994) to cover more areas, whether around the world as in the case of FSC, or in the U.S. and Canada as in the case of SFI. Products that carry one or both eco-labels can be found internationally though. The case of FSC showed how this organization established partnerships with other environmental organizations to have a message in addition to the eco-label. That was shown in the example of the partnership with the World Wildlife Fund organization, where WWF label and the “Love Your Planet” campaign appeared together with the FSC eco-label on Scout brand.

The SFI organization was being involved in several community projects and it established several partnerships with universities and community organizations. In addition, the SFI certifying organization provides environmental education materials for

kids and youth through initiatives like the Project Learning Tree, PLT. The SFI eco-label includes several versions (Table 4) that explain the degree of compliance and specify the type of the certification products can have. While annual reports provided some understanding of what the FSC and SFI organizations did in relation to sustainability communication, the social media networks were among the main communication platforms to spread sustainability knowledge. Most updates were shared across the platforms of Facebook and Twitter, and to less degree on YouTube and LinkedIn.. The most prominent themes were related to forest health and management, biodiversity, and ecosystem. Other themes include climate change and saving the environment.

Table 4

SFI Labels' Versions

SFI Label	What does it mean?
 <p>The logo features a stylized green tree icon inside a leaf shape. To the right of the icon, the text reads "SUSTAINABLE FORESTRY INITIATIVE" in bold, uppercase letters. Below this, it says "Certified Sourcing" in a smaller font. At the bottom, the website "www.sfiprogram.org" and the code "SFI-00001" are listed.</p>	<p>This label “tells buyers and consumers that company that is certified to the SFI 2015-2019 (Extended through December 2021) Fiber Sourcing Standard, or comes from recycled content, or from a certified forest. All fiber must be from non-controversial sources” (SFI, n.d.h.).</p>
 <p>The logo features the same stylized green tree icon. To the right, the text reads "SUSTAINABLE FORESTRY INITIATIVE" in bold, uppercase letters. Below this, it says "Certified Chain of Custody Promoting Sustainable Forestry" in a smaller font. At the bottom, the website "www.sfiprogram.org" and the code "SFI-00001" are listed.</p>	<p>“If the input of certified content is 30%, the organization can only make claims or use the SFI label on 30% of the output. This is consistent with all global chain-of-custody standards. The labels used for the volume credit method are shown below. If recycled</p>

 <p>SUSTAINABLE FORESTRY INITIATIVE</p> <p>Certified Chain of Custody Promoting Sustainable Forestry and Recycled Content</p> <p>www.sfiprogram.org SFI-00001</p>	<p>content is used, then the label must state “Promoting Sustainable Forestry and Recycled Content.” If there is no recycled content, then the label must simply state “Promoting Sustainable Forestry” (SFI, n.d.h.).</p>
 <p>SUSTAINABLE FORESTRY INITIATIVE</p> <p>Certified Chain of Custody At Least XX% Certified Forest Content</p> <p>www.sfiprogram.org SFI-XXXXX</p>  <p>SUSTAINABLE FORESTRY INITIATIVE</p> <p>Certified Chain of Custody X% Certified Forest Content, X% Certified Sourcing, and X% Recycled Content</p> <p>www.sfiprogram.org SFI-XXXXX</p>	<p>“If an organization does not meet the 70% threshold, it must transparently disclose the actual percentage of certified forest content or recycled material on the product label. The following two labels may be used by any chain-of-custody certificate holder that drops below the 70% threshold and uses the average percentage chain-of-custody method” (SFI, n.d.h.).</p>
 <p>SUSTAINABLE FORESTRY INITIATIVE</p> <p>Certified Chain of Custody Promoting Sustainable Forestry</p> <p>www.sfiprogram.org SFI-XXXXX</p>  <p>SUSTAINABLE FORESTRY INITIATIVE</p> <p>Certified Chain of Custody Promoting Sustainable Forestry and Recycled Content</p> <p>www.sfiprogram.org SFI-XXXXX</p>	<p>“The average percentage method allows manufacturers to label 100% of their product with the SFI Certified Chain-of-Custody label. If an organization wishes to use the SFI chain-of-custody label or make a chain-of-custody claim on 100% of an organization’s product, the content must be at least 70% composed of certified forest content and/or recycled material. If recycled content is not used, then the label must just state “Promoting Sustainable Forestry” (SFI, n.d.h.).</p>

 <p>SUSTAINABLE FORESTRY INITIATIVE</p>  <p>Certified Chain of Custody At Least X% Certified Forest Content</p> <p>www.sfiprogram.org SFI-00001</p>	<p>“If a chain-of-custody certificate holder uses recycled content, they can choose to incorporate a Mobius loop showing the percentage of recycled content in the product. Below are examples of the Chain-of-Custody label with the Mobius loop.</p> <p>Recycled content includes pre-consumer and post-consumer recycled content” (SFI, n.d.h.).</p>
 <p>SUSTAINABLE FORESTRY INITIATIVE</p>  <p>Certified Chain of Custody X% Certified Forest Content, X% Certified Sourcing, and X% Recycled Content</p> <p>www.sfiprogram.org SFI-00001</p>	
 <p>SUSTAINABLE FORESTRY INITIATIVE</p>  <p>Certified Chain of Custody Promoting Sustainable Forestry and Recycled Content</p> <p>www.sfiprogram.org SFI-00001</p>	

Figure 16

Kids and the Environment. This figure illustrates a message by SFI collaboration with other organizations to enhance kids' engagement with the environment. The post appeared on Twitter



Figure 17

Caribou Conservation and Research. This figure illustrates a message by SFI research collaboration to conserve caribou, whose habitat depends on forests. The post appeared on Twitter



SFI Program @sfiprogram · 22 Feb 2017

Applying innovative research to conserve #caribou: #SFIgrant w/ @fRlresearch, @Weyerhaeuser & West Fraser
[calgaryherald.com/opinion/column... ..](http://calgaryherald.com/opinion/column...)



Woodland caribou populations in Alberta are declining. HO / THE CANADIAN PRESS



↻ 6

♡ 12

Figure 18

Guinness World Record Certificate in Tree Planting. This figure illustrates a message by SFI about setting a world record in the number of trees planted in one hour. The post appeared on Facebook



The Guinness World Record certificate features the Guinness World Records logo at the top, which includes a star and a classical column. Below the logo, the word "CERTIFICATE" is printed in a bold, serif font. The main text of the certificate reads: "The most trees planted simultaneously at multiple locations by teams of up to 100 people is 202,935 in an event organised by the Sustainable Forestry Initiative (USA) at 29 locations across Canada and the USA on 20 May 2015". At the bottom of the certificate, it says "OFFICIALLY AMAZING" in a stylized font, accompanied by a small circular seal. The background of the certificate is a light, textured pattern.

Sustainable Forestry Initiative ...
Like This Page · September 22, 2015 · Edited ·

SFI Sets a World Record One Tree at a Time: Officially Amazing

SFI and its partners across North America set a new World Record, planting 202,935 trees in one hour. SFI partnered with 29 teams of 25-100 people each to plant trees in locations from New York City to Vancouver Island, British Columbia.

Organized by SFI, the effort involved 1,165 volunteers from all ages and backgrounds, including the forest sector, community organizations, youth groups, conservation groups and SFI Implementation Committees. They planted trees between 1 p.m. and 2 p.m. EDT on May 20, 2015.

<http://www.sfiprogram.org/media-resources/news/sfi-sets-a-guinness-world-record-one-tree-at-a-time-officially-amazing/>

92 6 Comments 26 Shares

Like Comment Share

Most Relevant ▾

Figure 19

SFI Eco-label on a Paper Bag. This figure illustrates the SFI eco-label on a paper bag. The post appeared on Facebook



Figure 20

SFI Eco-label on Product Packaging. This figure illustrates the SFI eco-label on a product packaging, where the message focused on the benefits of the eco-label. The post appeared on Facebook

Sustainable Forestry Initiative January 11 · 🌐

Why Use the **#SFI** Logo: when consumers buy products with the **#SFI** label, they are helping grow future forests, sustain communities, fund conservation research, educate youth & train loggers. Learn more. **#video**

YOUTUBE.COM
Why Use the SFI Logo
SFI on-product labels are widely recognized and provide a visual cue to...

👍 6 2 Shares

CHAPTER V

FINDINGS - BRANDS

Introduction

This chapter focuses on the brands' use of eco-labels. I focus on two brands: Walmart, and Boise Paper. The cases showed how the brands communicate their environmental sustainability in general, and how they use the two eco-labels (FSC & SFI) to communicate their compliance with sustainability practices and that they care about the environment which support different goals at the same time; marketing, public relation, and sustainability. The two brands provide two different perspectives. Walmart is considered a consumers-oriented model that own a large number of retail stores. Boise Paper does not have retail stores but the brand sell products to retail stores and consumers. As a result, Boise Paper collaboration with eco-labels' certifying organization serve goals of marketing and sustainability at the same time. The data of the two case studies of Walmart and Boise Paper include annual reports that are available online. The two case studies related to brands showed that corporations focused more on wider sustainability themes through their communication and less on eco-labels in specific. These previous strategies could be a way to avoid issues of greenwashing. The available communication on social media networks provided better understanding about the two brands and their sustainability communication practices. The social media networks used in the analysis are Facebook, Twitter, YouTube, Instagram, and LinkedIn.

The role of the brands in the process of eco-labels' messages is a little different from the role of eco-labels' certifying organizations. Brands can enhance their public relations images by using eco-labels. Also, brands can affect how the messages of eco-

labels are interpreted by consumers, mainly through placement of eco-labels, providing more information, and by using social media networks' signs and links. While Walmart is considered a consumer-oriented business model, Boise Paper sell for both businesses and consumers. In addition, brands' use and distribution of eco-labels may face challenges as greenwashing, which could explain why the two brands do not usually communicate the eco-labels on social media networks.

Walmart

The brand is considered a consumer-oriented brand that has been growing since its establishment date; it is considered the largest retail name in the world (Walmart, n.d.b). The establishment was by Sam Walton in the United States on July 2nd, 1962. The first Walmart store was opened in Arkansas (Walmart, n.d.a). In addition to grocery, the company sells clothes, home equipment, technology equipment, grocery, and a wide range of other products. The estimated number of customers who buy or use Walmart services is about 265 million (Walmart, n.d.b). The number of Walmart stores has been growing to reach more than 11,438 stores worldwide in 27 countries (Walmart, n.d.c). Some of those stores operate under different names in other countries. According to Walmart's official page, the revenue of the 2018 fiscal year reaches \$500.3 billion and the number of employees around the world reaches 2.2 million (Walmart, n.d.b).

Looking back to the early growth, by 1980, Walmart established Walmart Foundation and the Walton Family Foundation (Walmart, n.d.a). In 1990, Walmart was at the top of the retail industry and in the following year Walmart opened the first store in Mexico City, which was the first international store. The company's huge network of suppliers and its logistic capabilities have enabled it to respond well to natural disasters

like hurricane Katrina and Rita in 2005 (Walmart, n.d.a). During its growth journey, Walmart used six logos; the current logo was introduced in 2008 (Walmart, n.d.a).

Mission Statement

Although there is no dedicated section on the Walmart webpage talking about the mission statement, the mission is found in other pages like 'Our History'. The statement is "Saving people money so they can live better" (Walmart, n.d.a). In addition, several documents showed indirectly the mission and the vision of the company to contribute to people's life, economy, and the environment

Stakeholders

Walmart stakeholders include investors, customers, employees, and suppliers. Each one of the previous stakeholder has different interests. For example, investors focus more on profit. Customers want good products with acceptable prices. Suppliers are interested in selling their products to Walmart (like in the case of Boise Paper) taking into account the challenges of sustainability and competition. Walmart suppliers include also famous brands like LEGO (kids' toys company). LEGO has a certification from FSC on its products (Knudstorp, 2014). In relation to partnerships with stakeholders, one article on WWF website was entitled "Walmart and Unilever Push for Innovative Place-based partnerships to Tackle Deforestation." It was mentioned in the previous article, "more partnerships can be anticipated around the corner to help tackle the diverse challenges of commodity-driven deforestation in different regions" (World Wildlife, n.d.). In relation to consumers, an article from the Los Angeles Times (2016) was entitled, "Walmart set Environmental Plan as People Seek Green Items." The article mentioned that Walmart "is under pressure from consumers, especially millennial, who want environmentally

friendly items. Walmart is looking at technology that will let shoppers scan food to learn its origins and other information, beyond just tagging products with green labels”

(Associated Press, 2016, para 4).

Rules for Business Building

The current leadership structure has two sections. The first one is the executive management, which has forty-three members including the CEO and the chief sustainability officer. The current chief sustainability officer is also the president of Walmart Foundation. The second section is the board of directors, which consists of eleven members. According to Sam Walton, the founder, there are ten rules for business to success (Walmart, 2015). These rules are: 1) Commit to your business 2) Share your profits with all your associates and treat them as partners 3) Motivate your partners 4) Communicate everything you possibly can to your partners 5) Appreciate everything your associates do for the business 6) Celebrate your success 7) Listen to everyone in your company 8) Exceed your customers’ expectations 9) Control your expenses better than your competition 10) Swim upstream (Walmart, 2015).

How the Brand Uses FSC and SFI Labels

There are three main ways in which Walmart has used the Sustainable Forestry Initiative label, SFI, and the Forest Stewardship Council label, FSC. The first way is by placing these eco-labels on some products, specifically, on some Walmart brands like Great Value for example. In this study, one product was chosen from the Great Value products; this product is the facial tissue paper. The second way Walmart used the labels is by placing the labels on paper bags that customers can find in the checkout area in Walmart stores. Some stores charge fees for these bags. The third is by giving details about these

eco-labels in Walmart sustainability documents, such as the Global Responsibility Reports. The main audience group is consumers who are going to see and interpret these labels. The brand aims to show that it cares about the environment by getting products certified by one or both organizations.

Global Responsibility Reports

The global responsibility reports provide a better understanding about Walmart's strategies regarding its sustainability in the U.S., and around the world. The reports also include information about the progress toward several sustainability goals, such as reducing waste and reducing carbon emission. The available online reports covered the years from 2005 to 2018. Some of these reports are available as PDF files and as interactive online pages. The global responsibility reports are available in English language. Generally, the reports start with a message from the CEO and then show sustainability trends and Walmart's progress. Some reports have a message from the chief sustainability officer. The reports also include infographics that show statistics related to Walmart responsibility practices. In addition to the three areas of sustainability - economy, society, and the environment - some reports have updates regarding the governance topic. The reports also include statistics about Walmart global stores sustainability practices.

Eco-labels. The Global Responsibility Report (2014) showed a good example of using the FSC eco-label with other labels, where the Global Responsibility Report was printed on sustainable papers. The FSC eco-label was positioned next to Rainforest Alliance Certified eco-label and Printed Using 100% Wind Energy label. Further, there was a comparison that showed the benefits of using sustainable papers. These

comparisons include the number of pounds of greenhouse gases and the number of trees saved from cutting, and the amount of saved energy.

There are two types of products that use FSC eco-label on Walmart stores. The first type includes products manufactured or produced by brands other than Walmart; for example, Garanimal wooden preschool toys (Walmart, 2011). The second type includes some Walmart products (like furniture, including computer desks & TV stands), and brands (like Great Value facial tissue box). In relation to sustainability practices' progress, the reports showed how the supplying companies that use certified wood increased. More, the number of companies that used recycled materials has also increased (Walmart, 2011). According to (Walmart, 2010), "in furniture, 25 percent of wood items sold at Walmart and Sam's Club have received third-party certifications." Some examples of the previous certifications include SFI, FSC, and PEFC. FSC eco-label was mentioned more than SFI eco-label. One reason could be the global presence of FSC; for example, in the Global Responsibility Reports, FSC label was mentioned in countries like Brazil, U.S., and U.K.

Sustainability Goals. Walmart has broad sustainability goals such as zero-waste, selling environmentally friendly products, and depending on renewable energy. In addition, there are several initiatives and approaches. One approach is Sustainability 360, which deals with several sectors and stakeholders including operations, suppliers, customers, associates, and communities. According to (Walmart, 2010), Sustainability 360 "live in every corner of our business – from associate job descriptions to our interactions with suppliers – and guides our decisions based on improving the environment, supply chain and communities where we operate and source." The country

in which a Walmart store operates is important because some global branches may choose a new strategy. For example, Walmart online stores in Brazil added the “sustainable products” category at Walmart.com.br. This strategy aimed to help customers find sustainable products easily.

Sustainable Value Network. Another area to look at is the Sustainable Value Network (SVN), which integrates sustainability into different levels. For example, the chief executive officer receives quarterly updates from the executive management. The executive network sponsors include senior vice president level or higher. The Sustainability Team oversees network activities and provides guidelines. The Network Captains guide network efforts and drive SVN initiatives. The Sustainable Value Network includes Walmart associates, NGOs, academics, governmental agencies, and supplier companies.

Walmart Sustainability Hub

The Walmart Sustainability Hub provides a portal for several resources related to Walmart sustainability strategies. The resources cover areas of deforestation, forest management and sourcing, restoration, certification and validation, case studies, and several other areas. Both SFI and FSC information appear on the certification and validation section. In addition, Walmart Sustainability Hub has resources regarding sustainable textile, sustainable coffee, sustainable chemistry, and training and webinars. Another project mentioned widely is the Project Gigaton, which is “a Walmart initiative to avoid one billion metric tons of greenhouse gases from the global value chain by 2020” (Walmart Sustainability Hub, n.d.b). There are six categories that intersect with

each other in the Project Gigaton. These categories are energy, waste, packaging, agriculture, forests, and product use and design.

Forests. The Sustainability Hub provides information that covers several areas related to forests management. For example, companies interested in joining forests pillar of Project Gigaton should commit to one or more of several engagement opportunities, where the company can submit a goal in relation to: palm oil, soy, beef, timber, paper and pulp, and restoration commitments (Walmart Sustainability Hub, n.d.a). Not to mention that companies can add more goals related to other areas not mentioned in the previous list. Further, companies interested in submitting goals should follow the SMART goals formula. In other words, these goals should be specific, measurable, achievable, relevant, and time limited (Walmart Sustainability Hub, n.d.a).

Packaging. Looking closely at the packaging category in the Project Gigaton, the available resources explain how labeling can work in packaging design, “If you’ve ‘Right sized’ packaging, increase the recyclability of your packaging. If you have recyclable packaging, use a consumer-friendly recycling label on your packaging- such as the How2Recycle label. If you have a consumer-friendly recycling label on your packaging, increase the use of sustainability-sourced materials. If you have sustainably sourced materials, collaborate with others to improve infrastructure for recycling” (Walmart Sustainability Hub, n.d.c).

Environmental, Social and Governance Report, ESG

The 2019 Walmart environmental, social and governance report includes four categories: ESG commitment and progress, United Nations Sustainable Development Goals – UNSDGs, Global Reporting Initiative – GRI, and Sustainability Accounting Standards

Board – SASB (Walmart, n.d.d). The ESG commitment and progress includes two sections: the environment section, and the social one. The goals in the environment section are related to climate change, sustainable supply chain, and waste. The goals in the social section are related to retail opportunities, providing affordable safer and healthier products, and communities. There are three columns that show priorities for each section (goals), metrics, and results.

Eco-labels. In relation to eco-labels, one goal from the sustainable supply chain is to “source 100% of all Cavendish bananas and pineapples sold in Walmart U.S., Sam’s Club, and Asda from suppliers’ farms that have received third party certifications (i.e., Rainforest Alliance, Sustainably Grown, & Fair Trade)” (Walmart, n.d.d). The results in the report showed that the previous goal was achieved as the following so far: For Bananas, 100% Walmart U.S., and Sam’s Club – 100% Asda. For Pineapples, the achieved results are 80% Walmart U.S. – 60% Asda (Walmart, n.d.d).

Another area in the sustainable supply chain is deforestation, “Goal: Walmart will source and use RSPO [Roundtable for Responsible Palm Oil] or equivalent-certified palm oil (mass balance & segregated supply chain system) and source pulp, paper products with zero net deforestation in 100% of Walmart private-brand products by 2020” (Walmart, n.d.d). In relation to the previous goal, a part of the metrics mentioned, “percentage private-brand pulp and paper volume certified by the Forest Stewardship Council, Programme For Endorsement of Forest Certification, and Sustainable Forestry Initiative or is using recycled content.” The result was 91% achieved (Walmart, n.d.d). In relation to the ‘Labeling’ section under the ‘Waste’ category, one of the metrics is the “number private-brand suppliers in How2Recycle program in the U.S.” (Walmart,

n.d.d). The result for the previous criterion is >800 suppliers (Walmart, n.d.d). Another metric is the “number SKUs received How2Recycle label in the U.S.; includes Walmart U.S., Sam’s Club and Jet.com.” The results for the previous criterion are >16,000 SKUs (Walmart, n.d.d).

United Nations Sustainable Development Goals, UN SDGs. Under this section, there are eight listed goals relevant to ESG initiatives and adopted from the UN SDGs. These goals are: zero hunger, gender equality, affordable and clean energy, decent work and economic growth, sustainable cities and communities, climate action, life below water, and life on land (Walmart, n.d.e). The environment and social section show grouped goals in relation to its section. For the environment section, related UN SDGs were grouped in three categories.

The first category is climate change; it has the following goals: zero hunger, affordable and clean energy, sustainable cities and communities, climate action, and life below water (Walmart, n.d.e). The second category is Responsible Supply Chains, which has the following related UN SDGs: zero hunger, affordable and clean energy, decent work and economic growth, climate action, life below water, and life on land (Walmart, n.d.e). The third category is ‘Waste’, which includes the following UN SDGs: zero hunger, life below water, and life on land (Walmart, n.d.e). In the social section, there are four categories that include the following UN SDGs: decent economic growth, zero hunger, gender equality, and affordable and clean energy (Walmart, n.d.e).

Waste. In relation to waste, one of the goals is to “label 100% of food and consumable private-brand packaging with How2Recycle label by 2020” (Walmart, n.d.f, para.5) Walmart will work with U.S. private brand suppliers to achieve the previous

goal. Not to mention that the previous goal is one of other related goals. Also, different branches and locations may have different dates to achieve goals; for example, “In 2019 Walmart Canada announced a commitment to use this label [How2Recycle] on all private brand products by 2025” (Walmart, n.d.f., para.7).

Social Media Networks

Walmart has several social media networks whether for the main brand name (Walmart), or for other affiliated names that work under the Walmart umbrella like Sam’s clubs.

The five social media networks used in Walmart.com are: Twitter, Facebook, YouTube, Pinterest, and Instagram. The accounts have updates regarding a wide range of issues, such as products, holidays, events, and corporate responsibility activities. In relation to the environment and sustainability, the posts often showed the bigger environmental themes instead of focusing on details (such as a specific eco-label or a certification). For example, one Facebook’s post showed updates about some celebrities’ campaigns in 2019 like LeBron James and a campaign to provide support for kids’ education. Another campaign, for instance, is #SparkKindness (figure 23) and #FightHungerTogether.

Figure 23 shows how a part of the #SparkKindness campaign was related to providing green spaces in Alpaugh in California. In addition, some posts talked about international events and celebrations, such as the World Book Day.

The Twitter platform was relatively similar to the Facebook one. Some events include #NationalHispanicHeritageMonth celebration and Walmart’s First Wellness Day, which talked about free health screenings. Regarding sustainability, there were posts talking about Walmart response to natural disasters like #HurricaneFlorence, and #CaliforniaWildFires. The previous posts also showed Walmart efforts through the

Hurricane Relief Fund. Another event was the Earth Day (figure 22). The figure shows the following: “On Earth Day (& every day), we’re planting seeds for a greener future. One year into our Project Gigaton, our suppliers have already helped us reduce 20 million metric tons of carbon emissions.” The previous figure shows how Walmart linked the post to its project Gigaton.

In relation to green communication and advertising, one post showed products and the tweet was, “Wake up and smell the eco-friendly cleaning products. Wanna go green, but not sure how? No worries! We’ll help” (Walmart, 2018a). The post showed a group of cleaning products such as Seventh Generation, Green Works, and Ecos. One way that used to show the sustainability efforts was by using infographics to create easy-to-understand comparisons. For instance, the reduction of carbon emissions by 20 million metric tons was compared to housing and transportation. According to (Walmart, 2018b), the 20 million metric tons equals “4.2 million passenger vehicles driven for one year, [and] 2.9 million homes’ electricity use for one year” (figure 21). Figure 21 shows how the previous information was mentioned in the context of the issue of climate change.

Figure 21

Branding and Environmental Responsibility. This figure illustrates a message by Walmart about the brand effort to minimize its carbon footprint. The post appeared on Twitter

Walmart @Walmart · 18 Apr 2018

Climate Change we're coming for you. 🌱 This year we reduced our carbon emissions by 20 million metric tons in our global supply chain and we're just getting started! Learn more: bit.ly/2J7mqKD

How much is 20 million metric tons?

 4.2 million passenger vehicles driven for ONE year	 2.9 million homes' electricity use for ONE year
---	--

3 replies 23 retweets 35 likes

Figure 22

Earth Day Event. This figure illustrates a message by Walmart about International Earth Day and a part of what Walmart is doing in relation to reducing carbon emissions. The post appeared on Twitter



Figure 23

#SparkKindness Campaign on Facebook. This figure illustrates the #SparkKindness Campaign by Walmart. A part of the campaign was related to providing a green space for a community in California. The post appeared on Facebook



The image is a screenshot of a Facebook post from Walmart. At the top left is the Walmart logo, a yellow sunburst. To its right, the text reads "Walmart updated their cover photo." followed by "June 12 · 🌐" and three dots in the top right corner. The main text of the post says: "We teamed up with Jennifer Garner to inspire communities to come together and inspire kindness. We kicked things off by building a green space for a community-in-need in Alpaugh, CA, and we didn't stop there. We also provided our stores with resources to perform their own acts of kindness, and hope YOU can #SparkKindness, too! Wherever you go. Whenever you can. Big or small. Use #SparkKindness to share your journey with us, and we'll feature a few for everyone to see." Below this is a link: "walmart.us/2MMCurS". The central image shows a group of about ten people, mostly in blue shirts, standing in a grassy field with their arms around each other's shoulders. A large white "#SparkKindness" is overlaid on the image. At the bottom left of the post are icons for like, love, and wow, followed by "1K". At the bottom right are "289 Comments" and "132 Shares".

BOISE Paper

Boise Paper is a leading paper brand in the U.S. and sell for businesses and consumers. The brand was established in 1931 and has continued to grow to become Boise Inc., which is an organization that focuses on sustainable manufacturing. In 2013, Boise Paper Inc. was acquired by Packaging Corporation of America, PCA. The brand products include office papers, printing and converting products. The brand's slogan is: Paper with Purpose. Office papers include a wide variety of paper products including original papers, recycled paper 100%, and mixed papers (a percentage of it is recycled). Some examples of the brand's products are Boise Polaris, a shiny paper product, and Boise Aspen, which is recycled paper, and Boise Fireworks, which is multi-use colored paper, and Boise X-9, which is multi-use copy paper.

The brand endorses its products by several certifications, including the Forest Stewardship Council, FSC, and the Sustainable Forestry Initiative, SFI. The brand works through the three sustainability areas - environmental, economic, and social (Boise Paper, n.d.a). The brand has partnerships with several organizations, such as Arbor Day Foundation, American Forest and Paper Association, Dovetail Partners Inc., Society of American Foresters, and Two-Sides organization (Boise Paper, n.d.b).

Stakeholders

The Boise paper brand has several stakeholder such as community organizations, eco-labels' certifying organizations, and consumers. The brand, for example, works with the Project-Up initiative to spread sustainability knowledge among communities. In addition, the brand works with three eco-labels' certifying organization related to forest sustainability. Consumers' engagement takes place through the communication activities

conducted with partnership and through social media networks. The annual document showed the external initiatives as well as the brand's memberships in associations' organizations like environmental and conservation organizations and forest products industry. The external initiatives include Carbon Disclosure Project (CDP), EcoVadis, Global Food Safety Initiative (GFSI), Global Reporting Initiative (GRI), How Life Unfold Campaign, Project-Up! (In partnership with Arbor Day) (Packaging Corporation of America, 2018). Membership in associations' organization include American Forest paper Association (AF&PA), American Forest Resource Council, American Society for Quality (ASQ), ASTM International, Corrugated Packaging Alliance (CPA), Envelope Manufacturers Association (EMA), Federal Water Quality Coalition, Fiber Box Association (FBA), Forest Resources Association, Forest Stewardship Council (FSC), Institute of Packaging Professionals (IoPP), International Corrugated Case Association (ICCA), International Corrugated Packaging Foundation (ICPF), International Safe Transit Association (ISTA), International Standards Organization (ISO), National Council for Air & Stream Improvement (NCASI), National Fire Prevention Association, National Paper Trade Association, National Society for Human Resources Management, North American Forest Partnership, Programme for the Endorsement of Forest Certification (PEFC), Pulp and Paper Safety Association (PPSA), Recycled Paperboard Technical Association, SEDEX, Society of American Foresters, Sustainable Forestry Initiative (SFI), Sustainable Packaging Coalition (SPC), Technical Association of Pulp & paper Industry (TAPPI), The nature Conservancy, and Two-Sides, North America (Packaging Corporation of America, 2018).

Mission Statement

Although there was no section labeled mission statement on the brand webpage, the brand mission statement showed itself in several places, such as Paper With Purpose. The full statement is: “Boise Paper works tirelessly to engineer and deliver high quality products you can trust. When it comes to sustainability, we believe it’s our responsibility to give back in the most relevant and meaningful ways we can” (Boise Paper, n.d.c). The brand’s mission appeared also in other sections, such as the title on the “Connect With Us” section: “Sustainable paper for a Sustainable Future.” The previous title has the following paragraph underneath on the webpage, “We’re part of the American landscape. And we’re going to keep working to make the landscape better for everyone. Together, we can build a sustainable future” (Boise Paper, n.d.c).

Leadership

The brand’s vision has enabled it to gain recognition from a rigorous certification for its Aspen line of recycled paper. This recognition comes from Green Seal certification. Another initiative that showed the brand’s mission is Project-Up, which has effects in relation to urban parks and local communities.

The Sustainability Challenge

Paper production is a process that affects several sectors including agriculture and forests, water, energy, and biodiversity. The amount of energy spent to produce paper and packaging is large whether in relation to cutting and transpiration of trees to the factory, or in relation to papers’ making process. Generally, sources of energy are mixed; in other words, these sources include traditional sources like fuel, and contemporary sources such as renewable energy. In addition, paper production needs water in a large amount.

Moreover, the manufacturing's process includes the emissions of greenhouse gas. Yet, compared to other industries, paper and printing has the least emission of CO₂. That emission is about 0.9% from the total emission worldwide (51,840 MTCO₂ EQ) (Global Carbon Project, 2014). All previous issues can lead to negative effects on the environment. To mitigate the previous issues, solutions include sustainable forest management, recycling, and regulations.

Sustainability Areas

In relation to the environmental area, the brand mills have certifications that support well-managed forests. In addition, the brand uses renewable energy sources in the manufacturing's process (Boise Paper, n.d.a). Moreover, the brand provides a range of recycled papers from 30% to 100% post-consumer recycled content. Regarding the economic part, the brand provided over 1,500 job opportunities. Finally, the social aspect includes activities, such as American Red Cross, Boise Paper's Project Up, and Box Tops for Education. As described by the brand, the Boise Paper's Project Up is an "initiative brings local businesses, families, and individuals together, proudly transforming abandoned urban spaces into community parks for all to enjoy" (Boise Paper, n.d.a).

How the Brand Uses FSC and SFI Labels

The brand used both eco-labels in several ways although the main use was as an endorsement on the product packaging, as on the packaging of Boise Aspen 30. Not to mention that there is another eco-label used by the brand: The Programme for the Endorsement of Forest Certification, PEFC. Some of the brand's packages showed one eco-label, like FSC, which was used as a part of other labels, such as Project-Up label. The brand did not use the label as a sole method to show its sustainability's practices.

Looking closely at the sustainability actions in the brand, the list includes issues related to sustainable forestry, American Red Cross, Box tops for Education, Project Up, and certification. Yet, labels appear on the brand's packages are mostly related to the environmental practices of the brand. In addition, the two labels (SFI & FSC) were mentioned several times in the brand document and a few times on the social media networks.

Documents

The available document was the Responsibility Report 2018 from the parenting company Packaging Corporation of America, PCA. The document showed the years' range in which the paper process production is certified, "In 2018 our containerboard mills were successfully certified to FSC standards (FSC-C139165). With this certification, all PCA mills are now "triple-chain" certified" (Packaging Corporation of America, 2018, P.18). The document showed also the efforts made to handle the three areas of sustainability (environment, social, and economic). The environmental area deals with categories of materials, energy, water, biodiversity, emissions, effluents and waste, and environmental compliance. In relation to materials, for example, the report mentioned:

PCA maintains our fiber procurement program in compliance with the Sustainable Forestry Initiative (SFI) 2015-2019 Standard Requirements, the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification (PEFC) and recognizes the American Tree Farm System (ATFS) individual and group certifications. (Packaging Corporation of America, 2018, p.18)

Regarding energy, the document showed how the brand depends on several sources of energy and working toward more inclusion for renewable sources. For

example, in 2018, 64% of energy consumption was from renewable fuel, 27% was from non-renewable fuel, and 9% from electricity and steam (Packaging Corporation of America, 2018). The total number of energy consumption was 113.9 million GJ (Packaging Corporation of America, 2018).

The relationship between biodiversity and sustainable forest management is also related to the brand. One of the long-term goals of PCA is to work closely with landowners to help with sustainable forest practices. The document mentioned the importance of independent third-party certifications that follow rigorous standards when evaluating fiber sourcing and practices. These three programs are Sustainable Forestry Initiative (SFI), Forest Stewardship Council (FSC), and Programme for the Endorsement of Forest Certification (PEFC). In addition, PCA has training's programs for logging workers to increase sustainable practices. Management practices do not include the mandatory ones only, but also the voluntary practices, which – in long-term, save the biodiversity of the landscape.

Other related areas to biodiversity include collaboration with associations to support research and collaboration efforts. Such collaboration includes, for example, a partnership with Forest Resource Association (Packaging Corporation of America, 2018). Not to mention that the three forest certification programs have biodiversity areas as a component in their certifications. Regarding the areas affected by operations, the document stated, "Utilizing Nature Serve and state Natural Heritage websites, we check for threatened or endangered species and ecosystem conservation priorities in combination with on the ground inspections (Environmental Impact Assessments) before harvest activity" (Packaging Corporation of America, 2018, p.21).

Project-Up Initiative

Project-Up label appears on Aspen Boise Paper (the recycled paper). According to the description written beside the label on Aspen Boise Paper's package, "Boise knows that a commitment to sustainability goes beyond our environmental impact. That's why we created Project-Up - to help turn innovative and unique ideas into projects that advance the social, economic, or environmental sustainability of local communities." Not to mention that the previous paragraph is translated into Spanish on the same package. According to Close-Up Media Inc (2011), Project-Up is "a new civic sustainability initiative through its Boise ASPEN brand of recycled papers. Project UP seeks to transform distressed urban spaces throughout North America into revitalized, usable parks for communities to enjoy" (Close-Up Media Inc, 2011).

Social Media Networks

Facebook and Twitter are the main social media networks that showed the highest engagement with people and the brand's clients. Yet, people's interaction with Facebook's posts was higher in number compared to Twitter. The same is applied to the number of posts in Facebook. Other networks include LinkedIn and YouTube. Both previous channels have less updates and engagement compared to Facebook and Twitter. Not to mention that several posts in both networks have no engagement in terms of likes, comments, or shares. Regarding Facebook, there are several posts about trees' benefits (figure 27). Figure 27 shows how the brand linked trees' benefits to the issues of climate change, clean air, clean water, and animals' habitats. Some other trees related posts were shared from other news or organizations, such as Arbor Day Foundation.

In general, the Facebook's posts reflect positive trends, in other words, lack of negative framing by showing the products' benefits. In addition, there are posts related to business life issues, such as time management, stress control, organizing work, and having a healthy lifestyle. Among other things, there are short videos that give tips and advice about business-related issues. Facebook was also used to show the brand's responses to natural disasters. In relation to eco-labels and advertising, Facebook was used to advertise Boise Paper directly and indirectly. The network was used directly by showing some products in the posts, and indirectly by placement like positioning products behind the speaker in the short videos. There was one post about the FSC label on Facebook.

Twitter's activity has a relatively similar pattern to Facebook. Corporate responsibility activities include education (figure 24) and health campaigns, such as Red Cross Blood donation. Figure 24 shows how the brand distributed school materials as a part of the brand corporate responsibility in the beginning of the school year. Another area of similarity is the business-related tweets that deal with issues of productivity, time management, stress control, motivation, and the importance of recycling as in figure 26. The tweets also showed partnerships with other organizations. Responses to natural disasters were given some positive turning by providing advice and solutions. Instead of focusing on details of eco-labels, the tweets focused on the wider themes like planting trees and communities' initiatives to plant trees. There was no dedicated post to talk about the two labels (SFI, FSC) except if the labels appear on products' packaging (products' images). A good example of campaigns is #ForestProud (figure 25). Figure 25 shows how the brand support #forestproud organization to promote forest health. Among

other things, the posts showed efforts to connect to cultures and famous events, such as the Earth Day on April 22.

Although LinkedIn has a lot of followers (10,357 followers), the level of engagement was low compared to Facebook and Twitter. Looking closely at LinkedIn, there are some posts that appeared on Facebook and Twitter. The “Ads” section on LinkedIn has posts mostly related to the brand’s products. In addition, the promoted posts (these posts are usually paid by the brand to appear on LinkedIn feeds) include posts related to productivity and work/life balance. More, there are promoted posts about corporate responsibility, such as Red Cross blood donation. One topic that appeared repeatedly was “A Supply Management View of Sustainability.” These posts provide some tools to help evaluate sustainability’s practices in the paper industry. The brand’s mission appears in the “About” section as the following:

Through our Paper with Purpose promise, Boise Paper is committed to partnering with our customers to understand and execute on their needs. We deliver high-quality products and innovative solutions guaranteed to meet those needs. And we invest time and resources into ensuring the sustainability of our industry, our communities, and our environment. (Boise Paper, n.d.d, para 2)

The Boise Paper’s YouTube channel shows several videos in relation to the Project-Up initiative. One video that shows the Project-Up in action is about collaboration between the brand, the Alliance for Community Trees, Citizens for a better South Florida, and Opa-Locka Community Development Corporation (Boise Office Papers, 2015). The previous projects aimed “to transform an abandoned lot into a neighborhood park and green space” (Boise Paper, n.d.d). Another example is collaboration between the Project-

Up Huston, Trees for Houston, and Arbor Day Foundation, and Buffalo Bayou Park (Boise Office Papers, 2018).

The examined social media networks revealed how the brand (Boise Paper) used the networks in a strategic way to reach different audiences. Facebook and Twitter focused more on engaging the brand's audience in addition to prospective clients. More, Facebook provided a platform for discussion, where the brand's consumers responded to posts. On the other hand, LinkedIn was used to build the brand's image and promote the brand among industries and professionals.

Conclusion

The two brands used eco-labels to communicate that they care about the environment; yet the eco-labels' messages are unlikely to serve a communicate environmental role or an awareness raiser role except in some situations; for example, when there is a partnership that explicitly states such messages as seen in the example of (Scott brand, WWF, and FSC). The brands can affect how the eco-labels' messages are interpreted and perceived by the audience by means such as placement on products, providing more information, or by using social media networks' signs and mobile phone applications. As a corporation, Walmart has shown growth both in terms of products and sustainability practices. The corporation's growth around the world brings a challenge to its sustainability practices because countries and even cities in the same countries have different regulations in terms of sustainability, which could affect the use of eco-labels.. The use of FSC, and SFI eco-labels count for a small percentage of Walmart sustainability practices and communication. The FSC, and SFI eco-labels can be found

in products like wood and paper products, notebooks, products' packaging, and Walmart paper bags.

In relation to Boise Paper, the brand sell for both businesses and consumers. The brand's products include new paper and recycled papers that can have from 30% to 100% of recycled materials. The brand depends on forest materials i.e., wood, to a great degree as a source for manufacturing papers. This dependency required the brand to adopt a number of environmental certifications that contribute to sustainability and can guarantee a sustainable model of production and business. In addition, the brand was involved in several community organizations and associations. The brand uses three eco-labels related to forest health and management. These labels are FSC, SFI, and PEFC. The two case studies of the brands showed the growth in brands' sustainability practices, including the use of FSC and SFI eco-labels. This involvement was shown through social media networks' platforms, especially through Facebook and Twitter, and to a less degree through YouTube, Instagram, and LinkedIn. The social media networks showed a mix of marketing posts, community engagement, and sustainability news. Finally, the results showed that the two brands do not usually speak about eco-labels on their social media networks.

Figure 24

Distributing School Materials to an Elementary School. This figure illustrates a part of Boise Paper brand corporate responsibility. The post appeared on Twitter



Figure 25

#forestproud Campaign on Twitter. This figure illustrates a message by Boise Paper brand and the support of the brand to the @forestproud organization. The post appeared on Twitter



Figure 26

Importance of Recycling. This figure illustrates a message by Boise Paper brand about recycling paper bags. The post is a video that appeared on Facebook




Figure 27

Benefits of Trees. This figure illustrates a message by Boise Paper brand about the four main benefits of trees in the environmental system. The post was appeared on Twitter

BOISE PAPER Boise Paper @BoisePapers · May 7

A7: Trees give us clean air, protect us from climate change, give animals a place to live and produce amazing necessary products like paper. By keeping them safe, we keep the circle of life moving. [#ArborDayConnection](#)



Benefits of trees

1. Filter air and water
2. Protect us from heat and pollution
3. Slow the rate of climate change
4. Save energy

6 15 23

CHAPTER VI

FINDINGS - CONSUMERS

Introduction

Conducting the focus groups' discussions was important because it allowed to understand how consumers' interpretation works when they see or read an eco-label. Consumers' interpretation of eco-labels is linked to these consumers' views, demographics, and their relevance to the eco-labels' messages. The findings showed the importance of understanding the purchase habits and how this affects consumers' reaction toward eco-labels. In addition, the findings showed differences in understanding the meanings and the uses of eco-labels. Although there were differences in understanding, the findings revealed how visual and verbal cues stand in the front line when consumers are trying to understand eco-labels. Also, the findings revealed differences in the role of eco-labels in communicating about environmental sustainability. Further, the findings showed the importance of eco-labels' design and placement on products.

The focus groups' discussions allowed participants to elaborate and have discussion with other participants in a way that revealed the participants' understanding and perspectives about eco-labels in general and FSC and SFI labels in specific. Examples from the two businesses in this study (Walmart & Boise Paper) were introduced to the focus groups' participants. These examples included the FSC, and SFI eco-labels. The focus groups started with general discussion about the participants' purchase habits, and then moved to the participants' understanding of the eco-label term in general. Other terms were also introduced. Those terms include green label, environmentally friendly label, green stamps, green signs, and eco-stamps. Then, the

discussions continued with the participants' interpretation of FSC and SFI eco-labels and these labels' usages on products' packaging. This previous point provided several insights that are presented in the discussion's section of this study.

After that, the discussions moved to the participants' perspectives in relation to the attraction's factors in FSC and SFI eco-labels. Importantly, the discussions included issues of curiosity and the communicative environmental role of eco-labels. Finally, the participants had discussion in relation to other eco-labels stories that communicated about environmental sustainability. The focus groups' discussions aimed to answer the following research question:

Q3. What kinds of environmental information do consumers take away from eco-labels?

This research used two focus groups to answer the previous question. The focus groups' participants were recruited from an undergraduate class in the School of Journalism and Communication at the University of Oregon. The research included two focus groups that lasted one hour for each group. Focus groups' participants were introduced to the research topic at the beginning of the discussions. Samples of FSC and SFI eco-labels were introduced by providing packages that carried the two eco-labels. These packages are a paper bag from Walmart and a facial tissue paper carried the SFI label, and a copy paper box carried the FSC label. The figures (7, 8, 9) show the packages used in the focus groups' discussions.

Purchase Habits

Participants' purchase habits varied. Yet, the results inclined more toward buying according to the price - as the main factor - instead of the environmental benefits of the product. One student commented, "I definitely will just buy whatever I need whatever

brand I want. And then if a product displays good environmentalism or is known to be bad for the environment then I am aware.” Another participant commented, “I go buy products based on what works best for me and do not take it into consideration the environmental impact really.” Yet, a few participants were willing to buy green products without considering the price as the main factor for purchase decision, “I would say it is not like much more than like an added benefit really unless there are two options of the same product, but one is more environmentally friendly like I definitely go for that one.” Also, one participant mentioned that if the difference in prices is relatively small, he is more willing to buy the green option. When prices are equal, sustainable products might have an advantage. According to one student “it could be like another push to make the purchase, but not necessarily the reason for purchase.

In addition, there was an unspoken perspective that green products’ prices are higher than the traditional products. The previous issue was not mentioned directly, but through the context, which reveals participants’ attitudes that green products are more expensive than the traditional products. Those who were willing to buy green products were more environmentally conscious either because of the place they live in, or because of the educational factor. For example, one participant said, “The price as a college student can be broken. So, if it is cheaper, I want to buy the cheaper product, but at the same time, the more I am going to journalism classes and learn about the environment and consumerism you know, I am just like I am more aware now than I ever was before.” An emerging theme was about the effect one person could make if that person purchases green products. One participant raised the previous issue and said, “I am only one person like it is not going to make a difference”.

More, purchase habits differ according to the type of products. For example, one participant was more interested in buying organic food because he wants to keep a healthy body. In addition, the previous participant's attitude toward organic food was like his attitude toward clothing manufactured in a sustainable way. He said, "I care about my body ... I try to consume more organic stuff like environment aspects in my mind... in fashion I do not really like to consume fast fashion brands, so I try to consume more sustainable brands." The previous student educational environmental background might be a factor that affects his decision.

Understanding of Eco-Label Terms

The two focus groups' participants showed a relative census regarding the definition of the (eco-label) term, or the green label one. For example, some participants talked about the term in relation to products, "Products that are not additionally harming the environment that are either recyclable or reusable or organic in terms of consumption." Another student said, "I just assume that it means that the environment was not harmed while making the product." While the previous participants talked about not harming the environment, another participant added that the product might be manufactured in a way that not only prevents the harm, but also supports the environment, "I would think of it as like the production and consumption of it either does nothing or helps the environment." Most participants mentioned the phrase environmentally friendly to describe their understanding about the term eco/green label.

Understanding the (eco-label) term was also linked to the cultural and social background and/or the previous purchase experience, where someone was exposed to eco- labels many times. One participant added, "Those green I recognize them from

stamps like some put stamps say green or like grass fed meat as like those types of stamps that help me to understand what the product is.” A few participants mentioned how being from a different place (east coast) could affect the perception of the term eco-label. For example, one participant mentioned that to be green on the east coast could differ from being green in the west in terms of the range of sustainability practices. But even being in just a different location could change the interpretation of the term. For example, one participant commented, “In California, being green like obviously conserving water.” Among other things, there was the theme that the place/location’s effect can affect several aspects of lifestyle, which will affect people’s understanding of the term eco-label. A good example of the previous situation is public transportation and using bikes in Oregon, which makes it a place that sounds more sustainable. Another aspect of sustainability practice was the use of plastic bags and how it differs from one place to the other. Consequently, participants argued that such differences could make their understanding about the (eco-label) term different.

Interpretation of FSC and SFI Eco-labels

In relation to SFI eco-label, most participants were able to give some ideas about the SFI label’s meaning. In general, participants connected the SFI label to trees and sustainability. As a result, the product is probably coming from sustainable sources. Participants who were able to understand the SFI eco-label used visual and verbal cues to shape an idea about it. For example, one participant said, “This package is like not using fresh woods. They do not cut and just produce these things [the carton bag].” Another student added, “They would be using recyclable materials rather than like cutting down trees.” Another student said, “When they cut down a tree, they start planting trees.” Yet,

the previous student was also confused when he commented, “You gonna know it is something good, but the specific is hard. So, it is kind like you have to do more research to know what it really is.” Yet, there was some confusion and ambiguity “I think it is a little bit ambiguous for sure because it says just certified sourcing like certified by who about what.” This ambiguity appeared more in the case of FSC eco-label.

Participants spend some more time to figure the meaning of FSC eco-label. The main reason for that is the absence of abbreviation for the letters FSC, especially that they were exposed previously to the SFI eco-label, which carried the meaning of its abbreviation. In addition, one participant mentioned that being not clear about the FSC label does not mean that SFI label is an excellent example, but it is still better than the FSC in term of cues given in the label “we do not know what certified sourcing means, but at least it says something.” Although there are some text cues, one participant commented, “I do not know what responsible sourcing means.” The same confusion appeared regarding the term “mix paper from responsible sources.” Yet, some participants depended on the context of the label and its location on the paper’s box to understand it “I mean you see all these other recycling logos and stuff, so you assume it means something good”.

While the meaning could be grasped by the context and the location of the FSC label, the multiple eco-labels were mixed with the brand message to some extent. For instance, one participant said, “I see an explanation on the back like paper with purpose [Boise Paper’s slogan] and stuff, but like we do not know if that is connected to this like the FSC.” Some participants talked about the need for a short explanation or message with the eco-label “the placement is bad, the placement is pretty good in the back, but I

think you need to utilize it better you can put a small little quote.” Again, placing the FSC eco-label with the other labels on the front side was a key factor that helped participants to give a close idea about the FSC label’s meaning.

Understanding FSC and SFI Labels’ Usage

After participants were asked about each eco-label’s meaning, they were asked to talk about their understanding how the two eco-labels relate to the products (Walmart paper bag, Great Value tissue paper box, & Boise Paper product package). Regarding the SFI eco-label, participants used a similar strategy to the one that they used previously to give ideas. This strategy depended on the eco-label placement on the package. Such a strategy was not always successful to give a clear idea, “I honestly have no idea, like I’ve never seen this before, so I’m assuming it is a good thing.” A few participants were able to give a close explanation about the relationship between the brand and the eco-labels, “I think the company that created this bag is being supervised in a way by whoever is giving the certain companies, these labels... I think it is like the company is held accountable by this initiative, where they like being checked up on to make sure they are really doing this.” The SFI eco-label did not carry information about the percentage of the recycled materials. Yet, one participant commented, “I would just assume that it is 100% recyclable.” One major concern is the placement of eco-labels on less common places, which are unlikely to have an effect. For example, one participant said, “It is interesting because it is like you said in the bottom of it [Walmart paper bag], and this one [Great Value tissues] can be pulled off [consequently thrown away because it is on the front cover]”.

Exploring through the context also helped participants to figure out the relationship between the products and the FSC eco-label, “in general, like a check mark with a tree kind of assume Ohh! like something about sustainable use... maybe they plant a tree you know for a tree they cut down, but it is still not clear exactly like specifically what it is they do.” Another factor that helped participants to figure out the relationship between the brand and the eco-label is the fact that they were introduced to SFI before, which could give them a hint about how FSC label works. In general, the confusion was related to the label’s cues that do not give enough information, and to the eco-label relation to the brand.

Attraction Factors

In general, the two labels (FSC & SFI) showed some attraction’s aspect. Yet, there were also several issues. For example, the tree and the leaf in the SFI label were attractive to some participants although this mix between the tree and the leaf was confusing for other participants. One participant commented, “a tree inside a leaf, but maybe it means like a small piece has a big impact.” Another participant said, “I want to know what the logo means, like what it is supposed to be. It looks like a tree in a leaf. Yeah I do not know what that means.” Although one participant considers the label as a cool one, he raised the issue of the color. The color of the label on the Walmart paper bag is blue. The color on the Great Value tissue box is green. Most participants agreed later that a green color could be more suitable. Another related issue is the size of the SFI label, which was considered by some participants to be small on the Great Value tissue box, which affected the label’s appeal.

In addition, the website address that appears underneath the SFI eco-label was praised and criticized at the same time. It was praised because it could help consumers to navigate to the source of information about the label. Yet, it is unlikely that consumers are going to do these extra steps. One participant said, “instead of that website, include like a general note... because no one will open this and go to the website, who is going to check this?” In addition, the participants mentioned placement, color, and size as factors that affect the appeal of SFI eco-label.

In relation to FSC eco-label, the participants gave different views. Some consider it not attractive; others considered it as relatively attractive. One participant commented, “I think that at least it does include trees and that I do not like the way the tree is structured... the tree at least related to the concept of environmentalism.” The main reason was not the design although the design issue mentioned as well. The main reason was the lack of information about the FSC eco-label, which affected the participants’ understanding of the label. As a result, the label’s appeal dropped down. One participant found that the two labels have something good, “I would pick this logo [FSC] with that word [from SFI].” Moreover, the “check” mark on the tree in the FSC eco-label was an attractor because it could give some meaning, which can enhance the saving trees’ message more than the leaf in the tree.

Curiosity and the Communicative Environmental Role

A major concern about the SFI eco-label was the placement of the label. Some participants said that they would be more interested to know more if the label is more noticeable. One participant said, “I feel like if they put it visible on the front or something, like then I would notice it, and second I will look it up and see what it is

about.” Another participant talked about how the discussion itself made them more interested, “if we do not have this discussion, I would not even know. But now I am kind of curious to know what that is. It is something that sparks curiosity, but I would have seen it.” Another participant said, “I feel like I am more interested in it just because we are talking about it right now.” Other participants said that the label does not spark their curiosity to know about the eco-label or about the issue the label deals with. One participant commented, “this absolutely means nothing to me, I am gonna forget about it”.

One reason that might affect participants’ level of curiosity is the current discussion about the environmental issues going around the world. One participant commented, “I just feel like it is so much information out there on climate change and how we need to act now. So, it is like personally my brain is just accustomed to being on the lookout for green, eco like all that kind of stuff.” The placement of the SFI eco-label was also a related issue to the ability of the label to ignite curiosity. One participant commented, “because it is on the bottom like it does not make it does not really make it seem important.” The placement issue was more prominent when the label went with other labels. One participant commented, “it is supposed to go with the do not flush label - so it is like that it is a part of the messages every consumer ignores”.

In relation to the FSC label, participants talked about the absence of cues. As a result, they are less likely to go further and know more about the eco-label or the issue the FSC eco-label deals with. Some participants compared the FSC eco-label to the SFI eco-label, where the later one gives more cues, such as the full name of the letters appearing in the label (abbreviation). One participant commented, “I think the SFI that

one definitely sparks my interest more. I am not sure why. I think the title itself - this [FSC] does not say what FSC means.” Another participant said, “this one SFI is structured, it does make more sense and it is more like visibly appealing and it had tiny bit more information on it.” In general, there was some ambiguity regarding the two eco-labels. Even phrases like well-managed forests were not able to resonate with some participants. Many participants argued that the absence of information may help sometimes, but not in this situation. One participant said, “I feel like sometimes for certain products like an absence of information will spark curiosity, and that is positive for certain things”.

Although the previous opinion swayed between the ability of the SFI eco-label or the FSC eco-label to ignite curiosity, the participants told stories where other brands were able to ignite curiosity to learn about the environment. One story that several participants talked about was the Dawn dish liquid campaign about saving wildlife (figure 28). Figure 28 shows a Dawn dish liquid bottle with the photo of a duck on the front side of the package. The previous campaign aimed to clean animals from oil spill, where there are many commercials that show how the Dawn dish liquid works cleaning ducks. One participant commented, “I just like it regarding the emotional appeal. I just remember like seeing in the aisle and like especially when moving to the college when I get to buy my own stuff. I see a million of them in the aisle. So, for me, that is just like basically brought me to it”.

Design, Layout, and Placement

While some participants showed interests in both labels’ designs, the participants also mentioned some flaws. One of the main flaws is the lack of information about the source

or the certifying organization that issued the eco-labels. One participant commented, “I do not know by who - like is this really issued by the government, city, or is this just random company... Who is this SFI program - you know - I have no idea, so this is kind of confusing me.” The previous participant also mentioned how some organic stamps [labels] are more recognizable since some of these stamps show the source of the label. The degree in which eco-labels enable consumers to discover meanings is different among eco-labels. While some famous eco-labels like Rainforest Alliance Certified use several visual and verbal cues, these cues are less in the FSC and SFI eco-labels, especially regarding the abbreviation of the labels’ names.

The design of FSC eco-label received some positive feedback since there are trees and a check mark. For example, in the SFI label, the tree and the leaf received praise because the design simply related to trees and the environment. One participant commented, “overall, I think it is a good design. I think it should be a different color just because everything on this bag is blue [Walmart paper bag], and I think they should make it stand out or make it green or something.” Another participant said, “I think the logo is the only thing you really like if you have no idea what we are talking about. If you did not know either sustainability or forestry, then I think that is the only thing that you can associate”.

Although SFI eco-label was praised before because it has text that explains the abbreviation of the three letters (S, F, & I), one participant considered that as too much text. More, the phrase “certified sourcing” was not clear for some participants. One solution emerged in the discussion was a green QR code that can help consumers to know more. One participant commented, “those will cut down words like super easily.”

Another participant talked about the importance of marketing, “everyone knows what the recycling symbol is [the symbol with three arrows]. So, it is like universal. No one needs to explain it to you, what it is, so I feel like just marketing wise”.

Figure 28

DAWN Dish Liquid. This figure illustrates two ducks on the front side of Dawn dish liquid bottle



The FSC eco-label received some positive feedback as well as negative ones. The “check” mark on the tree was a good simple sign. The main flaw was the lack of text that explains the abbreviation FSC. A participant commented, “you do not want to think while you are just shopping - you know - putting in your bag other things; you do not want extra [effort] while in shopping.” In addition, the previous situation is related to the kind of product. One participant commented, “maybe if something to eat, to put in your body,

you wanna think a little bit more.” The code which appears beneath one of the FSC label was an issue since it does not give meaning, at least for non-specialized people. The lack of understanding pushed some participants to say that the label should consider giving a new design. Another participant talked about the importance of showing these labels next to each other’s (as in this study), so the participants can compare.

Communicating Labels to People

In addition to the design issue, participants suggested that both eco-labels (FSC & SFI) should have more information. Yet, the participants mentioned that such a solution should be creative i.e., it could be through a green QR code or a hashtag. One participant said, “a little hashtag thing, like underneath the name that not like a ton of text, but I feel like a clear little hashtag.” Another participant commented, “I feel like because everyone on social media, so if it is not QR code just search it on Twitter hashtag whatever... That will make it interactive.” Another reason for criticism regarding the eco-labels was how they affected some participants' feelings. One participant said, “right now it just looks like corporate.” Another participant commented, “I also think that the QR code if I am gonna to wrap it off and see the QR code, I think it will make me stop for a second, like I will think Ohh what a QR code in a Kleenex. I think that will actually make me want to look at it.” Another participant commented in relation to SFI eco-label, “If they can add just like how it is sustainable... and how they make the product that is sustainable - like just the shortest amount [number] of words possible.” Another participant said, “It can have a paragraph on the back and even the words [explanation] next to it.” Yet, another participant contradicted the previous idea, “it kills the effect of the logo. You know, you need to read that big text first.” In addition, the issue of placement was raised because

changing the eco-label's place on the package could help communicate the label in a better way. Other issues include the size of the SFI eco-label, and the color, "make the label green make it pop out" as one participant commented.

Regarding advertising the eco-labels, one participant commented, "I think it is gonna depends, like who is the target audience, like obviously our generation, like a lot of social media. So, I think like ads or if a company tweeted or something like that."

Another participant talked about a market in Portland city in Oregon. The market shows all the eco- labels on a board inside the store. The participant gave a different perspective regarding social media, "social media is an idea, but it is hard to promote these things in social media. How are you going to do that?"

Adding a paragraph was suggested frequently in relation to FSC eco-label since the label was relatively unclear. One participant said, "there are already paragraphs with the other logos [labels on the Boise paper package] and there is nothing about this."

Another participant added, "they put the paragraphs in Spanish as well... This logo was completely left out." Yet, there was a contradicting idea from another participant, "I am not gonna read it, like just in general pulling a paper out. It is kind hard. I do not ever see myself really reading it unless I am stuck without my phone." Placing the FSC eco-label next to the other labels was helpful though. One participant said, "the only way that I would know this is like if it is beneficial is because the placement is near to the other ones [labels]".

Other Eco-labels' Stories

In addition to the Dawn dish liquid story, one participant mentioned the story of Chipotle commercial, which was about bad farming and the importance of good farming. The title

of that commercial is: Chipotle – Back to Start. The commercial is available on YouTube as an animation video that lasts for about two minutes. A participant commented regarding that commercial, “I know they have really cheesy one talking about like what they do without bad farming techniques and stuff... the animals just like a little bit of a story and kinda feel good about it, and a happy song.” One participant mentioned the importance of storytelling, “a good video would be like trees and to me I love animals, so it is like animals will miss home”.

Another story was related to the World Wildlife Fund label. One participant told a story about her experience when she was a child when she had a polar bear toy with the WWF label. The previous experience made her wonder about the issue and wanted to know more. The same participant explained the importance of such emotionally appealing labels to younger generations, “that is something for partnerships would be cool, like they may reach younger generations that way, like that is something pretty simple that has an emotional appeal to kids”. A similar eco-label that has an animal was the Rainforest Alliance Certified label. Some participants argued that the popularity of the previous eco-label was due to the high number of media used by the label’s certifying organization.

Conclusion

The focus groups’ discussions revealed the role of participants’ education and interest in the environment in interpreting the two eco-labels’ messages in this study (FSC & SFI). However, the results showed that purchase habits are different although the participants have a relatively similar education. In addition, the discussions revealed that eco-labels’ usage and understanding by consumers are related to the society these labels exist in.

The focus groups' discussions showed the degree of confusion that eco-labels' messages could create, especially if they are new to consumers or not explained by a text or a communication tool, such as a Twitter hashtag. Participants who were able to quickly interpret the FSC and SFI eco-labels had been exposed previously to similar eco-labels. In other words, they used their previous knowledge to interpret the eco-labels' messages in this study (FSC & SFI). In general, participants' understanding of FSC and SFI eco-labels happened mainly through discussion with other participants. Further, the participants' understanding of FSC and SFI eco-labels was aided by the labels' visual and verbal cues, such as color, design, text, and placement on the package. The participants were more involved in discussing the eco-labels and their related environmental issues when they were asked to do so instead of being proactive. Participants' general understanding of FSC and SFI eco-labels is that these labels mean something good for the environment. The factors of visual and verbal cues – such as design and color – brought to the discussion the importance of providing extra information about these eco-labels so consumers are aware about the meaning.

Discussing the communicative environmental role of eco-labels was another point in the focus groups' discussions. Some participants talked about the ability of eco-labels to bring curiosity about an environmental issue or to motivate them to explore the topic of environmental sustainability more. Other participants mentioned that their interest could be affected by the focus groups' discussions and might be different in other scenarios. More, for some participants, the presence or absence of eco-labels did not make any difference. In addition, some of the focus groups' participants mentioned that their curiosity and willingness to know more about the eco-labels and the related

sustainability issues could be a result from being in a society and in an educational system where issues of the environment sustainability had been brought many times.

Regarding the improvement of communication methods, the focus groups' discussions revealed how the participants weighed the importance of new communication tools, such as social media networks and mobile phone applications. The participants also talked about the importance of not ignoring the traditional methods of communication, such as showing eco-labels on a board in a store. Further, the participants talked about the importance of creativity and the development of eco-labels' messages in a way that eco-labels' certifying organizations and brands that use eco-labels implement additional ways to provide more information about eco-labels. For example, a simple and effective way that was suggested is the use of a Twitter hashtag that enables consumers to know more by scanning or putting the name on the social media platform Twitter. In addition, the participants discussed the idea of QR code and its benefits and complications. Finally, most focus groups' participants agreed on the importance of having better visual and verbal cues to better interpret eco-labels' messages, their roles in sustainability, and the sustainability issues the labels deal with. The interpretation of eco-labels' message by the focus groups' participants showed that these participants fall into the negotiated readers' group and the oppositional readers' group mentioned in the Reception Theory, where these participants were able to interpret some parts of the eco-labels' messages. The focus groups' discussion showed the absence of a dominant readers' group that can interpret the message correctly. Not to mention that the nature of the focus groups' discussion provided some help, where some participants discussed and figured out the meaning together.

CHAPTER VII

DISCUSSION

Introduction

Using Reception Theory as an analytical framework, I examine the various strategies used by certifying organizations to encode eco-labels with meaning, how those meanings are distributed and transformed by consumer brands, and finally how consumers decode those meanings. The results of the case studies and focus groups show that eco-labels communicate meaning on several levels: they can, in limited conditions, provide specific information about forest related issues, second they can create general awareness about the certifying organization itself. Finally, they merely communicate corporate social responsibility, generally.

In addition, I found that brands' use and distribution of eco-labels are linked to factors of society, value system in the corporation, and also related to the brands' goals. I found also that consumers' interpretation of eco-labels depends on two areas. The first area is related to consumers' value, ideals, demographics, and relevance to the issue of environmental sustainability. The second area is related to the clarity of the eco-labels' messages. Moreover, I found that communication channels of social media networks and mobile phone application could bridge gaps that happen when eco-labels' certifying organization communicate the labels, or when brands carry those labels on their products.

There is little evidence that information on forest related issue is being communicated through eco-labels alone. But these issues were communicated on the social media networks of the two eco-labels' certifying organizations as these two

organizations posts about the importance of sustainable forests and the effect related to the eco-system. The communicative environmental and awareness raiser role of eco-labels seems to be enhanced by brands in some situations like when there is a partnership and an environmental message that could bring awareness to some sustainability areas as seen in the case of collaboration between Scott brand, WWF, and FSC. Finally, the brands' use of eco-labels can serve marketing efforts (symbolic) and sustainability effort at the same time. The responsibility of eco-labels' certifying organizations is related to the message encoding, which include elements of visual and verbal symbols. On the other hand, the responsibility of brands is related to the way brands deliver eco-labels' message on their products through the means of the placement of eco-labels, providing more information on the package, and using social media links or mobile phone applications. This previous brand responsibility should be balanced in a way that does not overestimate the effort. Consumers' interpretation of eco-labels is linked to these consumers' views and relevance to the topic of sustainability, the demographic factors, the clarity of eco-labels' messages, and how brands deliver these messages.

Eco-labels' Messages Encoded by the Sender

Although previous research (Kaplan, Kaplan, & Sampson, 1968; Tang, Fryxell, & Chow, 2004) talked about the importance of cues, it is hard to evaluate the success of an eco-label's message based on the cues' number only. The messages of the two eco-labels in this study (FSC & SFI) were encoded by two eco-labels' certifying organizations to transfer some environmental information to consumers. The symbols in both eco-labels are well understood by the sender of the message but can encounter misunderstanding from consumers as discussed in the findings' section. Previous research (D'Souza,

Taghian, & Lamb, 2006) mentioned that eco-labels are not always understood by consumers. This issue of ambiguity of eco-labels' messages was mentioned several times in previous studies (Langer, Eisend, & Ku, 2007; Harbaugh, Maxwell, & Roussillon, 2011; Moon, Costello, & Koo, 2016; Brecard, 2017). Since eco-labels' certifying organizations are responsible of creating the labels, they can handle this issue. Also, the miscommunication will happen more for the negotiated readers' group and the oppositional readers' group because of the audiences' different ideals, views, relevance to the message, age, ethnicity, and other demographics' factors. While the SFI message is clearer than FSC, the two messages in the eco-labels have several ambiguity issues according to the participants in the focus groups' discussions. These issues include naming of the labels, design, color, and verbal cues, especially the lack of text that accompanied the labels. Also, it can be noticed that to some extent the SFI label has more details in relation to verbal cues. Detailed labels may have some advantage compared to simpler labels as discussed by Teisl (2003).

In the case of FSC and SFI eco-labels, visual and verbal cues (coming from eco-labels' certifying organizations) as well as the placement of the labels (coming from brands) play a significant part in the interpretation process. A previous study (Stokes & Turri, 2015) talked about the importance of adding information to explain eco-labels. This previous idea is not always possible from brands' side due to the rules usually set by eco-labels' certifying organizations. The two labels showed a comparison between a less abstract label (SFI), and a more abstract label (FSC). While the participants of the focus groups' discussions showed more understanding about the SFI eco-label when they were introduced to it, they were also able to understand the FSC eco-label. Yet, the previous

process of understating the abstract involved other factors mentioned previously, such as the placement of the eco-label (set by brands mostly) and the “tree” shape in the FSC eco-label (created by eco-labels’ certifying organizations). Previous research (Teisl, Rubin, & Noblet, 2008) emphasized the importance of having a well-design label.

It was supposed that the participants would be more attracted to the label that is from third-party certifying organizations due to its credibility compared to a self-declared label. Although that was relatively true for the two labels in this study, a few participants mentioned how other labels (self-declared) and campaigns were able to attract their attention although those labels or campaigns were not from third-party certifying organizations. They were self-declared labels like the Dawn dish liquid and the oil spill campaign. The Dawn dish liquid campaign’s message was clearer and easier to be interpreted by consumers. Thus, although the issue of the source credibility is important, the message interpretation seem to depend more on the visual and verbal cues included in the eco-labels’ messages, and on the relevance of these messages to consumers.

Eco-labels’ messages could be better understood if we look at eco-labels taking into the account the goals of the message sender. The sender (eco-labels’ certifying organizations) wants to achieve two goals. One goal is related to businesses (brands); the other is related to consumers. For both brands and consumers, eco-labels’ messages need to be clear and reduce ambiguity. Brands as a group of audience aim in most cases to use eco-labels to promote their products and compete in the market (Erskine & Collins, 1995). From a historical perspective, eco-labels evolved to replace statements issued by brands and companies about these brands’ environmental practices. Some companies still issued such statements though. The point is that an eco-label can be seen as an

endorsement that communicates many things, which could create ambiguity sometime instead of increasing the product value. This ambiguity is not only caused by the differences that exist between the senders and the audience, but also caused by how the messages are encoded. It was recommended that companies should avoid ambiguity and provide clear information (Testa, Iraldo, Vaccari, & Ferrari, 2013).

Since eco-labels' certifying organizations are more related to environmental practices compared to brands, some goals of these organizations are to help consumers to make better purchase decision, to help companies be competitive in the market, and to help the environment. To be able to help the environment in this case, eco-labels are expected to have a communicative environmental role and an awareness raiser effect that speaks to consumers, especially in the case of the third-party labels. It could be argued that third-party labels have come to replace the traditional ways that were prominent when brands used to talk about their environmental practices by themselves (self-declared) without having an outside organization that can evaluate the work in a way that provides more accountability and transparency. The two eco-labels in this study (FSC & SFI) may have more popularity in the coming years because of the forests' crisis that happened in many places around the world, especially the forest fire in Australia in 2019 and 2020, the Amazon forest fire in Brazil and Columbia in 2019, and in Oregon and California in 2020.

Although it is difficult to quantify, the effects of eco-labels' messages can be observed in the long-term on the knowledge's level and the behavioral one of the audience (consumers). Some possible ways to trace that effect is through consumers' purchases and consumers' engagement on social media networks of eco-labels' certifying

organizations. These social media networks have showed the capabilities to be an option for having open discussion although there is criticism about issues like privacy. These networks, for example, could be platforms to reduce corporate greenwashing as Lyon and Montgomery (2013) discussed. Yet, social media networks should be used wisely by firms as mentioned by Kaplan and Haenlein (2010).

There are many areas to consider when looking at eco-labels from an international perspective. One area is how eco-labels move from developed into developing countries and vice versa. It is supposed that the interpretation of eco-labels' messages could have some challenges related to languages, relevance to consumers, communication channels, and financial issues. For example, Rainforest Alliance Certified label could have better growth since it uses more cues such as the frog and the green color. On the other hand, B Corp Certified eco-label may need a paragraph to explain the label's meaning. The same could be applied on the two eco-labels in this study (FSC & SFI). A feasible approach to bridge the previous gap is to use a tailored language version of the label, which is already applied in several countries in relation to (FSC & SFI).

Brands' Use and Distribution of Eco-labels

The analysis of case studies showed that the communication strategies used by brands to communicate eco-labels are different from the strategies used by eco-labels' certifying organizations. For example, eco-labels' certifying organizations mainly used social media networks to spread knowledge about sustainability and eco-labels. However, brands avoided the previous practice to avoid greenwashing accusation. The use of eco-labels and how the labels function also depend on the value system brands and

corporations have since they can affect eco-labels' messages by factors such as placement on the package, adding social media signs, and adding explanation.

While brands are not advised to speak about eco-labels directly like in social media networks, brands can use other ways to facilitate the understanding of the eco-labels' messages. Brands, for example, can add explanations to some eco-labels that make the labels easier to be understood by consumers. Not to mention, the previous solution could be not available for all eco-labels due to the terms that set by eco-labels' certifying organizations on how the brand can use the eco-label. The dominant readers' group was clear in relation to other situations mentioned by the participants of the focus groups, as in the situation of Dawn dish liquid case and the campaign of saving the ducks from oil spill in the ocean.

There is a difference between a company that uses eco-labels to persuade consumers to buy, and another company that uses these labels because that company believes in sustainability benefits. Marrewijk and Werre (2003) set six ambition levels of corporate sustainability. These levels indicate the degree in which corporations and companies look at sustainability, customers, and several related areas to business. The levels are: Pre-CS (corporate sustainability), compliance-driven, profit-driven, caring CS, synergistic CS, and Holistic CS. The first two levels indicate a negative application of corporate sustainability as well as a negative view toward customers - as victims that benefit companies. The changing point starts from the third level. Yet, the third level is not interested in sustainability itself. It is interested in it because it could generate more profit. This also agrees with the previous business case situation.

The second level, on the other hand, is practicing sustainability because laws and legislations require it. In this level, brands are more likely to get certified from eco-labels' certifying organizations to avoid legal consequences. The highest level could be seen as an ideal one for brands. At that level, customers are not only looked at as human beings, but also as contributors to the business. Generally, the profit-driven level, the caring level, and the synergistic levels reflect conscious business. Using eco-labels as a communication tool about the environment could be expected when companies and brands function on the higher levels of corporate sustainability.

Since societal culture could affect a brand culture, corporate culture affects the way that brands communicate sustainability (Signitzer & Prexl, 2007). The previous idea was clear in the case studies of the two brands (Walmart & Boise Paper). The two brands showed effort to communicate their sustainability practices through annual reports mainly. On the other hand, social media networks were not the main platforms to talk about sustainability. One reason could be that the two brands do not want to be accused of overestimating their environmental efforts. This thin line (between being sustainable and not over communicating the effort) could be more apparent in big corporations, which usually get involved in more production and manufacturing issues compared to small companies that focus on one or a few products. It could be argued that using a lot of communication – especially in social media networks - to talk about the environmental achievements could lead to more skepticism from the audience (consumers), especially those who have sufficient degree of environmental knowledge and can relate to environmental messages. The opposite was true in the case of the two non-profit eco-labels' certifying organizations, where social media networks showed more coverage for

several environmental topics since this is the main work field of the two eco-labels' certifying organizations (FSC & SFI).

Another important point to consider when looking at the corporate culture is why brands and corporations do sustainability communication. According to Signitzer and Prexl (2007), there are three cases: marketing case, business case, and public case. While most brands do more efforts in the first two categories, non-profit organizations are expected to do more effort in the public case category. Yet, there are some shared boundaries between these three previous cases. For example, non-profit organizations are also working to promote their eco-labels as discussed in the two case studies (FSC & SFI) in this research. As a result, these organizations are expected to work also on the marketing and business cases to promote their labels among brands like Walmart and Boise Paper. These previous points are closely related to consumers' interpretation of eco-labels' messages because they affect how the sender (eco-labels' certifying organizations) encode eco-labels.

Generally, the value system of an organization is relatively similar to the value system that exists in that society; there are exceptions to that rule. Importantly, corporate sustainability communication is more present in societies that value the environment (Signitzer & Prexl, 2007). In addition, Signitzer and Prexl (2007) asked the following question, which could show the difference between Boise Paper and Walmart; "the question is whether multinational companies headquartered in countries with liberal or social market systems will also engage in corporate sustainability communication CSC in less developed regions. Empirical evidence on this is, however, is still lacking" (p. 11). It could be argued from the analyzed data of the case studies that corporations in less

developed regions can get engaged in CSC. Yet, the activities of such engagement were relatively different from the headquarter CSC activities.

The Audience of Eco-labels

The development of eco-labels showed that there are multiple stakeholders who are involved in the distribution and reception of these labels. The two main audience groups are businesses and consumers. Yet, there are several stakeholders involved in the process including governments, retailers, donors, legislators, and environmental groups. Brands' purpose to get certified differs according to several factors related to three main areas: compliance with regulations, using eco-labels for marketing purposes, and using eco-labels for sustainability purposes. Brands can choose to focus on one area more than the other, or to have eco-labels to achieve many goals at the same time.

The factors to get eco-labels by brands include laws and regulations, society where the brands exist, nature of the products that will be certified, competition from other brands, availability of eco-labels' certifying organizations, and the cost of certification. While brands are considered an audience group of eco-labels, the message in eco-labels is designed to be received by consumers. The analysis of the two case studies related to eco-labels' certifying organizations showed that these organizations used different ways to communicate with the audience groups. For example, when eco-labels' certifying organizations plan to promote these labels among brands, these organizations communicate about the benefits brands can get. Such benefits include the increasing awareness of the eco-label and the positive response of consumers toward the label which serves the marketing and public relations purposes, and the sustainability purpose. This is usually mentioned in the annual reports and the expertise reports in the

eco-labels' certifying organizations' website, and also available when brands seek consultation from eco-labels' certifying organizations.

In addition, eco-labels' certifying organizations will show how these environmental labels helps brands to comply with the current environmental regulations or the potential regulations in the future. The analysis from the two case studies of Walmart and Boise Paper showed that brands know the importance of getting certified by eco-labels' organizations, especially in relation to areas that could make consumers conscious about an environmental issue like forest sustainability and management. Another important point is that brands are unlikely to depend on social media networks to evaluate the benefit of an eco-labels although these networks could provide some insights regarding consumers' perception and interaction with eco-labels. Instead, brands will use annual documents of eco-labels' certifying organizations in addition to other resources like surveys to evaluate the investment of getting certified by an eco-label's organization.

Consumers, on the other hand, are considered the audience group that receives the environmental message of eco-labels. The messages of eco-labels are supposed to be designed in a way that help consumers to quickly understand the labels, understand the environmental topic of the label, and helps consumers in the purchase decision. In addition, eco-labels can bring several environmental issues to consumers during or after the purchase phase. The analysis of the two case studies related to the eco-labels' certifying organization showed that these organizations had changed the design of their labels since the establishment date to better transfer the environmental message to consumers as in the case of FSC label. In addition, the analysis showed that there are several types of eco-labels that have the same general design, but with some details that

match specific criteria in the products that will get certified. Yet, the analysis of focus groups showed that both eco-labels' certifying organizations and brands were not always successful in transferring the eco-labels' messages to consumers. The discussion showed that there are barriers from the sides of eco-labels' certifying organizations and barriers from the brands side. To better understand the audience group of consumers, the coming paragraphs include discussion about these groups according to the three categories in the Reception Theory.

In relation to consumers, I found that there was an absent of a dominant readers' group in the focus groups' discussion. The Reception Theory explains this group as the one that is going to interpret the message as the sender intended. Eco-labels' certifying organizations are primarily the sender or the encoder of the eco-labels' messages. To less degree, brands could be also considered senders of eco-labels message when they add explanation to eco-labels. Consumers who are in this group will be less likely to misinterpret the eco-labels' messages (the original eco-label's message that is sent by eco-labels' certifying organizations).

The majority of the audience in the focus groups' discussion can fall into the negotiated readers' group and the oppositional readers' group. Yet, the focus groups' discussions showed how the factors of demographics can change the audience understanding and as a result move some of audience to the dominant readers' group. In addition, there were participants in the focus groups' discussions who get the message of SFI label faster than the FSC message because of the issues of the message clarity. It is good to mention here that these two labels (FSC & SFI) are less famous compared to other famous label like the recycling eco-label. As a result, most of the audience are

unlikely to be in the dominant readers' group. On the other hand, the analysis of the case studies of the eco-labels' certifying organizations showed that the audience's (consumers) awareness and understanding of eco-labels has been increasing since the establishment date of the eco-labels' certifying organizations in this study (FSC & SFI). The previous notion of increase can be positive for eco-labels' certifying organizations and for brands.

The issue of the clarity of eco-labels' messages was the most prominent one in the focus groups' discussions. That issue was more prominent than the factors of relevance of the message, consumers age, ethnicity, or belief. Although several participants showed their interests in the environmental sustainability topic, and they were able to relate to the message, the issue of the message clarity hinder the process. This issue is discussed later with some possible solutions from certifying organizations and brands. Understanding the message was not successful due to the message encoding done by certifying organizations, and due to the placement by brands. One important point is that more readers (consumers) could move from the previous negotiated position group to the dominant position when the message is delivered by brands differently. This is also expected when the age of eco-labels' message is old.

The negotiated reader position is the second category. The audience in this group include consumers who were able to understand some parts of the eco-labels' messages of the two eco-labels (FSC & SFI). I found that the majority of the participants in the focus groups' discussions belong to this group. For example, some participant was able to recognize a part of the eco-labels' meaning, especially that they were introduced to similar eco-labels before. Although the audience in this group still does not get the full meaning of the eco-labels' messages, the negotiated audience position is also considered

good by certifying organizations and brands, but not as good as the dominant readers' group.

The oppositional reader position is the third category. The audience in this group includes consumers who misinterpret the message in a way that they give it a different meaning than the original meaning intended by the sender (eco-labels' certifying organizations). The level of misunderstanding and miscommunication is big in a way that the message has a different meaning set by the audience in this group. The data from case studies of eco-labels' certifying organizations showed that social media networks were used to promote eco-labels. Misunderstanding or miscommunication is less likely to happen because of the interactivity nature of social media networks that provide two-way communication. Data from focus groups' discussions showed that there were a few participant who can be in this group, where these participants did not get the meaning of the eco-labels message. Instead, these participants thought that these eco-labels (FSC & SFI) are just signs for something, but they were not sure why the eco-labels were on the packages. As discussed earlier, the oppositional position is considered bad and not preferred neither by eco-labels' certifying organizations, nor by brands.

Looking at the factors that can affect the audience's (consumers) interpretation, the participants of the focus groups' discussions talked about their attitudes towards eco-labels and how their educational levels affected their attitudes. Education was a crucial factor among socioeconomic variables in several studies such as Teisl, Rubin, and Noblet (2008). The participants also showed interest in environmental communication, which explains why consumers' perception differs depending on the degree of their interest in the environment as mentioned by Costa (2016). Attitude toward science is also important

because in the focus groups' discussions, the interest in the environment as a scientific topic affected some participants' curiosity to discuss the issues of the two eco-labels (FSC & SFI) more. This attitude toward science is also related to attitude toward science education. It could be argued that the same participants could show more understanding about the eco-labels' topic years from if these consumers continue improving their environmental knowledge.

In addition, the effect of social status was shown in the focus groups' discussions when some participants admitted that if they have enough money, they will purchase more green products. Although purchasing green products does not guarantee that consumers will use eco-labels as a communicative awareness raiser tool about environmental sustainability, it is likely that the functionality of these eco-labels will differ if consumers do not have enough resources to purchase green products. The ability to relate to the eco-labels' messages is another factor that shows how eco-labels function in different societies. For example, using an eco-label as a communicative tool about the environment could be noticed more in developed societies rather than developing ones because the level of development affects how corporate sustainability communication is practiced in general (Marrewijk, 2003; Signitzer & Prexl, 2007).

The Interpretation of Eco-labels' Messages

It could be argued that eco-labels can serve a communicative environmental role when these labels are close to the values and attitudes of consumers. Such attitudes, for instance, include attitudes toward forest health and sustainability and how that topic is relevance to consumers. In other words, the interpretation of an eco-label is related to the level of consumers' interest in the environment (Costa, 2016). The previous situation can

be found in the dominant readers' group described by Hall (1993). More, it could be argued that eco-labels have the possibility to serve a communicative environmental role in more developed places, for example, the cosmopolitan areas versus the rural areas. The focus groups' discussions showed such differences related to different places. In the focus groups' discussions, some participants talked about the effect of the place they live in on their interests in the environment. For example, one student commented how taking classes in the school of journalism and communication at the University of Oregon introduced her to the topic of sustainability and green consumerism. Another student explained how travelling to the east coast showed the differences in applying sustainability between the east coast and the west coast in the U.S.

Since the emergence of eco-labels, there have been discussions about eco-labels' efficiency. Although such labels could be seen as good things in one society, other societies might perceive them as bad things, and the audience (consumers) may find difficulties to relate to eco-labels' message due to the factor of culture and the nature of society. For example, the NON-GMO eco-label has been in discussion for a long time, especially in societies where people use genetically modified organisms in farming. Having such labels is not only disturbing for those people but also could affect their job opportunities in the farming industry. Understanding these differences related to society and message relevance is important, especially that these differences exist in several forms, such as a green university that cares about sustainability, or even a small group of green consumers. The analysis from the case studies of the two eco-labels' certifying organizations showed how some groups of people –like indigenous communities- give

more value to their farms and trees since such things are related to both their living and to the culture they inherit from their ancestors.

Communication channels could affect consumers' perception of environmental crisis, especially when these consumers can see their relevance to the eco-labels' messages. For example, the participants of the focus groups' discussions were more able to remember other eco-labels that were accompanied by crisis and media coverage, such as the ducks and the oil spill in the Dawn dish liquid campaign (which is considered a self-declared label). In addition, the participants were more aware about the WWF label and how that label relates to animals' saving, probably because of the visual cues (panda bear) on the label and its meaning. This brings the importance of visual cues, which can be more effective in recalling processes compared to verbal cues only (Kaplan, Kaplan, & Sampson, 1968), and the importance of both visual and verbal cues together on the recalling process (Tang, Fryxell, & Chow, 2004). The two eco-labels (FSC & SFI) showed different complexity levels. Participants in the focus groups' discussions found SFI eco-label as less complex compared to the FSC eco-label, which gives less visual and verbal cues that were recommended to be used together for better results in recalling according to Tang, Fryxell, and Chow (2004). The issue of complexity, where consumers do not understand eco-labels' meanings, was also mentioned by D'Souza, Taghian, and Lamb (2006). As mentioned earlier, the participants in the focus groups' discussions can fall into the negotiated readers' group and the oppositional readers' group.

Another important point to consider is time. An example that relates to the previous case is the famous recycling label with three arrows. The two eco-labels in this study (FSC & SFI) have been in the market for about twenty-seven years (established in

1994). Being specialized in forest management makes these two eco-labels less apparent on daily products that have famous eco-labels like Fair Trade eco-label, and Rainforest Alliance Certified eco-label. Relatively, new eco-labels like B Corp Certified (established in 2006) have been moving fast in the market because of the several media campaigns done by the certifying organization. The campaigns were able to show the relevance to consumers' life and to the environment. The communication efforts conducted by the previous label's certifying organization mitigate its ambiguous sign (B), which cannot be understood easily compared to other eco-labels like (FSC & SFI). The B Corp Certified label deals with brands that consumers usually use on a daily base, such as tea and coffee products. The type of certification in B Corp eco-label includes the entire company instead of a specific product. The focus groups' discussions revealed how some participants were more willing to buy green products and to check these products' environmental information if this information was communicated in a way that relate to these consumers. The focus groups' discussions showed how some participants are less willing to buy green products with eco-labels because they cannot afford the price. The same focus groups' participants also talked about situations where they purchased green products when the price was the same as other products.

In relation to the communicative environmental role, the participants of the focus groups' discussions were more able to perceive the general meaning of the eco-labels (FSC & SFI). The participants said that the SFI and FSC labels represent something good based on their placement and the visual cues in both eco-labels. Seeing the two eco-labels (FSC & SFI) as good is one of the brands' goals because that can be transferred later to the name of the brand itself. In other words, the eco-label is good, so the brand. But to go

beyond the (general good) impression and understand the meaning and the environmental issue the eco-labels deal with took more time from the participants. Yet, many participants were able to understand the meaning. This agrees with Costa (2016) where the author argued that consumers can interpret eco-labels' meaning if they are asked to study it. Hence, the issue of clarity was raised again as a good facilitator in the communication process, which agrees with BreCARD (2017) who argued that imperfect information is likely to affect perception and the benefits of eco-labels.

It could be argued that what is true for some consumers could be seen as false for other consumers even if the two groups share the same characteristics except the cultural values, which direct their hidden motives behind their actions. In eco-labels research, Cervellon and Carey (2011) noticed how consumers' purchase intention of eco-fashion differed from one society to the other, where the researchers compared eco-fashion consumption between North America and Europe. The importance of cultural part was also mentioned by Godemann and Michelsen (2011) and Töpfer and Shea (2005). In addition, members of society could refer to people who live in different countries, or even people who live in the same countries but in different cities. For example, the cultural values of people who live in rural areas are different from those who live in cities. Not to mention that each society and culture not only affect how people perceive their values, but also how they perceive values that come from other cultures. Tailoring messages to people's cultures was clear in the two eco-labels' certifying organizations (FSC & SFI) social media networks' posts, where these posts showed events and holidays related to people and places, such as the earth day celebration, and the indigenous people day.

In this study, eco-labels were hypothesized to serve additional roles in addition to their marketing one. It is hard to say that people who form a group are more likely to see eco-labels as a door to environmental information compared to isolated people who do not form a group. Yet, the degree of such involvement is critical because high involvement could lead these group members to be more critical and skeptical about eco-labels and how these labels could serve the environment. On the other hand, a low level of involvement could be enough to encourage consumers to go beyond eco-labels to explore the environmental issues these labels deal with.

In the focus groups' discussions, the participants mentioned the famous recycling label (the label with the three arrows), which is a good example of an eco-label that has been tried and appeared on a wide range of products compared to the products that use FSC and SFI eco-labels. The participants said that when the recycling label was introduced, it was accompanied by text like reduce, reuse, and recycle. Then, the recycling label appeared alone and did not need the previous verbal cues. As a result, that eco-label's message was easier to be interpreted by consumers. The previous idea is true to some degree. Yet, some brands still use verbal cues with the recycling label. Later, it is argued why such verbal cues are important even if the label is clear. The dominant readers are the consumers who are expected to see more things in an eco-label in addition to its marketing purpose i.e., these consumers will understand the environmental message transferred by the sender (eco-labels' certifying organizations). They could give more consideration to the symbols and information an eco-label has.

Eco-labels' Messages and the Role of Communication Channels

In the focus groups' discussions, the participants discussed the idea of adding other communication tools to the two eco-labels (FSC & SFI). The participants suggested a hashtag that encourages the young generation to search about the two eco-labels (FSC & SFI) and the topic the labels deal with. Previous research (Young, Russell, Robinson, & Barkemeyer, 2017) showed that new communication tools like social media networks (Facebook) and e-newsletter affected consumers' food waste behavior significantly compared to traditional media (retailer magazine). Another appealing reason for using social media could be the ability of social media networks in reducing corporate greenwashing (Lyon & Montgomery, 2013). One suggestion was a green QR code, which could allow consumers to access the labels' information and the topics the labels deal with. Previous research (Teisl, 2003) has mentioned how a minor change in eco-label can enhance the communication effectiveness of that label. Yet, using a QR code is still a challenging issue mainly because of the digital divide and the need to download a mobile app to scan the eco-labels (FSC & SFI). Further, Atkinson (2013) mentioned that QR code should be designed carefully to provide information for consumers. Other research (Asensi Conejero & Kaulins, 2019) talked about the usefulness of QR codes and how consumers demand them. Yet, the previous authors also mentioned the barriers, specifically, in relation to legislation, complexity, and lack of fund. It is not clear to what extent the two eco-labels (FSC & SFI) in this study can benefit from a QR code. The idea is theoretically appealing, but it needs to be tried first in real market settings.

Communication tools have been able to bridge many gaps that exist between the consumers and the sender, but there are still challenges related to consumers'

interpretation of eco-labels as seen in the findings' section. It is good to consider both the new communication platforms like social media networks and mobile phone applications, and the traditional platforms, which still play a role. Not to mention that traditional media - like newspapers and magazines in addition to radio and television - is still the leading communication channels in several countries. Mass media is important because it can bring eco-labels to consumers' awareness, especially in cities that do not have access to the Internet. Although mass media can reach more areas, it does not necessarily mean more knowledge about the eco-labels. It could be challenging to see eco-labels work as an awareness raiser about the environment in rural areas. Yet, such a previous scenario could be possible depending on the consumers' characteristics and their interests in the environment. The later factor was emphasized by Costa (2016). The results from the case studies showed how the two eco-labels' certifying organizations (FSC & SFI) helped rural communities and encouraged the farmers in the rural areas. As a result, it could be possible to consider eco-labels in these areas as an awareness raiser as in the research, or able to inform people about environmental sustainability. A combination of traditional communication channels with new media channels could produce better effects (Kaplan & Haenlein, 2010; Hanna, Rohn, & Crittenden, 2011). Looking closely at the development of eco-labels' messages, it can be noticed how some eco-labels' certifying organizations conducted several media campaigns in the beginning, and then these organizations reduce the communication efforts as soon as the word spread, where consumers are speaking about the labels and sometimes recommend products carry that label. The previous situation can be seen through the Rainforest Alliance Certified label and B Corp Certified label.

Regarding mobile phone applications, the results coming from the focus groups' discussions support the idea of integrating eco-labels with mobile application. In relation to this issue of communication channel, Leire et.al. (2004) stated, "there is a general lack of knowledge on which channels appeal and lead to increased awareness and knowledge among consumers" (p.58). Also, previous research (Kozhushna, 2018) encouraged integrating technology to consumers' life to show information about products, companies, and stakeholders. Instead of spending time figuring out the meaning, a mobile phone application can provide enough information whether for marketing purposes, or for communicative environmental and awareness raiser purposes.

In relation to online shopping, which provide a unique way to read other consumers' reviews and products' information before making a purchase decision. Consumers who are interested in the environment can check products' eco-labels quickly online as it happened to one of the participants in the focus groups' discussions. Previous research (Delcea, Cotfas, Trica, Craclun, & Molanescu, 2019) mentioned the positive effect of online media exposure in relationship to green products. The online shopping experience can also allow consumers to check eco-labels' certifying organizations' websites and have quick facts about products and the related environmental issues, especially in social media networks, which allow engagement with brands and other consumers (Dessart, Veloutsou, & Morgan-Thomas, 2015). Yet, there are many products that could carry one or more eco-labels but do not show these labels on the online product - simply because it is not important to the other characteristics of the product. It is good to mention here that carrying more labels does not mean more clarity. Previous research (Langer, Eisend, & Ku, 2007) mentioned that more eco-labels on a product could create

confusion. Some exceptions are related to products that are promoted to be sustainable, such as computers and energy sources.

It could be argued that with social media networks, the near future could experience more awareness at the consumers' level. Yet, it is good to remind here that social media networks were recommended to be used in a holistic system that also uses traditional media (Kaplan & Haenlein, 2010; Hanna, Rohn, & Crittenden, 2011). The case studies' results coming from the two eco-labels' certifying organizations (FSC & SFI) showed how the two eco-labels' certifying organizations provided consumers with tools to check what items are licensed and what items are not. In addition, the two organizations (FSC & SFI) provided lists of certified products. This kind of procedure can push brands to disclose more information about sustainable products and probably certify more products.

The Effect of Eco-labels' Messages

Eco-labels could create a conflicting situation for some consumers. In other words, consumers start connecting eco-labels to green washing because of their interpretation of the eco-labels' messages. Those consumers can be found in the oppositional readers' group, and to less extent in the negotiated readers' group. This study argued that there are effects that go along with these labels' purpose in guiding consumers to make a better purchase decision. The focus groups' discussions showed that eco-labels' ability to be communicative environmental tools is difficult and depend on the message encoding and also on the characteristics of the audience (consumers). In addition, such effects are hard to be measured and quantified. For instance, in the focus groups' discussions, some participants recall their experiences with other eco-labels when they were asked to do so

and think collectively like in the case of Dawn dish liquid and the story told by the brand. Importantly, those participants were able to recall the environmental issue, which was presented in that context i.e., oil spill in the ocean.

If eco-labels are able to work as communicative environmental tools, eco-labels' effects can be categorized into three areas: make consumers curious about a specific environmental issue, keep a specific environmental issue in the consumers' minds, and transfer environmental information to consumers. These previous three situations depend also on brands. First, eco-labels could make consumers curious to learn about sustainability in general or about a specific environmental issue. In this scenario, for instance, consumers, use eco-labels to guide them toward their preferences in relation to green products. There is another group of consumers that may purchase green products on the base of price regardless of sustainability benefits. Both groups of consumers, if intrigued by eco-labels located on the products, they may start looking for more information about the labels on the Internet. It is less expected to ask other people about the labels unless there are circumstances that require so (like living in less developed places where there is no Internet). If consumers look for these eco-labels online, most of the time they will find eco-labels' certifying organizations presence on the Internet whether on the official websites' pages or on social media networks. When consumers reach there, they can find environmental information about the labels and the environmental issues the labels deal with. The previous scenario sounds ideal, but it is possible to happen since there is already a level of engagement on the social media networks of both certifying organizations (FSC & SFI). Not to mention that the transparency nature of social media networks has allowed for different perspectives,

where some consumers speak about the labels positively and some other consumers show criticism.

Second, eco-labels could help keeping an environmental issue in consumers' minds for a period of time. The previous scenario is more likely to happen with consumers who know about a certain environmental issue rather than those who do not know. Previous knowledge about the issue could be a prerequisite in this situation. This could relate to the interest level in the environment (Costa, 2016), and the ability of an eco-label to evoke positive emotion that can enhance consumers' purchase intention (Kumar, Bebek, Carrigan, & Bosangit, 2016). A consumer, for instance, who knows about the importance of forest to the ecosystem, may forget the issue of forest. Then, when that consumer goes shopping, there is exposure to products with forest-related eco-labels. When that consumer is exposed to the label, the issue of sustainable forest and maybe current news related to the issue comes to the mind. This scenario is more likely to happen when eco-labels' campaigns are noticeable (like the example mentioned in the focus groups' discussions, where a store in Portland city in Oregon shows all eco-labels on a board.

Third, there are eco-labels that are accompanied by some environmental information. In this case, the labels are supposed to provide basic environmental information for consumers. So far, the number of these eco-labels is low compared to most eco-labels that have labels without explanation. Providing a piece of information about eco-labels and how the labels deal with the environment could be a good change to eco-labels' messages. It can reduce the ambiguity in more abstract labels as the focus groups' participants mentioned. This agrees with Stokes and Turri (2015) who argued

that providing explanatory information to the labels could help consumers understand them, especially that previous research (D'Souza, Taghian, & Lamb, 2006; Cervellon & Carey, 2011; Harbaugh, Maxwell, & Roussillon, 2011; Testa, Iraldo, Vaccari, & Ferrari, 2013; Brecard, 2017) raised the issue of eco-labels' ambiguity several times. There are a few products that have this kind of explanation, which is usually a short paragraph. An important point here that sometimes brands cannot intervene with the original eco-labels' messages and they cannot add to it. In addition, adding a paragraph could be challenging for products that do not have enough space, such as a snack bar. The two eco-labels in this study (FSC & SFI) were criticized for not providing such an explanation, especially in the Forest Stewardship Council, FSC case, where other labels on the package of Boise Paper were explained. An example where eco-labels are explained is the EcoTeas brand Figure (29). Yet, previous research (Kiker & Putz, 1997) mentioned that green certifications could provide environmental information, but these certifications are not a solution to the issue of forest depletion. However, they can raise awareness in relation to sustainable forest management (Rametsteiner & Simula, 2003).

Understanding the communicative environmental role of eco-labels within the context of the relationship between eco-labels' certifying organizations, brands, and consumers was challenging because these three previous groups have different interests and priorities. Further, there has been a gap in understanding the communication channels that consumers prefer to help them better interpret eco-labels' environmental messages. This study explored the triadic relationship and showed how brands can cooperate with eco-labels' certifying organizations to enhance the interpretation of eco-labels' messages that target consumers. Further, the communicative environmental role of eco-labels could

become clearer with adding better visual and verbal cues to eco-labels' messages. In addition, this study showed the importance of integrating communication tools of social media networks' signs and mobile phone applications to eco-labels' messages. This previous point could be perceived better if it is applied by eco-labels' certifying organizations rather than brands since these certifying organizations are the main sender of the eco-labels' message.

Figure 29

Eco-labels with Explanations. This figure illustrates six eco-labels on a yerba mate brand (Eco Teas) with explanatory paragraphs for each label



Suggestions for Future Research

The suggestions for future research include four important aspects related to eco-labels' certifying organizations, brands, communication technologies, and societies where eco-labels exist. The following suggestions were derived after integrating the case studies results with the focus groups' discussions' results, in addition to the previous literature about eco-labels.

To begin with, future research could benefit from studying other eco-labels that relate to other business sectors, such as food and beverages, fashion, transportation, and tourism. Although there were several studies in relation to the previous sectors' eco-labels, future research could benefit from continuing studying eco-labels because these labels deal with several stakeholders. In addition, future studies of eco-labels could benefit from studying less known eco-labels instead of focusing on the famous labels. This previous point appeared in the literature of eco-labels, where most studies focus on a few famous eco-labels, such as the Rainforest Alliance Certified and Fair-Trade International eco-labels.

In addition, future research could benefit from implementing other research methods to study eco-labels in the market context. This study, for example, used case studies and focus groups because the study aimed to explore new areas related to eco-labels. Other methods mentioned in the literature of eco-labels include interviews, surveys, and experiments. There could be an opportunity for studies that can employ experiments in the real market system with observation as two research methods. This previous idea could lead to insights in exploring the extent of eco-labels' effect.

Also, future research could benefit from studying the effect of communication tools in relation to eco-labels and how these tools contribute to consumers' understanding about eco-labels and the sustainability issues these labels deal with. Further, studying communication tools should not focus entirely on the contemporary tools - such as social media networks and mobile phone applications - but should consider the traditional tools such as T.V., magazines, newspapers, and radio. More, simple tools could be an area of exploration; for example, communicating eco-labels through a board in stores as mentioned in the findings of the focus groups. The current discussion of eco-labels revealed the importance of integrating these labels more with social media networks and with mobile phone applications. These two previous points could be an area for future research, especially in relation to mobile sensors and smart labels that could carry an electronic chip.

Finally, future research could benefit from studying how eco-labels function in other countries around the world, or in different cities in the same country. Studying how eco-labels work in different places could bring insights about the labels and about the effects of social systems. In addition, such research could bring insights to the brand responsibility communication and how big corporations' branches around the world adapt to each country differently. This previous issue could happen, for example, due to the different regulations that govern the use of eco-labels worldwide. The challenging issue of eco-labels has been the lack of general agreement by brands and the lack of regulations among countries. In other words, eco-labels in most cases are voluntary. Although there are expectations that eco-labels are going to be obligatory in the future due to the current trend of sustainability, such a situation is not guaranteed. The eco-

labels' research showed that competition, profitability, brand image, and interests in sustainability are the leading reasons that motivate brands to use eco-labels.

Limitations

This study focused on the consumer decoding of eco-labels' messages. The other stakeholders not covered like partners, donors, legislators are beyond the scope of this study. This study has limitation regarding the sample size of eco-labels. These eco-labels were two, Forest Stewardship Council, FSC, and Sustainable Forestry Initiative, SFI. These two previous eco-labels are mainly about forest health and management. In addition, this study did not include all the eco-labels that deal with the forest management issue. Using two eco-labels was a recommended strategy to make this study doable in terms of time and expenses. Another eco-label that deals with forest management is Programme for the Endorsement of Forest Certification, PEFC. In relations to the brands used in this study, the study focused on two brands (Walmart & Boise Paper). Studying other brands and sectors, for example, the food and beverage sectors, can bring additional insights to the topic. Another limitation in this study is the society where this study took place. It is unclear if studying eco-labels in different societies will bring the same results. Finally, this study used case studies and focus groups to explore the topic of eco-labels. Other methods like observation and experiments in the market could provide more insights.

Conclusion

This study explored the topic of environmental sustainability by studying how consumers interpret eco-labels' messages and how eco-labels' certifying organizations and brands communicate their sustainability practices in general and eco-labels' messages in

specific. The study's significance comes from its exploration of a topic that was not given much attention by previous research. Previous research of eco-labels focused mostly on studying the link between eco-labels and consumers' purchase intention. This study explored the communicative environmental role of eco-labels. One of the goals of the study was to explore the triadic relationship that happens between the three involved stakeholders of eco-labels: eco-labels' certifying organizations, brands, and consumers. This study contributes to the literature of eco-labels, specifically, to the literature of the role of eco-labels in communicating about environmental sustainability.

The three research questions were chosen after identifying the relationship between the three stakeholders and their relationship to eco-labels' messages. The first research question handled the ways in which eco-labels' certifying organizations used communication strategies to promote environmental sustainability in general, and how these certifying organization encode eco-labels' messages. This question was important because it provided insights related to the two other stakeholders i.e., brands and consumers. The second research question focused on brands. The question brought insights in relation to corporate sustainability communication and how brands can affect consumers' interpretation of eco-labels' message by means such as the placement of eco-labels on packages, providing more information, and using social media networks' signs or mobile phone applications. The third research question handled the consumers' part as consumers are the audience who deals with the interpretation of eco-labels' messages. The question explored what consumers understand and take away from eco-labels.

The results of this study included three areas related to each one of the stakeholders. In relation to eco-labels' certifying organizations, the results showed that

eco-labels could work as communicative environmental tools for consumers regarding environmental sustainability issues, such as forest health and management. This previous point depends on a great extent on consumers' interpretation of eco-labels messages, and the encoded symbols in the eco-labels' messages. In addition, the results showed that eco-labels' certifying organizations need to work more on eco-labels' messages to better communicate these labels to consumers. There has been a discussion about the ambiguity of eco-labels for a long time.

The results of this study showed that brands can do their part in relation to sustainability by removing ambiguity from eco-labels through the means of social media networks' signs, placement of eco-labels on packages, and providing more information. In addition, the results showed that for both brands and eco-labels' certifying organizations, social media networks could play a role in advancing consumers' understanding of environmental sustainability in general and in advancing consumers' understanding of eco-labels' messages in specific. The results from the consumers' side showed that consumers in general have ambiguity regarding eco-labels' messages. Yet, when the messages are relevant to their life and interest in the environment, consumers can have better interpretations. Finally, the results showed that although eco-labels' understanding is usually tied with the factors related to consumers and the society where these labels exist, using different communication methods has the possibility to bridge some gaps related to society and consumers. The previous point is mainly due to the nature of accessibility provided by social media networks and mobile phone applications.

The study's recommendations include areas related to eco-labels' certifying organizations, brands, and future studies. On the one hand, eco-labels' certifying

organization can benefit from working more on their eco-labels' message to remove ambiguity and make these label more communicative. In addition, eco-labels' certifying organizations can benefit from using social media networks' signs and mobile phone application accompanied with their eco-labels to better communicate with consumers. Brands, on the other hand, can benefit from placing eco-labels in clear place on packages, providing more information if permitted by certifying organizations, and creating partnerships to deliver environmental messages. Regarding the recommendation for future studies, future studies could benefit from this study to explore other eco-labels' messages and other brands. In addition, future studies could benefit from studying eco-labels in other societies around the world. Finally, the current communication methods used by eco-labels' certifying organizations and brands could be a rich area of exploration. This study was an attempt to contribute to the sustainability topic and its implications in daily life. While the topic of environmental sustainability is large and involves several stakeholders, the future of sustainability is promising, especially with the contemporary development in the field of the environment and communication.

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