



WPI

WELLINGTON



Designing a Forest Stewardship Council Community Campaign for Wellington Zoo

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Abstract

Wellington Zoo in New Zealand is starting a community campaign supporting Forest Stewardship Council (FSC) to promote sustainable forestry practices. Our project evaluated community perceptions of FSC and designed components for the campaign. To accomplish this, we conducted consumer surveys, administered semi-structured interviews, and reviewed past conservation campaigns. From our data collection, it was found that over half of the consumer base did not recognize the FSC logo, and that consumers prefer to learn about new topics mainly through social media advertising. Also, conservation campaigns must make an emotional connection with the audience to result in audience engagement with the campaign. From this research, we designed components for a campaign such as interactive exhibitions, social media outreach strategies, and partnership programs with outside organizations.

Keywords: *Conservation, environmental campaign, Forest Stewardship Council, endangered species, social marketing, deforestation, sustainability.*



FSC logs, sustainably harvested from the Uzachi forest in Oaxaca, Mexico (Turner, N. C., 2012)

Executive Summary

Wellington Zoo is the oldest conservation organization in Wellington, New Zealand, and is committed to practicing “me tiaki kia ora,” the concept that if one takes care of the surrounding world, the world will return this support and care. Habitat loss is a danger for threatened and endangered species, with deforestation as the leading contributing factor (World Wildlife Foundation, 2017). Because of this, Wellington Zoo has decided to create a community conservation campaign supporting Forest Stewardship Council (FSC), an organization aimed at promoting voluntary sustainable forestry practices. FSC certifies timber products that are harvested in an environmentally-friendly way. This certification can be carried through to wood and paper consumer products like toilet paper or stationary. The logo which signifies that a product is FSC certified is shown below, in [Figure 1](#). Our team partnered with Wellington Zoo to help design this campaign. The aim of this project was to assist Wellington Zoo in creating their FSC community campaign by assessing the awareness of the FSC certification program within the Wellington community and providing a set of innovative components to increase the effectiveness of the campaign at the Zoo.



Figure 1. Forest Stewardship Council logo found on certified products (FSC International, 2017)

Methodology

The goal of our project was to develop campaign strategies that reach out into the Wellington community and effectively increase consumer purchases of FSC-certified paper products. To accomplish these goals, we outlined five objectives. The objectives and the resulting methodology were as follows:

- 1. Assess the current understanding of FSC by Zoo visitors and Wellington community members.**

To accomplish this objective, our team conducted a consumer survey, shown in [Figure 2](#). The aim of the survey was to understand the current perceptions of FSC from Zoo visitors and the community, and assess the level of support for FSC or like organizations.



Figure 2. Surveying in Wellington

2. Investigate the motivations and barriers of consumers purchasing FSC products.

The consumer survey, mentioned in Objective 1, also assessed the reasons why consumers either did, or did not, purchase FSC-certified products. Our group conducted a market analysis of toilet paper and tissue products available at local retailers. This helped us understand the economics of purchasing FSC-certified products. The focus on toilet paper and tissue products was because they are the most common certifiable items in households. Our team interviewed a retail manager from a popular grocery store in the Wellington area to understand the relationship between consumer purchasing habits and product availability. We also interviewed individuals who deal with FSC in their professional careers to understand the FSC organization and how it operates. These interviewees included a representative from FSC, and the gift store manager at Wellington Zoo.

3. Assess Wellington Zoo's current efforts in promoting and supporting FSC.

From the consumer survey in Objectives 1 and 2, we assessed the effectiveness of current FSC education programs at Wellington Zoo. Our team interviewed various zookeepers and rangers at Wellington Zoo to understand how the FSC message is conveyed at daily Animal Talks at the Zoo and the personal views held by these staff members about FSC. We conducted an interview with Zoo Educators to understand how the FSC message is incorporated within existing children's programs at the Zoo.

4. Investigate how to design a campaign that can effectively change the purchasing habits of consumers.

From the consumer survey, our group investigated what other types of environmental certifications consumers support, and the best methods to teach consumers about conservation messages. From our Zoo staff and FSC professional interviews used in Objectives 3 and 4, we asked the staff how they create conservation messages with FSC. Our team met with members from the marketing department at the Zoo to investigate how graphics and advertisements are made for Zoo campaigns, and assess the partnerships that exist between Wellington Zoo and other organizations. We reviewed reports on conservation campaigns that had been held at zoos in Oceania in the past to better understand how to create a conservation campaign.

5. Design various campaign components for the FSC community campaign.

Our team designed various campaign components using an appended 6-3-5 method, gaining front-end feedback from our colleagues at Wellington Zoo, and ranking ideas on impact-effort matrices. These components were our recommendations for Wellington Zoo's FSC campaign, forming the deliverable of this project.

Findings

At the completion of our data collection, our team analyzed the data to gather valuable information to use when designing our FSC campaign components. The following summarizes these findings as they address each project objective.

Objective 1: An assessment of the current understanding of FSC by Zoo visitors and community members.

The majority of the Wellington Community does not understand the significance of FSC and FSC products.

Through our analysis of our consumer survey results and interview data, we found that under half of the Wellington community could recognize the FSC logo, and an even smaller portion correctly understood the aims of FSC.

Information about FSC needs to be more accessible to consumers.

From our consumer survey data, we found that there were a large number of consumers that did not know about FSC. However, it was also found that consumers were interested in learning about FSC after it was mentioned on the survey. From our interviews, we learned that many Zoo staff members now support FSC, but had never heard of it before working at Wellington Zoo.

Objective 2: An investigation of the motivations and barriers of consumers purchasing FSC products.

A majority of Wellington consumers support other environmentally friendly certified products.

Our consumer survey and market analysis data paired with our retailer interviews showed that Wellington consumers support other sustainably sourced products through purchases of organic foods, cage free eggs, free range meat, energy efficient appliances, fair-trade products, and the use of reusable, recycled, or compostable shopping bag programs in stores.

A common misconception is that FSC products cost more than non-certified products.

Through our consumer survey and retailer interviews, we learned that a common barrier blocking consumer purchases of FSC-certified products was the belief that FSC products

are more expensive than other products. Our market analysis data showed that products across the price and quality spectrum were FSC-certified, including many “bargain” or “store” brands.

Increasing the availability of FSC-certified products and in-store FSC advertisement depends on consumer purchases and demand.

From our retailer interviews, we learned that sales numbers have the greatest impact on manufacturer and retailer decisions. Products that are popular with consumers will have increased production. In order to increase the number of FSC-certified items, retailers and manufacturers need to see that consumers are looking to purchase these products.

Objective 3: An investigation of how Wellington Zoo promotes FSC.

Wellington Zoo is already making efforts to spread the FSC message to its visitors.

Through our visits to Animal Talks at Wellington Zoo, and interviews with Zoo staff, we saw that Wellington Zoo is been relaying the FSC message to its visitors during daily Animal Talks, and in school programs for children. In our surveying, we found that the number of consumers that recognized the FSC logo was higher for Wellington Zoo visitors than other community members.

Objective 4: An investigation of how to design a campaign that can change the purchasing habits of consumers.

The ideal FSC conservation campaign must be multi-dimensional.

From all our data, we found that different types of conservation messages will have varying impacts on consumers depending on the demographic of the consumer. As a result, a community conservation campaign must adapt for this. To be successful in reaching different demographics in an audience, a conservation campaign must have multiple components in which the core messages of the campaign are relayed.

Conservation campaigns should encourage rather than “guilt-trip” their audience.

From all our interviews, there was a clear message that this campaign should be kept positive. It is not effective to make people feel accused that their actions are part of a problem that is causing negative impacts. This will usually cause individuals to become disengaged from the issue. Rather, it is more effective to help the audience make an emotional connection to the problem, and then encourage them to make the choice of being part of the solution.

Methods for promoting a behavior change are most effective at the time that the target behavior is occurring.

From our review of social marketing and behavior change texts, it became clear that the best time to intervene and recommend a behavior change is when the behavior is occurring. For this campaign, that would mean finding a way to advertise the benefits of purchasing FSC-certified products in grocery stores while consumers are purchasing paper products.

Objective 5: Designs for Wellington Zoo’s FSC Community Campaign.

There are six component areas that the FSC Community Campaign can address.

We found from our research that there are six distinct areas that the Zoo campaign should address to be most effective, reaching more demographic segments. These areas are: exhibits in the Zoo, components for Animal Talks, education in children's programs, information in the Zoo's gift store, community outreach, and partnerships with neighboring organizations.

Recommendations

After analyzing our consumer surveys, interviews, past campaign reports, literature reviews, and market research, our team brainstormed and produced the following campaign strategy recommendations for Wellington Zoo to implement in their FSC community campaign:

1. Create an FSC story walk, featuring signage and interactive pieces that inform Zoo visitors about the benefits of supporting FSC, connecting its impacts to species at Wellington Zoo.
2. Add a mock grocery store display in the Zoo, allowing visitors to learn about FSC-certified products that are available, and understand how easy and cost-effective purchasing FSC-certified products can be.
3. Distribute magnetic pledge cards allowing visitors to pledge to support FSC. These pledge cards would then be placed on the "FSC Tree of Life" at the conclusion of the FSC portion of the daily Animal Talks at the Zoo.
4. Start a children's program called "Timber Titans," where children are given an FSC superhero eye-mask to take home and are prompted to urge their parents to buy FSC-certified products.
5. Lead FSC related arts and crafts during Wellington Zoo children's programs, and hold an FSC crafts table every month for Zoo visitors to participate in during their visit.
6. Coordinate scavenger hunts for visitors to find the FSC logo throughout Wellington Zoo, going to habitats of animals that benefit from FSC to learn about the organization.
7. Increase FSC signage and information in Wellington Zoo's Gift Store, so visitors can make the connection between the FSC messages in the Zoo and the act of purchasing paper and wood products.
8. Adopt "FSC Friday" on the Zoo's social media accounts, featuring zookeeper testimonials and photos and videos of animals benefited by FSC.
9. Create an FSC themed Snapchat Geotag for the Zoo, to help spread the FSC name and logo into the community.
10. Distribute reusable shopping bags and shopping lists with the FSC logo to help remind consumers about FSC while they are making purchasing decisions.
11. Produce phone accessories with the Wellington Zoo and FSC logos printed on them to help increase the frequency of the FSC logo in the community.
12. Create an FSC consortium with other large organizations in Wellington to help extend the reach and impact of the campaign.
13. Reach out to public transportation hubs to gain advertising and display space for the FSC campaign to increase the campaign's audience size.

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Red Panda encounter at Wellington Zoo (Yoshioka, J., 2015)

Authorship

Azita Bakhtyari, Aidan Cookson, Austin McCalmont, and Madison Michaud all contributed to the research, analysis, and writing of this report. All members wrote individual sections of the report, and then edited to ensure for correct grammar and flow. A breakdown of the written contributions for each section of the report for this project can be seen below.

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Background	Azita Bakhtyari, Aidan Cookson, Austin McCalmont, and Madison Michaud	Azita Bakhtyari, Aidan Cookson, Austin McCalmont, and Madison Michaud
Methodology	Azita Bakhtyari, Aidan Cookson, Austin McCalmont, and Madison Michaud	Azita Bakhtyari, Aidan Cookson, Austin McCalmont, and Madison Michaud
Findings	Azita Bakhtyari, Aidan Cookson, Austin McCalmont, and Madison Michaud	Azita Bakhtyari, Aidan Cookson, Austin McCalmont, and Madison Michaud
Recommendations and Conclusions	Azita Bakhtyari and Madison Michaud	Azita Bakhtyari and Madison Michaud



Timber certifications can help consumers know products are sustainable. (2011)

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Chapter 1: Introduction

Global deforestation has reduced Earth's forest cover dramatically in the past 100 years, particularly in tropical areas. The pulp industry has greatly influenced reductions in forest because of its strong demand for timber. Forest loss today has created effects including increased greenhouse gas emissions, increased erosion, and an accelerating biological extinction rate. In 2010, global forest loss accounted for about 9% of all greenhouse gas emissions from human activities (Edenhofer et al, 2014). Floods and landslides due to deforestation have become an increasing problem in countries such as New Zealand. Many tropical forests, once rich with biodiversity, have recently vanished. Further deforestation could be avoided with more sustainable logging practices, such as selective tree cutting, but many groups do not have a direct incentive to change approaches. Organizations like Forest Stewardship Council (FSC) are working to influence these groups to change their procedures.

FSC developed a global certification system in 1993, which certifies forest managers who maintain business practices that are safe to both the forests and their surrounding communities. To become certified, land managers voluntarily sign a contract promising to implement changes in forestry practices suggested by FSC, including sourcing from only sustainable lots of trees, respecting indigenous communities' beliefs and uses for the land, and ensuring that a set FSC approved management plan is followed by the company. Products of certified forests are granted a special logo, informing the consumer that the purchase of the specific product is not negatively impacting the environment. Purchasing decisions by consumers to buy FSC-certified products can provide an incentive for manufacturers and retailers to support sustainable practices. Since the establishment of FSC, this organization has certified almost 200 million hectares (2 million square kilometers) of forests through over 1500 land managers worldwide (FSC International, 2017).

The FSC certification system for forest-friendly products is far reaching, and many paper products sold in grocery stores worldwide are FSC-certified. Recent studies have shown that

environmentally-conscious consumers are willing to pay up to 40% more for a product, if the product is manufactured in an environmentally friendly way (Body Shop International, 2016). It is unclear, however, whether Forest Stewardship Council certified products are more expensive than those that are non-certified, as cost-analysis research into the two classes of products has not been conducted. Furthermore, there have been no studies researching whether FSC certification is understood or recognized by consumers, and if an understanding impacts purchasing behavior. Additionally, there is a lack of data on the motivations for retailers to carry FSC-certified products, or for manufacturers to become FSC-certified. Before any community campaign can be started for the Forest Stewardship Council to raise public awareness of the organization and increase the sales of FSC-certified products, the perceptions of the FSC at all levels, from consumers, retailers, and manufacturers, must be evaluated.

FSC has been working to combat deforestation, which is a major threat to the survival of wildlife. Wellington Zoo in Wellington, New Zealand is committed to aid this conservation effort by initiating a campaign promoting consumer purchases of FSC-certified products. Together, the Zoo and FSC are committed to focusing on sustainability by educating visitors about their purchasing decisions and reducing their negative impact on the environment and wildlife.

This project partnered with Wellington Zoo to identify general views of consumers on FSC and recommend campaign components to be used in the FSC Community Campaign. The goal of Wellington Zoo for the Community Campaign was to hold an educational campaign that was based at the Zoo but expanded into the local community, raising awareness about FSC in consumers, and impacting their purchasing behaviors to be more environmentally conscious. In this project, Zoo visitors, individuals in the Wellington area, Wellington Zoo staff, and representatives of FSC were surveyed or interviewed to assess their views and perceptions of FSC. We conducted market research as well to gain insight into the popular toilet paper and tissue product brands, prices, and certifications in the Wellington Region. After the collection of stakeholder data, this project researched past campaigns at Wellington Zoo and other zoos to investigate the best ways to create a conservation campaign. Combined with our survey and interview data, this research helped us to design multiple components that could be successfully implemented in the FSC community campaign.

Chapter 2: Background

This chapter provides a literature review of the five main topics addressed by this project:

1. The causes and effects of deforestation as related to the pulp industry,
2. The formation, structure, and outcome of Forest Stewardship Council,
3. The concept of social marketing to induce behavioral changes in a target audience,
4. The factors influencing ethical consumption, and
5. The implementation of conservation efforts at Wellington Zoo.

2.1 Deforestation and the Pulp Industry

The pulp industry has had a significant influence on deforestation around the world with its strong demand for timber. Humans have had a long history of clearing forests, and deforestation continues despite a heightened environmental awareness existing today. There are direct impacts on the Earth from having significantly reduced forest cover to an accelerating plant and animal extinction rate, and increased erosion and greenhouse gas emissions. The negative influences from the pulp industry could be mitigated if consumers created a greater demand for paper products that were sourced from more environmentally friendly sources.

Causes of Deforestation

The leading causes of deforestation are the agriculture and timber industries. Dedicated spaces for farming are created by clearing large portions of forest. Agriculture is currently the cause of about 60% of tropical forest clearing, which most often takes the form of soy, palm oil, and cattle farming (Chakravarty et al., 2012). Brazil has lost more forest over the last decade than any other country in the world; the major driver of this loss being agriculture. Indonesia has lost the second most forest area by country, which has been driven primarily by the timber industry (Lawson, 2014). Timber is harvested for a plethora of products in great demand, ranging from structural wood and fuelwood to tissues and toilet paper. Wood was once the primary source of energy for the world, but recently has been overshadowed by fossil fuel

energy, and as a result energy sourcing is not a major part of global deforestation. However, it is still a major energy source for many developing African countries, such as Uganda, and is a concern for forests on a local level (Boucher, 2011). The pulp industry consists of products made from pulpwood, such as stationary and sanitary paper. These products are consumed globally and are a major contributor to worldwide deforestation.

The Extent of Deforestation

Deforestation is one of the leading drivers of global land change today. In 1990 there were about 41.3 million square kilometers of forest worldwide, which was reduced by 1.3 million by 2015; a loss of more than 3.1% (The World Bank, 2017). This rate of loss in forest area, caused over the period of 25 years, is almost five times larger than the entire area of New Zealand, or about a third of the area of the United States. The largest contributors to forest loss from 2010 to 2015 were Brazil, Indonesia, Myanmar and Nigeria, while the largest suppliers to forest gains were China, Australia, Chile, and the United States (MacDicken, 2015). Countries in temperate regions tend to have less difficulty managing forests responsibly, and many are even increasing forest coverage every year as their economies continue to shift from extractive industries to advanced manufacturing and services. Logging in these areas is usually done selectively, rather than by clear-cutting, as can often be found in tropical forests. The higher contributing countries to tropical forest loss tend to face greater problems enforcing responsible forest use. One study found that between 2000 and 2012, 49% of tropical deforestation was from illegal commercial activities (Lawson, 2014).

Implications of Deforestation

Agriculture, forestry, and other land use (AFOLU) in 2010 was estimated to make up 24% of the greenhouse gas emissions from global economic activity, which was 1.5 times more than worldwide transportation (Edenhofer et al., 2014). Net forest conversion makes up almost 40% of the greenhouse gas emissions within AFOLU (Tubiello, n.d.). Trees take in carbon dioxide from the atmosphere and store it within wood, acting as a carbon sink, and emit oxygen as a byproduct. Studies have shown that increased carbon dioxide, which is a greenhouse gas, insulates the atmosphere and leads to an increase in mean global temperature. Reducing

forests across the world minimizes the number of carbon sinks, resulting in less carbon dioxide removal from the atmosphere. Additionally, when trees are cut down, stored carbon is quickly released back into the air, which on the massive scale of deforestation can greatly add to the greenhouse gas effect. Since carbon is stored within the wood, burning it for energy or clear-cutting drastically amplifies the release of carbon into the atmosphere (Friedel, 2017). After timber has been cut, greenhouse gases continue to be released from factories that process wood.

Tree populations are typically able to grow back quickly after being cut, but the ecological impacts of cutting down forests can last long into the future. Trees and plants are a critical support of life on Earth, and function structurally as habitats for an abundance of tree-dwelling animals. Trees provide nutrients to the ground or even act as a food source themselves, a fundamental part of most ecological food chains, so removing trees can affect every species living in the area. Clear-cutting completely removes this resource and can force an entire ecosystem to collapse. Giam estimated that if deforestation continues linearly at the current rate in tropical forests, then a biodiversity loss equaling a mass extinction will happen within the near future (2017).

Some communities today are already facing consequences of deforestation. Early settlers in New Zealand naively carried out major deforestation, and today side-effects are observed in the form of massive amounts of erosion and landslides. The root system created by trees can strengthen top level soil that might otherwise be vulnerable to weathering. In 2004, the country faced the largest flood in the region in over 100 years, which left vast stretches of hills scarred from unstable ground movement (Knight, 2009).

The Pulp Industry

Worldwide, the pulp industry is projected to generate revenue of \$423.9 billion USD in 2017. Of the revenue generated, 55.9% is from packaging manufacturers, 25.1% is from publishers and stationery manufacturers, and 8% is from sanitary and household product manufacturers (McGinley, 2017). Pulp products such as paper and toilet paper are often only used once and turned into waste, and as a result are a major consumable. The top three countries of mass pulp manufacturing are China, the United States, and Japan (RISI, 2012).

These same three countries are also the top wood importers by monetary value (ITC, 2016). Publishers have seen a rapid decline in demand for printed paper media over the last five years due to increased digital media use, but demand for paper-based consumer goods has increased as Asian countries have experienced economic growth.

Pulp must go through many mechanical, thermal, and even chemical processes to be refined to the desired quality, which consumes enormous amounts of energy and emits a significant amount of greenhouse gases, as well as increasing amounts of air and water pollution in the surrounding areas of these factories. In 1995, pulp and paper manufacturers within the United States alone used 768 terawatt-hours, which made up 12% of all U.S. manufacturing energy use, or 3% of all energy used in the nation (Ruth, 1997). Overall, the global pulp industry accounts for 2% of all of humanity's carbon emissions. Furthermore, pulp manufacturing in the Asia-Pacific region makes up about half of the carbon footprint from the pulp industry worldwide (Deodhar, 2014).

Indonesia is a leading force in the pulp and paper industry, and the resulting environmental effects are alarming. Indonesia ranks amongst the top world producers, and has recorded supplying over 10.5 million tons of paper and 7 million tons of pulp per year (Obidzinski and Dermawan, 2012). This pulp is distributed all over the world; one in four toilet paper rolls sold in New Zealand comes from Indonesia (Global Issues, 2011). Although the pulp industry has established economic success in Indonesia, over half of the forest cover in this area has been removed since 1985; this is recorded as the highest rate of deforestation in the world (News Rx Health & Science, 2015). Clear cutting tends to be a common practice in tropical regions because of economic factors involved, such as requiring less land than selective tree cutting and the opportunity to convert the land for commercial agriculture (Yale school of Forestry & Environmental Studies, 2017). Because of this deforestation, wildlife habitats have been demolished and many species of animals that reside in forests, or depend on trees for nourishment and survival, are endangered. An example of this is the Sumatran Tiger; deforestation has led to this species being highly endangered, leaving only 400 Sumatran Tigers alive today (Global Issues, 2011).

Response from the Pulp Industry

The pulp and paper industry acknowledges the impacts and recognizes the need to make several changes in production habits. Currently, global rates in logging for timber processing have increased within the past two decades and are projected to continue rising. Only a fraction of the wood used in the industry is from plantations, and the rest is from natural forests, as can be seen from [Figure 1](#), below. Additionally, while the amount of timber being produced by plantations is increasing, the amount of timber from natural forests is staying roughly the same. To protect forests, but keep up with the demand, the industry has proposed a solution to increase the percentages of timber extracted from plantations and decrease the percentages of wood from natural forests. Additionally, endangered wildlife species with habitats in forests will benefit from these practices. Organizations, such as the Forest Stewardship Council, have likewise been trying to promote deforestation solutions alongside the pulp and paper industry, through restoration and conservation efforts for natural forests.

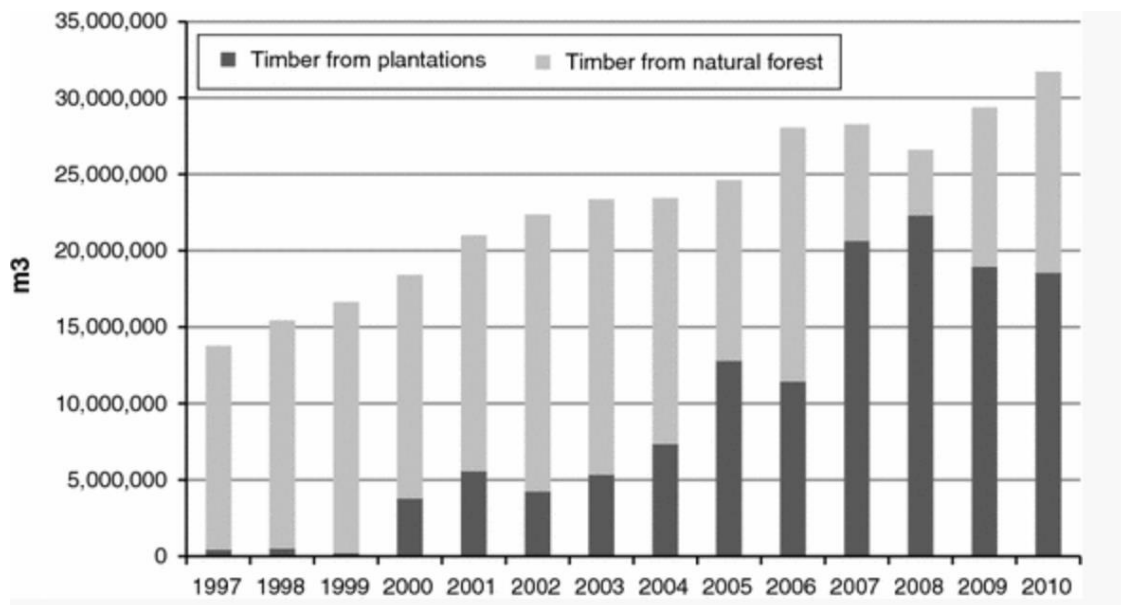


Figure 1. Timber sources for the pulp and paper industry (Obidzinski and Dermawan, 2012).

2.2 The Formation and Impact of Forest Stewardship Council

Throughout the past several decades, there has been a major shift within international politics and economics regarding environmentalism. During the 1990's, pessimism about the international legal protection of the forests of the world cast a shadow over many environmental civil society organizations (ECSOs) globally. After strenuous attempts at implementing international "hard law" solutions to excessive deforestation failed to minimize illegal deforestation, environmentalists felt disillusioned and sought alternative solutions. Concurrently, concern for the future of global forests was greater than ever due to widespread marketing campaigns aimed at raising awareness about deforestation and its potential consequences. Soft law approaches to conservation and forestry emerged because of greater public concern, and soon became the international standard for protecting the forests of the world (Tollefson, Gale, & Haley, 2008). Soft laws, in contrast to hard laws, are not strictly binding and lack legal significance.

The History of FSC

In June 1992, the results of more than ten years of forestry conservation work culminated in a major international conference, commonly referred to as the "Earth Summit" in the city of Rio de Janeiro, Brazil. This conference consisted of more than 100 heads of state representing 178 countries, all with one common objective: "to establish the tone, pace, and direction of the international environmental agenda for the foreseeable future," (Park, Allaby, 2017). Despite the promising agenda and extensive media coverage, the conference resulted in a mixed reaction among environmentalists. Many adversaries argued that there was little focus on the elementary forces driving global environmental change, and that the resulting legal agreements lacked significant binding commitments. Despite this feeling, the conference was an important step toward long-term international agreements regarding environmentally sustainable development. After the lukewarm outcome of the Earth Summit, a group of businessmen, environmentalists, and community leaders came together to create Forest

Stewardship Council (FSC), an international organization dedicated to preventing excessive deforestation by providing the first system of forest product certification.

The first assembly of FSC occurred in 1993 in Toronto, Canada. The group set out on a self-described mission “to promote environmentally appropriate, socially beneficial, and economically viable management of the world’s forest” (Tollefson et al., 2008). The international organization offers a voluntary forestry standard setting and accreditation service to companies and organizations interested in ensuring their business practices are safe to both the forests and their surrounding communities. The FSC represents a soft-law, alternative solution to more extreme solutions such as boycotts of forest products, as FSC believes these methods have been shown to devalue forest land, and are generally counterproductive (FSC, 2017).

The Global Forestry Certification System

To meet the established objectives, FSC spawned a global accreditation program which provides unique credentials to environmentally friendly land managers, and to products derived from the certified forests. The internal structure of FSC is similar in design to many governmental organizations. It consists of three main chambers: environmental, social, and economic. Each of these chambers is subdivided into Northern and Southern regions. For a forest to be considered environmentally appropriate, all three chambers must be satisfied. Harvesting timber and non-timber products must maintain the biodiversity, productivity, and ecological processes of the forest. Additionally, local people and societies should enjoy long-term resources from the forest. Lastly, for a forest to be considered economically viable, harvesting should be managed in a way that results in producing sufficient profit without generating additional financial profit at the expense of the resources or ecosystems of the forest, and surrounding communities.

Forest landowners or managers can initiate the accreditation process by reaching out to an accredited FSC certifier to become certified. After an assessment of the management operations is completed, the manager receives a list of required changes in harvesting procedures of the specific forest. To qualify for certifications, on average, U.S. organizations implemented 13-14 changes in forestry, environmental, social, and economic practices.

Common requirements include setting environment goals, changing workers' rights, and respecting local indigenous people and their landscape. At this point, the manager can choose to sign a contract, binding them to practice forestry in a certifiable, regulated fashion. The public is notified of the status of the assessment throughout the entire certification process, ensuring the integrity of the evaluation. This also allows the accreditors to hear as many voices as possible regarding the specific forest or landowner. The contract lasts for five years before the manager is required to reapply. Annual audits are conducted to verify that the agreement is being followed in full, and all certificates are subject to elimination if the terms are not met (FSC, 2017).

FSC Products for Consumers

The consumer can quickly determine if purchasing decisions will negatively affect the environment by looking for the FSC logo on any timber (or some non-timber) products, shown in [Figure 2](#), without the need for additional research into the provenance of the product. The product certification process is rigorous and explores the entire "chain of custody" from the forest, to the shelf.

Considering the strict criteria for certification, a common misconception is that FSC-certified products must cost significantly more than non-certified products of similar quality. Depending on the operation, price premiums for raw FSC-certified timber generally range from 15% to 25% (Forest Stewardship Council, 2017). However, by the time that FSC-certified consumables, like stationary and toilet paper, reach retail shelves, the price difference is not noticeable to consumers. Additionally, when project managers work with local mills and eliminate the middleman, there is often no premium for FSC-certified products (Eisenberg, 2017).



Figure 2. Forest Stewardship Council logo found on certified products (FSC International, 2017)

Outlooks on the Global Campaign

Due to the lack of short-term benefits of preventing deforestation, it is difficult to gauge the success of the FSC-certification system. However, two field-based surveys conducted by the Texas Forest Service and the Manomet Center for Conservation Sciences found that most American forest management organizations believed the advantages of certification outweighed the disadvantages and that it accomplished their goals regarding forestry protection (Moore, Cabbage, & Eicheldinger, 2012). The potential advantages and disadvantages of certification and their perceived accuracy (scored out of 5) by forest managers are shown in Tables [1](#) and [2](#). Of the 16 disadvantages listed on the survey, audit costs, time and preparation costs, extensive recordkeeping, increased management costs, and decreased return on investments were the only disadvantages with a mean score of over 50% (the majority agrees). Of the 173 organizations surveyed, 76% agreed that certification achieved their objectives, and 77% expressed a desire to recertify (Moore et al, 2012).

Table 1. Possible Advantages of FSC Certification (Max. score of 5) (Moore et al, 2012).

Possible benefit (advantage) of forest certification	Median FSC score	Mean FSC score
Right thing to do/corporate social responsibility	4	3.80
Value of public relations	4	3.71
Better organizational/professional image	4	3.55
Strategic position of organization	4	3.54
Retain/gain market access	4	3.31
Better management systems and performance	4	3.31
Better planning and implementation	4	3.26
Satisfy senior management decision	3.5	3.23
Better forest management and practices	3	3.19
Foster continuous improvement	3	3.17
Capture new market/marketing/sales tool	3	3.11
Better records	3	3.06
Self-discovery of problems/nonconformance	3	2.92
Better internal communications and discussions	3	2.91
Better use of science in management	3	2.91
Improve profitability	3	2.81
Better public, landowner, and supplier communications	3	2.81
Obtain useful dialogue with external auditors	3	2.77
Improve management efficiencies	3	2.75
Better timber and product prices	3	2.72
Better worker training and safety	3	2.70
Better morale among employees	3	2.70
Upper management knowledge or practices	3	2.57
Credibility with regulatory agencies	3	2.56
Employee empowerment	3	2.47
Prevent direct action campaigns/citizen challenges	3	2.38
Less regulation	2	2.37
Pilot study or project	2	2.15
Attract investors and increase stock prices	1	1.63

Table 2. Possible Disadvantages of FSC Certification (Max. Score of 5) (Moore et al, 2012).

Possible disadvantage of forest certification	Median FSC score	Mean FSC score
Audit costs	4	3.93
Time and preparation costs	4	3.82
Too much recordkeeping, too little action	3	3.18
Added costs for forest management	3	3.14
Decreased returns on investments	2	2.58
Negative changes in forest management	2	2.45
Limits professional discretion and flexibility	3	2.41
Adversarial auditing process	2	2.22
Too much planning/paralysis by analysis	2	2.11
Poor morale among workers	1	2.00
More discussion than management	1	1.95
Capitulation to green groups/lobby	1	1.91
Too much public interaction	1	1.84
Too much science/consultations	1	1.72
Public disclosure of audit results	1	1.71
Too much openness	1	1.51

The Forest Stewardship Council has made a positive impact on conservation by certifying almost 200 million hectares (2 million square kilometers) of forests worldwide since

its establishment (FSC International, 2017). This equates to roughly 3.3% of the total land area covered by forests. Twenty-nine percent of the land in New Zealand is covered by forests, meaning forestry conservation is extremely important. Within New Zealand, landowners have 21 certificates covering 1,271,000 hectares, about 16% of the forests of New Zealand. Over 147 products from these forests have full chain of custody certificates. [Figure 3](#) depicts certified forest area by country, with the darker colors representing more certified area. Canada, United States, and Russia have the largest percentage of certified forests, while many countries in Africa have the least.

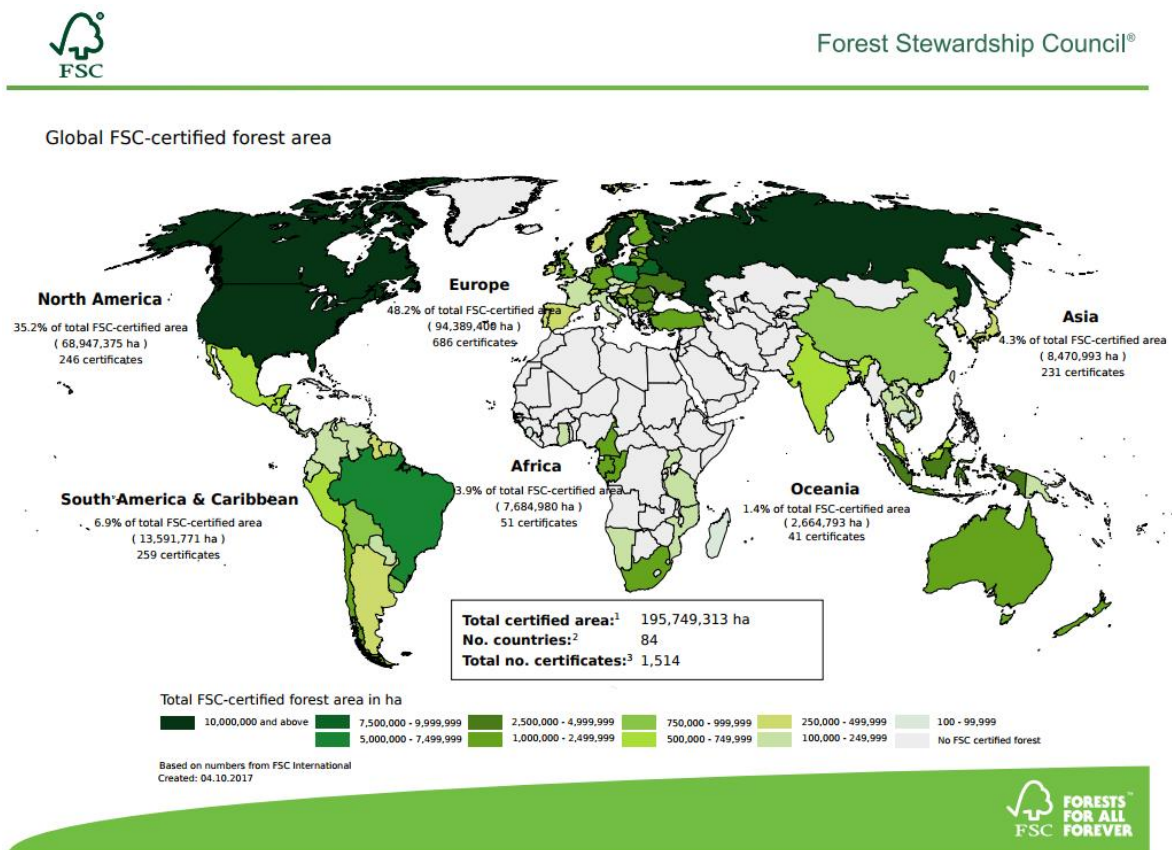


Figure 3. Map of FSC global certifications, October 2017 (FSC International, 2017)

Despite the current success of FSC, many activists working on forests worldwide are concerned with the future of the organization. Simon Counsell, one of the founding members of FSC, joined a group of other activists to develop a website, “FSC-Watch,” dedicated to providing a transparent view into the organization. In addition to failing to reform structural problems

within FSC related to poor governance in some areas, the group also argues that the power gained from increasing commercial interest is influencing their policies. Environmentalists are also concerned that the great expense of certification prohibits smaller suppliers from applying, which favors large suppliers by allowing them to gain an increasing market share (FSC-Watch, 2014).

Alternative Sustainable Forest Certification Organizations

There are several alternative sustainable forest certification organizations to FSC, with the most popular being the “Programme for the Endorsement of Forest Certification” (PEFC). However, PEFC is a mutual recognition scheme. They are responsible for certifying national sustainable forest organizations, giving these organizations international credibility. Because FSC is already an international organization, there is no overlap between the certifications. Both organizations consider environmental and social impacts of forestry, but PEFC is more concerned with ethics, such as workers’ rights, while FSC focuses on the environmental impacts. Wellington Zoo is focused solely on promoting FSC because FSC has stricter guidelines for the environmental aspects of forestry, which have the greatest effect on preserving animal habitats.

2.3 Social Marketing and Behavioral Change

Social movements, like the effort to combat deforestation through the purchase of FSC-certified products, confront a common challenge of encouraging wider populations to adopt the selected behavior of the movement. The issue of inactivity by the public to take part in social movements can be combated with social marketing. Social marketing is a practice where tools and techniques found in commercial marketing are utilized to work towards the advancement of a social goal, idea, or behavior for a specific, targeted audience (Peattie, 2009). This concept is often seen in campaigns driven by organizations that offer products or services that have an ethical component to them. The theory of social marketing is based on the main principle of marketing, which states that people will adopt new behaviors once they

are convinced of the value in making the change proposed by the marketer. Social marketing is used on many fronts, but can be especially seen in examples of educational campaigns, conservation efforts, or social campaigns to influence environmentally friendly purchasing behavior.

Examples of Social Marketing in Educational Campaigns

In Australia during the early 2000's, the TravelSmart social marketing campaign was initiated to reduce energy consumption through a targeted proposition: cycling is good for the planet. The TravelSmart campaign highlighted a desired target audience from survey data of Australian citizens. This practice identified groups of people that had the potential to be interested in cycling as an alternative to other used modes of transportation during daily activities. After being selected, the individuals in this audience were supplied with maps of bike routes and locations for secure bike parking, general information about cycling, and tips on where bicycles could be obtained or serviced. In addition, attention-grabbing ads promoting the campaign were strategically posted at bus stops and in high traffic areas of automobile transportation, to expand the reach of the campaign. The pilot city for the TravelSmart campaign was Perth, Australia. The campaign led to a 90% increase in cycling levels of the city during the first year (Peattie, 2009).

In the United States, the Truth campaign was launched in 1999 to prevent middle school and high school aged children from starting smoking, and is still running today. The Truth campaign was different from other anti-smoking campaigns in the country, since the targeted audience was children, rather than adults. So, all the tactics were specifically designed to work best on children; the campaign started showing short ads on popular adolescent television stations and social media platforms, using catchy phrases, popular music, and trendy spokespeople. The campaign converted the attitude that smoking is a positive and "cool" habit, into the belief that smoking is hazardous to health. After two years in the pilot area of the campaign, the state of Florida, the percentage of middle school and high school aged students that smoked cigarettes in the past 30 days had fallen from nineteen percent to nine percent, and twenty-seven percent to twenty-one percent, respectively (Khowaja, 2010).

Example of Conservation Efforts and Social Marketing

In 2010, the Cats Inside at Night community campaign was started at Wellington Zoo, in Wellington, New Zealand. The goal of this campaign was to implement a behavioral change in zoo visitors using a pledge card and to analyze the effectiveness of this method. The pledge card would influence visitors to aid conservation efforts by persuading these individuals to bring pet cats inside at night, as cats have been the driving force behind the endangerment of several native bird species in New Zealand. During the daily animal presentations at the amphitheater in the Zoo, the targeted behavior, keeping cats inside at night, was introduced. As adult visitors left the amphitheater, they were asked to fill out a questionnaire. Out of the visitors willing to complete the questionnaire, a control group and pledge group were formed. For members of the pledge group, a pledge card was to be posted on the amphitheater, stating that the visitor would pledge to bring pet cats in at night. Six weeks after, the visitors were sent a follow-up questionnaire. Recall of the conversation of cats and conservation was very high between the two groups: 91% recall for the control, and 100% recall for the pledge. For the control, only about 50% of the group changed behavior and brought cats in at night, while 100% of the pledge group implemented the desired behavior change (MacDonald, 2015).

Examples of Changes in Purchasing Habits Influenced by Social Marketing

Fairtrade is an organization that guarantees customers that the products offered under its brand name are cultivated ethically; the products undergo a special certification process ensuring that all items with the Fairtrade label are produced according to a specific code of practice. One of the most popular Fairtrade products are certified coffee beans. The business model of Fairtrade relies on social marketing; Fairtrade offers access for consumers to help farmers in the Third World get deserving compensation through daily purchasing decisions, and uses an altered commercial marketing strategy to display positive narratives of the brand. The brand has spokespeople that are outsiders to the business to propagate positive social narratives on top of the personal stories from the third world farmers, rather than having sponsors that gain financially with the success of the brand. Studies indicate that individuals do not usually choose to purchase Fairtrade directly because of the narrative from Fairtrade advertisements, but rather from other members in the community, which suggests that the

community of the individual ultimately influences their purchasing decisions. Social marketing of Fairtrade has been incredibly successful; people throughout the world spend around \$5.2 billion on the brand every year (Griffiths, 2015).

The Body Shop is a franchise that is well known for positive environmental and ethical awareness. Recent studies have shown that environmentally-conscious consumers are willing to pay up to 40% more for a product, if the product is manufactured in an environmentally friendly way (Body Shop International, 2016). The Body Shop has been tapping into this market since the creation of the franchise in 1976, by using social marketing; the Body Shop strives to keep customers informed about the positive environmental and social effects of purchasing the brand (Body Shop International, 2016). The information displayed throughout the store is targeted towards environmentally-conscious consumers about the use of natural ingredients, Earth-friendly manufacturing, and ethical policy concerning purchases from developing countries by the brand, using information cards, window displays, and in-store videos. Due to this constant reminder about the positive impact that customers can create by making purchasing decisions at the Body Shop, the brand is still successful in selling higher priced, but ethically sourced, items today (Laroche, 2001).

Behavior Change Literature Review

Fostering Sustainable Behavior, by Doug McKenzie-Mohr, is a book that details methods for inspiring audiences to adopt sustainable practices. *Made to Stick*, by Chip and Dan Heath, is another book that explains the most effective ways to make messages be remembered best by target audiences.

Fostering Sustainable Behavior explained that many of the common environmental campaigns use an informational based approach, which has been shown to typically be ineffective. By providing people with only information, there is very little impact on altering their behaviors. This is due to the many other significant barriers that impede action, other than a lack of information, such as inconvenience. McKenzie-Mohr explains that community based social marketing can be used as an effective tool, which involves in-depth research to cater the social marketing to a specific community. A general five step process is outlined that can be used to implement social marketing effectively, which includes selecting the behaviors to

change, identifying people's barriers and benefits to changing behavior, developing the campaign strategies, piloting the campaign, and finally implementing the campaign (McKenzie-Mohr, 2011).

Most of *Fostering Sustainable Behavior* focuses on developing and designing campaign strategies to change target audience behaviors. One of the first notable strategies was to ask simple requests from people before asking more difficult or inconvenient requests. McKenzie-Mohr stated that people generally associate inconsistent behavior with being untrustworthy, and as a result subconsciously try to act consistently. One study, for example, showed that people who agreed to put a safe-driving sticker on their car were substantially more likely to later agree to have a large sign in their yard than people who were not asked to use the sticker first. Commitments are also extremely useful in changing people's behavior. After agreeing to sign a card, promising to act a certain way, people are very likely to change their behavior according to the card because they are likely to value being consistent. Social norms can also effectively change how people act. Norms fall into the categories of descriptive, which are actions that most people do or do not perform, and injunctive, which are perceptions of whether most people approve or disapprove of an action. For example, a sign showing people completing the desired behavior will be particularly effective because individuals subconsciously view that action as a norm, and will act the same to try to fit in. That example only uses a descriptive norm, so adding an injunctive norm of approval, such as a smiling face or a thumb up to the sign will make it more powerful. Signage should never show the action that is trying to be avoided, because that may subconsciously be viewed as the norm instead. Even after people may view an activity as the social norm, feel committed to it, and want to act consistently with previous actions, they may simply forget to complete the behavior. A solution for this is prompts, which remind people about the behavior around the time and place it is to be completed. Both prompts and norms are most effective when they are displayed as close in proximity and time as possible to the targeted behavior to be changed. For example, if the desired goal is to get people to recycle more, prompts should be displayed on trash bins. If the resources are available, monetary incentives can also be used to persuade or dissuade certain actions.

The final major consideration for developing strategies is to use captivating information. For people to read signage, it must get their attention in the first place. McKenzie-Mohr suggests that information should be vivid, concrete, and personal. It can often also be more effective if it is tangible information, where instead of providing numerical figures, a comparison to a comprehensible or everyday object can be made. Messages that describe losses from inaction rather than gain from action can also be more effective, otherwise people may believe that if they do not go out of their way, then nothing will become worse. Campaign designers should be careful about using threatening messages, especially for environmental campaigns. People that feel they can do something about the threat will likely problem-cope with it by completing the suggested action, but individuals that feel they cannot control the threat will likely use emotional coping and further ignore the suggested action (McKenzie-Mohr, 2011).

After creating a preliminary community campaign design, McKenzie-Mohr suggests reviewing it with other professionals and even with focus groups. Additionally, it is suggested to run a pilot program for large campaigns to verify their effectiveness before full implementation. The book also recommends continuing collecting data after fully implementing a campaign to show its effectiveness, which could help with gaining funding and support from more sources (McKenzie-Mohr, 2011).

Made to Stick focuses specifically on the delivery of information. The two authors of *Made to Stick*, the Heath brothers, introduced the book with a great example of information that was effectively designed to “stick” well, or in other words be more memorable. In 1992, the Center for Science in the Public Interest (CSPI) worked to market the unhealthiness of movie-theater popcorn to people in the United States. Instead of stating the raw information, that a typical serving of movie popcorn contained about 37 grams of saturated fat, while the USDA daily recommended amount is only 20 grams, the CSPI made a shocking visual comparison. The extremely popular ad showed a box of popcorn next to a whole feast of greasy food and explained: “A medium-sized ‘butter’ popcorn at a typical neighborhood movie theater contains more artery clogging fat than a bacon-and-eggs breakfast, a Big Mac and fries for lunch, and a steak dinner with all the trimmings— combined” (Heath, and Heath, 2007). The

message was discussed nationwide, and sales of movie popcorn dropped until theaters announced they would stop using fatty coconut oil.

After an extensive study of successfully marketed information, Chip and Dan Heath found that they could code themes used in each advertisement into six categories. The principles factors of information which is memorable, or “sticky” that are outlined in *Made to Stick* are simplicity, unexpectedness, concreteness, credibility, emotions, and stories. Memorable messages need to be as simple, concise, and easy to understand as possible. The attention of people can be gained using the factor of unexpectedness, such as stating a fact that is contrary to popular belief, or that is surprising. Attention can be maintained by filling an information gap, which can be done by posing an intriguing question that leaves people wanting to know more. Concrete facts are ones that are more physical, which more people can comprehend and understand, removing any obscurity. *Fostering Sustainable Behavior* suggests a similar concept with using comparisons to commonplace items instead of presenting raw data. Clearing the possibility of skepticism is a way to gain credibility. The most effective way to gain credibility is to have people observe the stated fact on their own, as demonstrated with “try before you buy” offers. When the target audience observes the presented information, they should feel emotions. The unhealthy popcorn advertisement from the CSPI makes people feel emotions of disgust. Finally, stories can be used to maintain people’s attention and to make the message remain in their minds. Stories can explain a scenario that people might run into, and act as mental rehearsal before the activity is carried out. Messages that included more components of “sticky” information as outlined by *Make to Stick* were found to have a higher success rate in being remembered by the target audience (Heath and Heath, 2007).

2.4 Ethical Consumption

Ethical consumption is the purchasing of products that are not harmful to the environment or society. People can act to reduce deforestation simply by the items they choose to buy. Ethical consumption is a powerful tool for change, since individuals choose if to support companies based on their morals and values. Examples of items that are considered ethically

consumed by purchasers are FSC-certified products and Fairtrade coffee, since both are environmentally friendly and benefit society. Motivations of ethical consumption can vary by several different factors, including economics, demographics, knowledge, and values/attitudes, represented by [Figure 4](#) below.

Wealthier consumers tend to purchase more environmentally friendly products, because they often have a price premium and the cost of products do not impact these consumers. The relationships between demographics or environmental knowledge and green product consumption are contradictory in many cases, however, females and parents with children are more likely to be environmentally active. Consumer values also play a role in environmental purchasing habits. Collectivism, an internal locus of control, and the perceived inconvenience of being environmentally active, are the dominant attitudes in controlling a consumer’s green purchasing habits. Ultimately, understanding what affects purchasing behaviors will assist in the development of the Zoo’s community campaign.

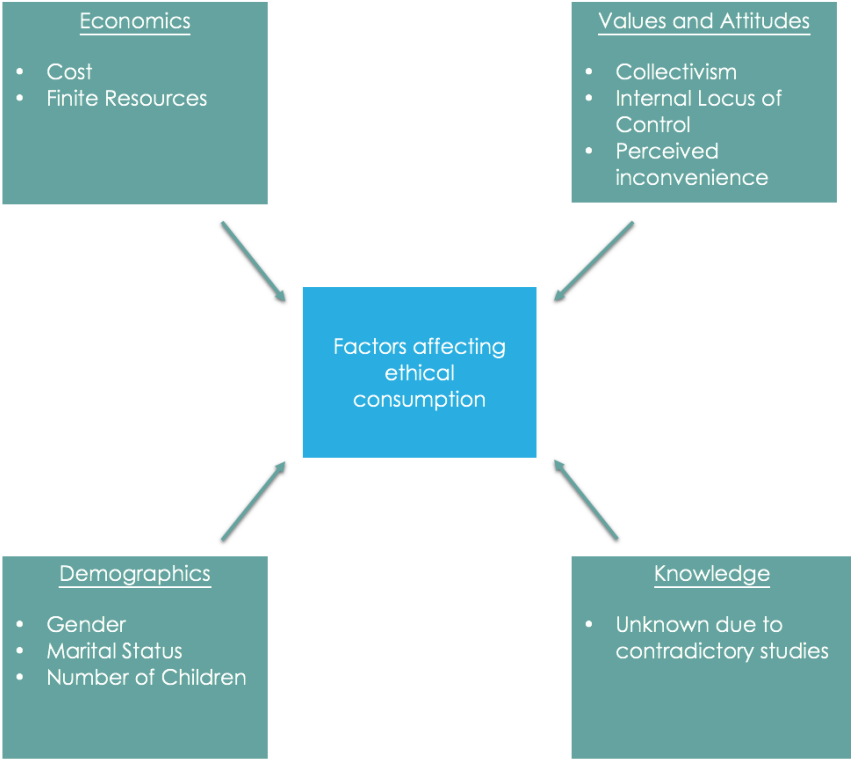


Figure 4. Factors affecting ethical consumption

Economics of Ethical Consumption

Increasing consumption within a community typically increases the economic wealth of the community, so economists often look to see how consumption can be increased (Carroll, 2017). In the 1990's however, many more economists began considering the concept that resources are finite and should be conserved. The simplest solution is to have people consume less on an individual level, which goes against basic economic theory, but serves to conserve limited resources on Earth. Increased recognition of this concept has led to the emergence of more environmentally friendly products, sometimes called "green products," which are often created using fewer resources than traditional products. While people may not actually reduce their own consumption, products made with concern for the environment tend to produce less waste, such as by using recycled material, reducing consumption of natural resources during the manufacturing stage. It takes more work to make green products than it does to make products optimized to be low cost, so green products almost always cost more. Cost is a major driving factor in the purchasing trends of people, which means that to buy more expensive, green products, some people must place a greater value on products being eco-friendly than on being costlier (Lintott 2009).

Demographics and Ethical Consumption

Purchases of higher priced, ecologically safe products are impacted by the demographic characteristics of everyone. Current and past research regarding the age of a green consumer has been contradictory. Several studies indicate that younger aged consumers are more willing to purchase eco-friendly products at a higher price (Long and Murray, 2012). However, other sources believe the green consumer is older in age (Fullerton, Kerch, and Dodge, 1996). As a result, a study done in a large North American city surveyed residents to understand how demographics plays a role in the purchases of green products. The specific city was not included in the report, to avoid construed bias of the reader (Laroche, et al., 2001). Questionnaires were distributed at each door throughout the city, during weekend afternoons. The surveys consisted of questions on gender, age, marital status, the number of children living at home, education level, household income, and homeowner status. The results of the questionnaire identified certain traits that had the most positive correlation to the readiness of the subject to

purchase higher priced eco-friendly products. Females are more likely than males to buy green products, indicating that women tend to be more environmentally concerned. Married people and parents are two demographics that hold a significant influence on consumer purchases, since individuals with these traits are more prone to think about the welfare of their spouse and children's future before their own. These individuals are more likely to think about how the environment could be negatively impacted by their purchasing decisions. However, the factors of homeowner status, age, household income, level of education, and work status were not found to have significant impacts on the willingness of individuals to pay more for green products (Laroche, et al., 2001). Overall, the results of this study show that females that are married with children tend to be the most environmentally aware with their purchasing habits.

Knowledge and Ethical Consumption

Research shows that consumer knowledge alone is often not enough to influence consumer purchases of green products. A study published in 2001, measured the ecoliteracy and willingness of individuals to purchase environmentally friendly artifacts. Ecoliteracy is a measure of the knowledge a person has about environmentally-related symbols, behaviors, or concepts. Individuals were asked questions about the environment and were scored based on their knowledge about the given topics. The respondents were then asked about their readiness to purchase green products. The results from this study show that ecoliteracy is not a good indicator of consumer purchases of environmentally friendly items. The average environmental knowledge score was the same for both those willing and refusing to buy green products (Laroche, et al., 2001). This suggests a disconnect between environmental knowledge and being environmentally active. Likewise, several studies have been published that show that an increase in knowledge does not correlate to a change in behavior. For example, the government of Canada created a campaign called the One-Ton Challenge, that aimed to reduce carbon dioxide emissions to protect the environment from global warming. This campaign relied heavily on educating Canadians about the program through print and television ads. Overall, this campaign was ineffective, because about 51% of Canadians were educated about the program, but very few changed their behavior to act sustainably. (McKenzie-Mohr, 3).

Simply enhancing knowledge alone about the environment is not enough to change behaviors and promote customer consumption of eco-friendly products.

Values and Attitudes Impacting Ethical Consumption

The values of an individual “are desirable goals, varying in importance, that serve as guiding principles in the life of every person” (Laroche et al., 2001). The decision to work for an ethical societal goal is largely influenced by personal values. Considering the impact of values on individual behavior is important in understanding motivations towards certain purchasing decisions, such as willingness to pay price premiums on environmentally friendly products.

The dominant value which positively affects the decision to purchase environmentally friendly products is collectivism. Collectivism is the principle that the group is more important than the individual, and the needs of the group should be prioritized over individual needs. This contrasts with an individualist, who prioritizes his/her self. A collectivist is more likely to engage in environmentally friendly acts, such as purchasing green products, because they feel it is helpful for the community and the world long-term, despite the lack of individual gains (Kaufmann, Panni, Orphanidou, 2012).

Another personal value that plays a significant role in green purchasing decisions is an individual locus of control. “Locus of Control” is a construct that refers to the personal belief of whether a person’s life is based on individual actions or external circumstances. An internal locus of control, the belief that personal behaviors directly affect the life of the individual and surrounding environment, is positively related to purchasing environmentally friendly products. On the contrary, an external locus of control, the belief that events in the life of the individual are determined by luck, fate, and external forces, is negatively related to the decision to purchase green products (Trivedi, Patel, & Savalia, 2015). This will become important in understanding why people do (or do not) make green purchasing decisions, to help our team design the community campaign based on these factors.

The perceived inconvenience of behaving in an ecologically favorable fashion is crucial in the consumer’s decision to purchase green products. This contrasts with the perceived importance of being environmentally active, which has shown to have little effect on the purchasing decisions of consumers (Laroche et al., 2011). For example, many consumers choose

to purchase single-serve packaged drinks, regardless of their level of knowledge associated with plastic packages and their effects on the environment. Additionally, a person may choose to not recycle, despite their strong feelings that recycling is the right thing to do. These situations arise when an individual's perception of the inconvenience of recycling or using a reusable water bottle is great enough to overshadow their perception of the importance of acting green (Laroche et al., 2011). It is essential to understand that these attitudes are defined as the individual's perception of being environmentally active, as opposed to the actual effects that these actions have. These attitudes could shift if the individual's perception of inconvenience decreases or importance increases.

2.5 Conservation at Wellington Zoo

Wellington Zoo has been leading conservation and wildlife efforts in New Zealand since it was founded in 1906. It was the first zoo in New Zealand and is a non-profit organization that is a member of the World Association of Zoos and Aquariums (WAZA) (Wellington Zoo, n.d). The main goal of WAZA is to connect and encourage the leading zoos around the world to promote environmental education, global conservation, and animal care (WAZA, n.d). By combining efforts with this organization, Wellington Zoo has focused its attention on teaching, mentoring, and involving community members in conservation projects, with the goal of supporting positive actions for the environment and wildlife. Wellington Zoo is committed to practicing “me tiaki kia ora,” the concept that if one takes care of the surrounding world, the world will then return this support and care.

Wellington Zoo is historically renowned because it is the oldest conservation organization in Wellington and is the first zoo in New Zealand to be “carboNZero” certified (Wellington Zoo, n.d). The carboNZero program has been recognized globally and works with New Zealand companies to measure, manage, and mitigate its carbon footprint to help leave a positive impact upon climate change and the environment (Enviro-mark, n.d). Climate change is a concern of the Zoo, and as a result, one of their goals is to leave the smallest carbon footprint possible.

The Zoo acknowledges the importance of the environment and aims to help it prosper, signified by one of its slogans: “Green Zoo Green You”. This slogan signifies the efforts of Wellington Zoo to use forest-friendly wood and paper products, energy efficient lighting and heaters, and reuse collected rainfall in bathrooms and cleaning. Wellington Zoo alone has over 260,000 visitors a year from all over the world, so conservation messages can potentially be carried far beyond its perimeter. The Zoo advocates for people to get involved and act to make a difference in the world, by maximizing connections of conservation messages and wildlife species by the visitors (Wellington Zoo, n.d).

Conservation Efforts at Wellington Zoo

Wellington Zoo has developed a Bush Builders environmental literacy program, designed to ignite positive conservation action amongst urban students. Since Bush Builders was developed in 2007, 4,000 Wellington Students have partaken in the program. Bush Builders consists of three phases: launch activities, Bush Builders Educator, and Plans for Conservation. In the first phase of this conservation effort, children begin thinking about the environment and the surrounding biodiversity through activities designed to ignite curiosity. The second part consists of an educator who visits the classroom, where students can ask questions and begin to closely analyze the biodiversity surrounding their own school. The final phase involves student-led conservation actions designed to make differences in the surrounding environment or for the wildlife, such as planting flora or building bird houses. Wellington Zoo focuses on educating children about the surrounding ecosystem because children are creative and have the capability to make positive changes for the future of the environment (Wellington Zoo, n.d.).

Wellington Zoo partakes in a conservation effort to support wildlife habitats in the Pigeon Bush reserve through purchases of carbon credits. To reduce greenhouse gas emissions, the New Zealand Government issues Carbon Credits to the Natural Forest Restoration Trust’s (NFRT) native restoration forest projects (NFRT Carbon Partner Program, 2016). A carbon credit is a permit, allowing the emission of one ton of carbon dioxide. Wellington Zoo voluntarily partakes in this conservation effort to restore native forests by purchasing carbon credits from the NFRT to offset their carbon emissions that cannot be reduced. Through the purchasing of

these credits, Wellington Zoo provides an income to the NFRT, which helps to restore the native forests of Pigeon Bush. This land was almost destroyed from farming in the 1860s, so restoration of the land is crucial for the flora and fauna (Pigeon Bush, 2016). The Pigeon Bush reserve is important to Wellington Zoo, because the land connects Tararua and Rimutaka Conservation Parks together (Wellington Zoo, n.d). This reserve creates a corridor for habitats, allowing wildlife to pass between the two connecting conservation parks (Pigeon Bush, 2016). Wellington Zoo proves to visitors that small efforts to reduce carbon footprints or compensate for greenhouse gas emissions can significantly impact wildlife.

Forest Stewardship Council Community Campaign at Wellington Zoo

Together, the Zoo and FSC are committed to focusing on sustainability by educating visitors and reducing their negative environmental impact. As a result, all the paper products and wood are eco-friendly at the Zoo, and the retail supply is stocked with several FSC-certified artifacts (Wellington Zoo, n.d).

Education of FSC-certified products has been implemented during the Animal Talks given at the Zoo each day, depicted by [Figure 5](#). These talks are given to visitors in front of the animal habitats, where zookeepers or rangers relate the natural habitats of wildlife to how to environmentally friendly behaviors. There are 12 talks given each day, approximately every half hour between 10 a.m. to 4 p.m. These messages last for 10 minutes and highlight the FSC logo and how the visitors can help save the wildlife through purchases of FSC-certified products.



Figure 5. Animal Talk at Wellington Zoo

2.6 Design Process

Design thinking is an approach to solving issues outside of professional design environments, utilizing “outside the box” thinking and other creative strategies to match the requirements of the problem with a solution which is feasible with the supplied materials. Unlike the more common design approach of analytical thinking, design thinking establishes little or no limits on ideas during the early stages of brainstorming (Robson, 1988, p. 41). Design thinking can be broken into two main phases: divergent thinking and convergent thinking. Divergent thinking is first applied to ensure that many unique solutions are discovered. Then, using convergent thinking, the “best” solution is found and realized. Most importantly, design thinking takes traditional scientific analysis methods and appends human emotional elements to the criteria (Meinel, Leifer, & Platner, 2010). Because design thinking is an iterative process, intermediate solutions can be obtained and used as a starting point for further design thinking.

The concept of groupthink was first written about in 1972 by psychologist Irving L. Janis. Groupthink is a phenomenon where a team loses the ability to individually come up with and voice opinions because members value the group higher than their own ideas. This is unhealthy for the design process as this creates an environment where ideas that seem risky are not proposed, and instead practiced perspectives go on unchallenged. Ideas brought up by the leader of the group can become polarized within the group, with group members agreeing without questioning the concept. This agreement can continue to build upon itself, entering a vicious cycle (Hart, 1991). When a group suffers from groupthink, there is a preconception that disagreement leads to conflict. This blocks the creative process of the group, and often smothers the ideas of less vocal members. However, constructive disagreement is necessary for a successful design process. Ways to avoid groupthink and have a successful design process include encouraging ideas and participation from all group members, and designating critical evaluators for decisions and plans (Loria, 2015). Another way to avoid groupthink is to purposefully slow down the decision process to ensure that enough debate was allowed for before coming to a final decision. Also, outside individuals who will be affected by the decision

can be invited to either help decide, or give feedback on options before a final decision is made (Bruzzese, 2015).

Brainstorming is a technique that allows groups or individuals to develop ideas to solve a specific problem by spontaneously creating as many ideas as possible in a limited amount of time. There are several different brainstorming techniques that have been employed for creating campaigns, including the 6-3-5 method, C-Sketching, and the impact-effort matrix tool.

The 6-3-5 brainstorming method is a technique that is designed to aid innovating thinking. This is a group thinking method that is structured to develop individual ideas and increase creativity. This technique typically involves a group of six people who sit around a table and each come up with three ideas as a solution. The ideas are then passed to the person sitting to their right, who builds onto it. This process of adding to the ideas are completed five times, since each design is continually passed around the table to every member of the team (Markman, 2017). The conclusion of this brainstorming method produces preliminary ideas that are unique and avoid criticism from group members. This allows for individuals to think freely and avoid social inhibition. Social inhibition is the term describing an individual's intimidation to present ideas to a group because of criticism or judgement that they may receive (Stangor, 2014). With this method of brainstorming, this negative factor is avoided due to the continual building and refinement of ideas from all group members.

C-Sketching is another brainstorming technique that many groups find beneficial to use during brainstorming sessions. This method requires individuals to draw pictures of their ideas instead of writing or speaking about them. Many factors contribute to why this technique is so impactful, including avoiding bias, increasing time, and promoting the use of creative areas of the brain. This method of sketching out ideas avoids biases by using drawings, because people often choose the easiest idea to talk about as their final solution, instead of exploring more creative designs. Furthermore, by physically drawing out the brainstorm, people take more time to think about their ideas and in what ways they can build upon them to improve it. In addition, by drawing out these suggestions individuals activate the creative and visual sections of their brain, allowing them to generate designs extending beyond preconceived thoughts (Markman, 2017).

To narrow down ideas produced by rapid brainstorming, many design groups use an impact-effort matrix. This matrix is a chart that ranks ideas based off the resulting impact and effort required. It allows for groups to select solutions to a problem, based off feasibility and influence. When people are creating a campaign, they typically want a design that will impact a targeted group with the least amount of effort. [Figure 6](#) is an example of an impact-effort matrix. Ideas are individually ranked on this chart, and solutions that fall within the upper left-hand quadrant are the higher impact and lower effort ideas. Groups can narrow down their brainstormed ideas to these designs, which are ranked within this area of the matrix (Andersen, Fagerhaug, & Beltz, 2010).

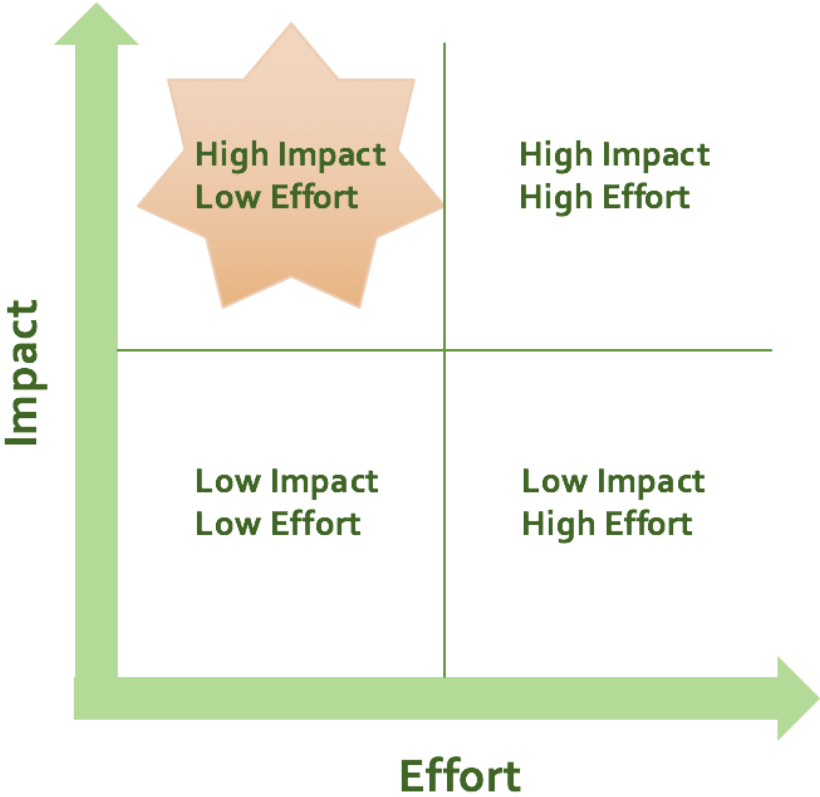


Figure 6. Impact-Effort Matrix

Chapter 3: Methodology

The goal of our project was to develop campaign components that reach out into the Wellington community and resonate with consumers to make them more environmentally conscious, increasing purchases of FSC-certified paper products. To accomplish this goal, our team set the objectives listed below, which are further outlined in the methodology flowchart in [Figure 7](#). Furthermore, the overall project schedule is shown in the Gantt Chart below in [Figure 9](#).

Our objectives were:

- Objective 1: Assess the current understanding of FSC by Zoo visitors and community members
- Objective 2: Investigate the motivations and barriers of consumers purchasing FSC products
- Objective 3: Investigate how Wellington Zoo promotes FSC
- Objective 4: Investigate how to design a campaign that can change the purchasing habits of consumers
- Objective 5: Design Wellington Zoo's FSC Community Campaign

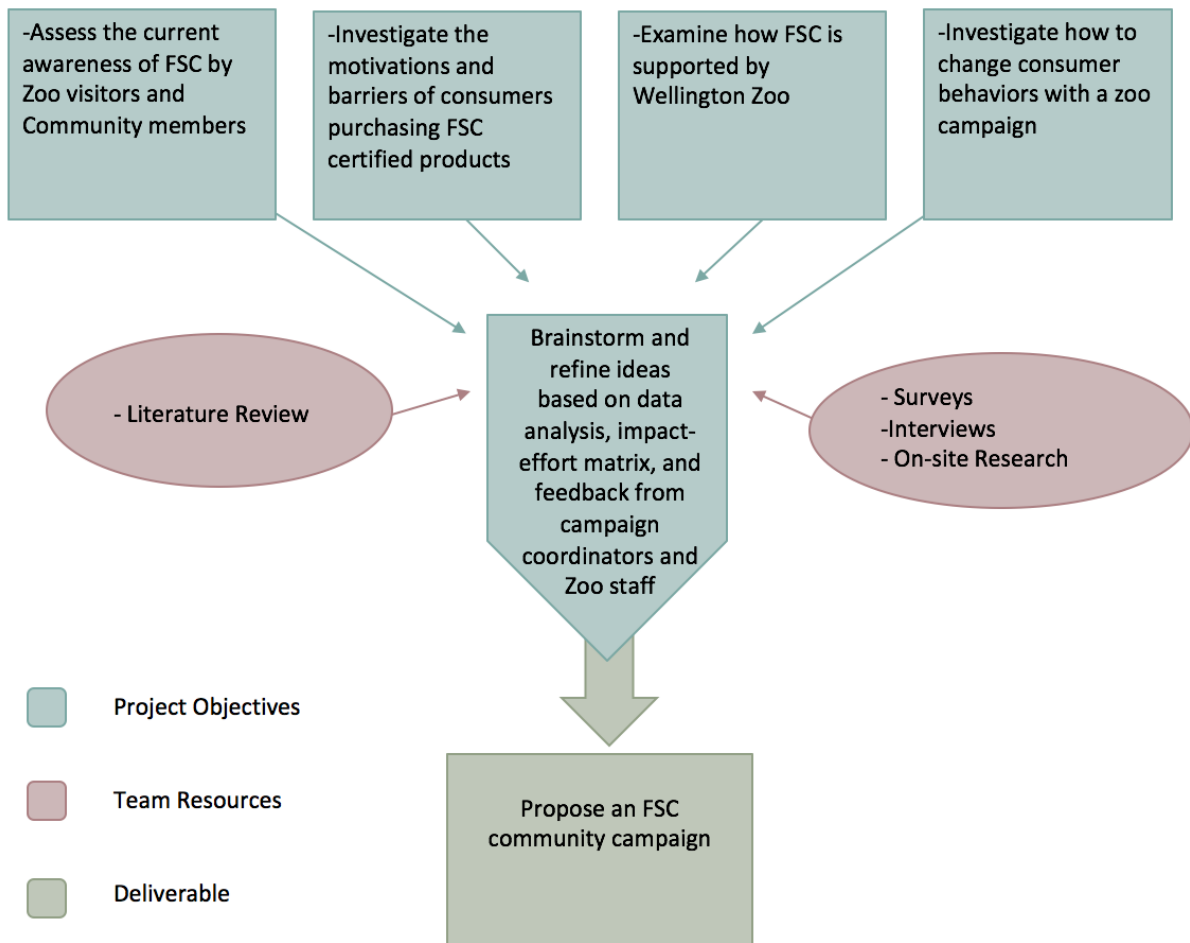


Figure 7. Methodology Outline

Objective 1: Assess the current understanding of FSC among Zoo visitors and individuals in the Wellington area

Our primary research objective assessed the understanding of the current awareness of the FSC certification amongst Zoo visitors and individuals in the Wellington area. To accomplish this objective, we administered a consumer survey to give us insight into what these individuals currently know about FSC.

Consumer Survey

Our team designed the consumer survey, found in [Appendix A](#), using Qualtrics. Qualtrics is an online survey tool that allowed us to create our own questions varying between single-answer, multiple-choice, and fill-in options. We administered this survey to both Zoo visitors at Wellington Zoo, and individuals in the Wellington area. We chose the Wellington Central Business District (Wellington CBD) as the location to survey when gaining insight into non-zoo visitors, as this area provided us with access to individuals from a wide range of demographics. Our team strategically developed the consumer survey to be short, because we did not want to take away from the experience visitors have at Wellington Zoo. Furthermore, we understood that many individuals around the Wellington CBD would have limited time to take the questionnaire.

We used the strategy of convenience surveying, which is the method of administering surveys to any individuals that are nearest and available (Crossman, 2017). Our team distributed the consumer survey to Zoo visitors and individuals in the Wellington CBD using a hand-held phone or tablet. We decided not to conduct paper surveys because the amount of paper waste generated from this would have been inconsistent the values of our FSC campaign. Additionally, the survey had many alternative question paths depending on prior answers, and this would have been confusing on paper. For administering the consumer survey, our team divided into groups of two to cover more ground in the same amount of time.

The consumer survey began by collecting the participant's demographic data, such as age, city of residence, and if they have children. The purpose of these preliminary questions was to provide us with information about what demographic groups are most environmentally conscious and know the most about FSC. The questions that followed were concerned with the participant's current awareness of FSC. The FSC logo was presented and individuals were asked if they recognized it and if so, where they had seen it. This data from the survey provided us with information about the current understanding of FSC within Wellington Zoo and the Wellington community.

Objective 2: Investigate the motivations and barriers of consumers purchasing FSC-certified products

Our second research objective investigated the motivations and barriers of consumers purchasing FSC-certified products. We accomplished this by administering our consumer survey, performing a local market analysis, and holding semi-structured interviews with retailers and professionals with FSC experience.

Consumer Survey

The consumer survey, used in objective 1, also asked several questions related to the purchasing behavior of consumers. These questions included, for example, “What affects your toilet paper/tissue product purchases?” One goal of the survey was to determine the main factors consumers consider when choosing which paper products to buy, and why they may, or may not, purchase FSC products. This knowledge was useful in designing our FSC campaign and providing suggestions to Wellington Zoo.

Market Analysis

To understand consumers’ purchasing behaviors, our team attempted to understand the local market available to consumers by visiting the largest grocery retailers in the Wellington region: New World, Countdown, and Pak’nSave. For each category of paper product, our team recorded the brand, respective unit price, and environmental certification of each item, as shown in [Table 3](#). Using Microsoft Excel, we analyzed the data to form a better understanding of the local market regarding the frequency of FSC-certified products available for purchase, and the average prices of these products. Market share between FSC and other certification organizations was determined by finding the percentage of all paper products that had each certification. When looking at price data we filtered out products with price outliers using standard deviation filters and used the remaining data points to find average prices for each certification. A common belief we found in our background research was that environmentally friendly products are more expensive, and this approach allowed us to

determine the accuracy of this perception. Before recording any data, we asked the stores for permission, allowing us to begin forming positive relationships with the managers.

Table 3. Format Used for Recording Paper Product Data at each Retailer

Category	Brand	Unit Price (100 Sheets)	Environmental Certification
Toilet Paper			
Paper Towel			
Serviette (Napkin)			
Tissue			

Retailer Interview

Our team had the opportunity to hold a semi-structured interview with the manager of a popular grocery store in the Wellington area. Semi-structured interviews are a method involving a general list of interview questions that are tailored and strayed from during conversations when felt best appropriate. The purpose of this interview style was to give us the freedom to gain more knowledge in areas of conversations that we wanted a better understanding of (Cohen & Crabtree, 2006). The interview was focused on how products with environmental certifications are marketed in stores, how conservation campaigns have made impacts on consumer habits in the past, and if there were viable ways for advertisements and displays for conservation campaigns to make their way into retail stores. The questions from this interview can be found in [Appendix B](#).

FSC Professional Interviews

We performed two semi-structured interviews with people who have professional experience with FSC. The gift-shop manager at Wellington Zoo has experience in both sourcing FSC products and explaining to non-certified sources the advantages of becoming certified. We asked the gift shop manager questions about sourcing FSC-certified services for the shop,

finding FSC-certified distributors, and the strategies used to start conversations with retailers about FSC-certified products. The questions from this interview can be found in [Appendix C](#).

We also interviewed the FSC representative for New Zealand to gain a better understanding of how the FSC operates internally and their role in New Zealand. Our team asked questions about the certification process in general, the amount of FSC-certified supply available for manufacturers globally, and the marketing involved with displaying the FSC logo on products available to consumers. The questions from this interview can be found in [Appendix D](#). During the semi-structured interviews, all four group members were present. One member took notes during the interview, while the other three members actively asked questions of the interviewee.

Interview Coding

After our data collection and primary data analysis, our group considered the overarching themes of our collected information. To understand and pull out more information about FSC from our interviews, all the notes from the zookeepers/rangers, zoo educators, zoo gift store manager, and FSC representative interview responses to questions concerning personal views of FSC were compiled and categorized as first-order concepts. Next, we grouped these into second-order concepts, then further clustered into aggregate concepts. We expanded upon aggregate concepts through group discussion.

Objective 3: Investigate how Wellington Zoo promotes FSC

This section of the study examined how Wellington Zoo had already implemented education programs about FSC, and how effective the current implementations are. The main methods of research were semi-structured interviews and the administration of the consumer survey.

Zoo Staff Interviews

The first set of semi-structured interviews related to Objective 3 were with the zookeepers and zoo rangers. The questions from these interviews can be found in [Appendix E](#).

Presently at the Zoo, the main method of teaching visitors about FSC and the impact of their purchasing decisions is through Animal Talks. Animal Talks are presented by zookeepers and rangers, and these 10-15-minute-long programs occur multiple times each day. We conducted four interviews with zookeepers and two interviews with rangers. Before interviewing each of these staff members we attended multiple Animal Talks, making naturalistic observations, to get a better idea of how Animal Talks present FSC. Naturalistic observations are performed by observing a subject in its natural environment without any experimental manipulation (Sparling, Chong, 2011). During interviews, it was asked if the zookeepers or rangers actively used any techniques to increase audience engagement in general. We sought to learn more about how the Animal Talks were structured and if any existing structure could be improved to further engage the audience.

The second set of semi-structured interviews included an interview with the Zoo's retail manager, as mentioned in Objective 2. Our aim was to gain an understanding of how the Zoo is involved with FSC outside of the Animal Talks, and if there were any opportunities to increase involvement. Additionally, we intended to learn about the feasibility of implementing part of the campaign into the gift store through a larger presence of FSC logos and information. During the semi-structured interviews, all four group members were present. One member took notes during the interview, while the other three members actively asked questions of the interviewee.

Consumer Survey

The consumer survey, also used in Objectives 1 and 2, had a section designed to give us an idea of how the Zoo's involvement with FSC had impacted people. Some questions asked participants if they actively purchase FSC products, while other questions asked how often they have visited the Zoo, and if they have been to any Animal Talks at the Zoo. With this information, we sought to identify if there was an association between various FSC education efforts around the Zoo and the retention of information or change in purchasing practices of Zoo visitors. If significant data was found, this could suggest that current implementations of FSC education at the Zoo are effective or ineffective on a large scale.

Objective 4: Investigate how to design a campaign that can change the purchasing habits of consumers

This section of our project investigated the best way for an environmental campaign to reach consumers, and effectively convince consumers to support FSC by purchasing FSC-certified products while grocery shopping. To accomplish this, we administered the consumer survey, conducted semi-structured interviews, and reviewed past campaign reports. During the semi-structured interviews, all four group members were present. One member took notes during the interview, while the other three members actively asked questions of the interviewee.

Consumer Survey

In the consumer survey, also used in Objectives 1, 2, and 3, we asked Zoo visitors and community members about their knowledge about FSC. In relation to investigating how to educate and influence consumer purchasing habits, the survey asked participants how they would like to learn more about FSC. The participants could select multiple options, including an exhibit at Wellington Zoo, social media, television ads, individual research, or they had the option to say they were not interested in learning more about FSC.

Zoo Staff Interviews

The first round of interviews pertaining to this objective were the zookeeper and ranger interviews, mentioned in Objectives 1, 2, and 3. During these interviews, we asked staff which visitor group, children or adults, would be most open to the messages of a sustainable product campaign. Also, we inquired about what staff would like to see in our FSC campaign design, and if they had any ideas or aspects they would like to add.

It was important to make sure that we knew what conservation messages the Zoo was currently conveying to leverage these past experiences in our campaign design. Our team held a semi-structured group interview with individuals from the marketing team at Wellington Zoo. During the interview, we asked specifically about Cats Inside at Night, as we had researched this

campaign already on our own, to see what methods went into making the pledge cards and signage that the Zoo had. We also asked about general campaign advertising at the Zoo, and how this may change depending on the age of the audience that a certain message is conveyed to. The questions from this interview can be found in [Appendix E](#).

To understand how to create programs that would appeal to children, our team interviewed the Zoo Educators that work the children’s educational programs at Wellington Zoo. The questions from this semi-structured interview can be found in [Appendix G](#). During the interview, our team asked questions about how the school programs at the Zoo were structured, and how the FSC message was incorporated into these programs. Also, our team asked about the best methods for conveying conservation messages to children, and how the Educators would like to see our campaign involve the Wellington Zoo school programs.

FSC Professional Interview

During the interview with the FSC representative, mentioned in Objectives 1, 2, and 3, we asked the representative about her knowledge of prior FSC campaigns, from internationally scaled programs all the way down to local efforts. To discover which consumer groups were relevant to our campaign, the representative was asked about her knowledge of the chain of custody from tree to product, and how consumer purchases impacted this. The phrase “chain of custody” refers to all the different steps, and companies involved, in the process that timber goes through in manufacturing, from tree harvesting to final product production. From this, we asked the representative which consumer groups would be the best to target.

Past Campaign Analysis

Our team analyzed materials from three conservation campaigns from recent years: Wipe for Wildlife, Don’t Palm Us Off, and Cats Inside at Night. Wipe for Wildlife was a campaign promoting purchases of recycled toilet paper and FSC-certified products at Zoos Victoria, a zoo in Australia. Don’t Palm Us Off pushed for legislation to improve labeling of palm oil on consumer products to help protect orangutan habitats, that was run at various zoos across Australia. Cats Inside at Night was a native species conservation campaign held at Wellington Zoo. We first referenced the campaign in our background, Chapter 2.3.

Our team aimed to gain insight on what methods were necessary to run a successful environmental campaign by reviewing these past examples of conservation campaigns. To analyze all this data, our group went through three different processes. First, group members individually went through the data and took notes, focusing on: why the campaign was started, what organizations were involved, how the campaign was implemented, and what the preliminary results of the campaign were. Next, group members came together and compiled the notes into one common document, divided into the categories mentioned previously. This form can be found in [Appendix H](#). Finally, our group went back through this document, and tried to link the outcomes of the campaigns to the various methods used to set up and implement the programs.

Interview Coding

After our data collection and primary data analysis, our group considered the overarching themes of our collected information. To understand and pull out more information about FSC from our interviews, all the notes from the zookeepers/rangers, zoo educators, zoo gift store manager, and FSC representative interview responses to questions concerning campaign designs and conservation messages were compiled and categorized as first-order concepts. Next, we grouped these into second-order concepts, then further clustered into aggregate concepts. We expanded upon the aggregate concepts through group discussion. This procedure was also outlined in Objective 2.

Objective 5: Designing the Wellington Zoo's FSC Community Campaign

To accomplish our final objective, we cumulated all our recorded data and research, to design the FSC campaign. The main methods to do so included trend analysis of the consumer survey data, revision of interview notes, and review of past campaign report analyses. In this section, all the results from our previous research objectives were cross-examined to help create our final product.

Data Analysis

From our consumer survey data, we used Qualtrics analysis software to create a report of all the responses. By using the Qualtrics report, we could easily analyze the data, looking for trends that would influence our campaign strategy. The data was output in bar charts for each question, showing the range of answers. When looking for trends, our team reviewed the extremes and averages for each question response. The software also gave us the ability to compare the data through cross tables.

In all the interviews our group held, one member always took notes, while the other three members actively asked questions of the interviewee. We reviewed the interview coding results as a team, to help inform our design process.

We reviewed reports about conservation campaigns, mentioned in Objective 4, and output a collection of analyses outlining how the campaigns worked. This data was then reviewed when designing our campaign to either decide to model certain aspects based on successful components of these campaigns, or to refrain from implementing components that failed to elicit the desired response.

The information gathered from the Qualtrics survey, interviews, and campaign analyses were used to inform different aspects of each research objective. Objective 1 assessed people's current understanding of FSC, which explained how much information about FSC is common knowledge and what concepts people need to be educated about through the campaign. Objective 2 assessed people's motivations and barriers to buying FSC products, so anything that tended to be particularly motivating could be highlighted by the campaign and any common barriers could be directly addressed. Objective 3 assessed how FSC messages were already implemented at the Zoo, which set a foundation for the campaign and which could be integrated with the campaign or even improved by it. Objective 4 assessed what the most effective methods are for a campaign to educate people about FSC, and directly gave us ideas on what should be included and what should be avoided in the campaign.

Campaign Design

To begin the design process, our group members individually brainstormed ideas using the 6-3-5 brainstorming technique, referenced in Chapter 2.6. However, because our group

consists of four members, we adjusted this method and named it the 4-3-3 brainstorming technique, since we have four members that each came up with three ideas, that were passed around to each of the three-other people.

Each idea was drawn as a sketch and described in a paragraph on the same sheet of paper. We decided this method was the most effective, since it allowed us to take our time and explore our ideas deeply as we sketched, since we had to wait for everyone in the group to complete their ideas, before passing them along. This method also avoided bias by using drawings and written explanations, since often people choose the easiest idea to talk about as their final solution (Markman, 2017). We used this brainstorming method for each general component area that we wanted to incorporate into our campaign. General component areas were identified from the categorized interview notes and survey responses.

After these initial ideas were expanded upon and compiled into one document, our team reached out to our sponsor and colleagues at the Zoo to get feedback on these ideas, avoiding groupthink, before moving on with the design process. Our group reviewed the feedback from these various sources, taking all suggestions into account in the next phase of the design process.

Next, our group came together to discuss our proposals with the new feedback from our outside resources. Any changes we wanted to make to our initial proposals were made before moving on. The following methodology was performed separately for each aspect we wanted in our campaign. To begin, we placed the sketches onto a wall and each member individually voted upon the top three ideas they wanted to see incorporated, by writing their ranking onto the sketches. Their first-choice vote was worth three points, second choice was two points, and third choice was worth one point. After each member voted, the points for each sketch were tallied and the top three designs entered an impact-effort matrix, as depicted by [Figure 8](#) below. This matrix, is often used to prioritize different ideas by rationalizing how impactful a proposal is to how much effort is required to carry it through (Andersen et Al, 2010). Wellington Zoo was looking for a campaign that is simple, yet has a strong influence on people's purchasing decisions. As a group we conversed and decided where each of the three ideas would land

within the matrix. We selected designs with ratings of low effort and high impact for each aspect of the campaign, each contributing to form our FSC community campaign.

	LOW EFFORT	HIGH EFFORT
HIGH IMPACT	GREAT Execute it right away.	GOOD Can you reach the same impact with less effort?
LOW IMPACT	WEAK Can you increase the impact?	BAD Focus on the other ideas.

Figure 8. Matrix comparing impact vs. effort (Andersen et al, 2010)

3.6 On-site Schedule

Our team followed the seven-week schedule represented by the Gantt chart below. The first two weeks of our project in Wellington consisted of surveying Wellington Zoo visitors and interviewing Zoo staff. During this time frame, we also visited grocery stores around Wellington Zoo and completed a market analysis to understand the popular toilet paper and tissue product brands, prices, and certifications in the Wellington Region. Starting on week three, we began to assess the Wellington community members regarding their knowledge and actions pertaining to FSC-certified products through electronic surveys distributed in the Wellington Central Business District. We also reviewed past campaign reports and prior survey data beginning on week three. Once all our data was gathered and analyzed, we brainstormed effective tools to encourage FSC purchases and finally proposed our design for Wellington Zoo’s FSC community campaign.

TASK	WEEK						
	1	2	3	4	5	6	7
Assessed Zoo Visitors	Surveyed Zoo Visitors						
Assessed Zoo Staff	Interviewed Zoo Staff						
Market Analysis at local retailers	Market Analysis at local retailers						
Assessed Local Community Members			Surveyed Local Community Members				
Reviewed reports and prior survey data			Reviewed past campaign reports and prior survey data				
Brainstormed effective tools to encourage FSC purchases					Brainstormed effective tools to encourage FSC purchases		
Gained feedback from other campaign coordinators and Zoo staff					Gained feedback from other campaign coordinators and Zoo staff		
Refined campaign ideas based on feedback					Refined campaign ideas based on feedback		
Proposed our design for Wellington Zoo's FSC community campaign					Proposed our design for Wellington Zoo's FSC community campaign		

Figure 9. Gantt Chart of the Project Methodology

Chapter 4: Findings and Analysis

Our team created four research objectives to accomplish our project goal, which was to aid Wellington Zoo in their design of a Forest Stewardship Council (FSC) community campaign. Our objectives were to assess the current understanding of FSC by Zoo visitors and community members, investigate the motivations and barriers of consumers purchasing FSC products, investigate how Wellington Zoo promotes FSC, and investigate how to design a campaign that can change the purchasing habits of consumers. At the completion of these research objectives, our team moved onto our final project objective: to come together and design proposals of campaign strategies for the community campaign. The deliverable for our project was a set of finalized suggestions of campaign strategies focusing on different components of a community conservation campaign, which Wellington Zoo could use when finalizing and implementing their FSC Community Campaign.

During our time collecting data, we surveyed over 200 consumers total at Wellington Zoo and around the Wellington Central Business District (Wellington CBD), and interviewed various staff at Wellington Zoo, the FSC representative for New Zealand, managers of grocery stores, and professionals with experience creating conservation campaigns. We presented and discussed our relevant findings as they related to our objectives.

4.1: Current understanding of FSC among Zoo Visitors and individuals in the Wellington area

Our first objective was to gain an understanding of the knowledge and awareness that Wellington Zoo visitors and members of the Wellington community have about FSC. To achieve this, our team administered consumer surveys to Zoo visitors and individuals in the Wellington Central Business District (Wellington CBD), as outlined in Chapter 3, Objective 1.

Consumer Survey

The consumer survey inquired about participants' demographics, containing questions about their city of residence, age, and if they had children. Following these questions, the survey asked the individuals if they recognized the FSC logo, and if so, from where. We tailored these questions to give us a basic knowledge about our survey participants and how their demographics contributed to their knowledge about environmental sustainability. These were all single-select, multiple choice questions. The raw data from the consumer survey can be found in [Appendix I](#).

The city of residence identified by all the survey participants can be seen in [Figure 10](#). From the 212 participants that answered this question, approximately half of the respondents were from the Wellington Region.

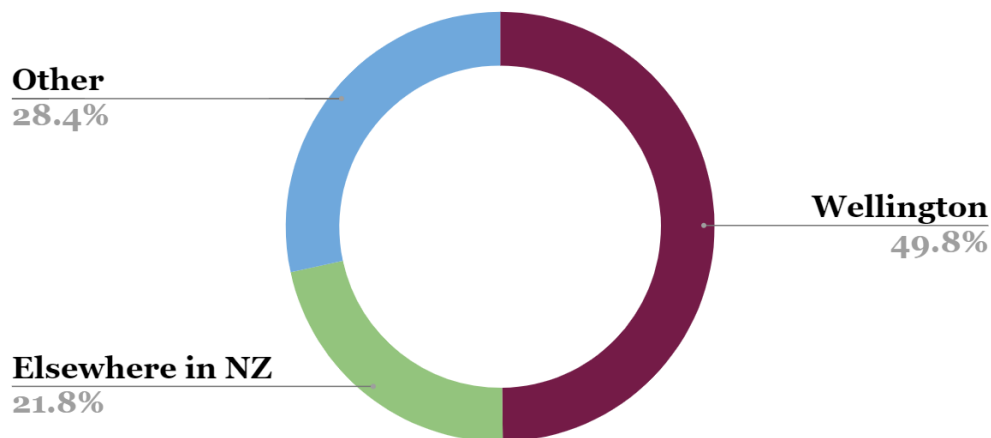


Figure 10. Consumer responses to "Where are you from?" (Zoo and CBD, n=212)

Most of the individuals who completed this survey were from New Zealand, which was crucial to our study. Our team's deliverable was to create an FSC community campaign for Wellington Zoo, so it was important for us to gather most of our information from New Zealand residents. These individuals will be impacted and targeted the most by the FSC community campaign, since they live around the Wellington region where this campaign will be implemented.

Following this question, all the participants were asked about their age and if they had children. The range of ages from the participants who took the survey can be seen in [Figure 11](#).

Most individuals who answered the questionnaire were between 18-29 years old, which made up about half of the participants. The second most common age group was the 30-44-year old's, followed by the older age groups. When conducting surveys, our team noticed that many young adults were at the Zoo because the Zoo attracts couples and families with children. Furthermore, many of the elderly individuals at Wellington Zoo who we solicited for our survey did not feel comfortable completing it on an electronic device. These factors led to most participants being younger.

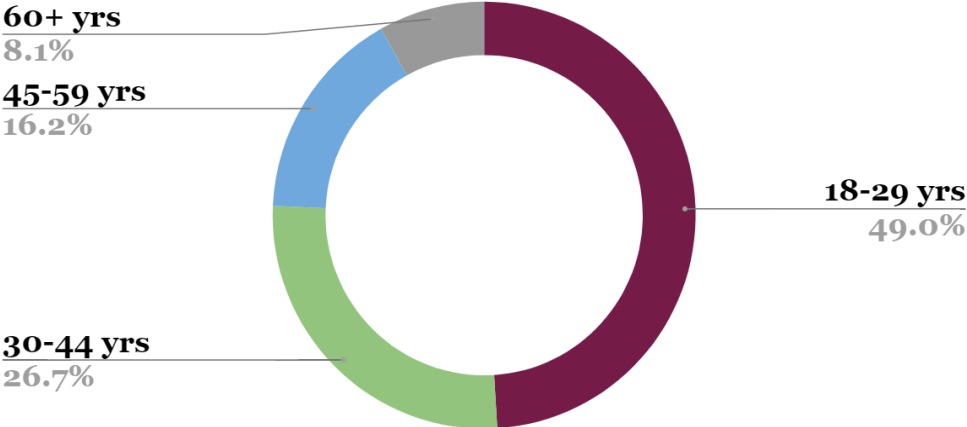


Figure 11. Consumer responses to “What is your age?” (Zoo and CBD, n=211)

The responses for “Do you have children?” are shown below in [Figure 12](#). As seen from the chart, most of the participants did not have any children. Our team was surprised when analyzing the data for this question. We were expecting most of the results to show “yes”, since half of our surveys were conducted at a Zoo where parents tend to take their kids to see the animals. When analyzing this information, we did recognize one possible factor for this unexpected finding, which was that many of the adults we asked to be surveyed who had children, were preoccupied with watching over their kids and as a result declined to complete our survey.

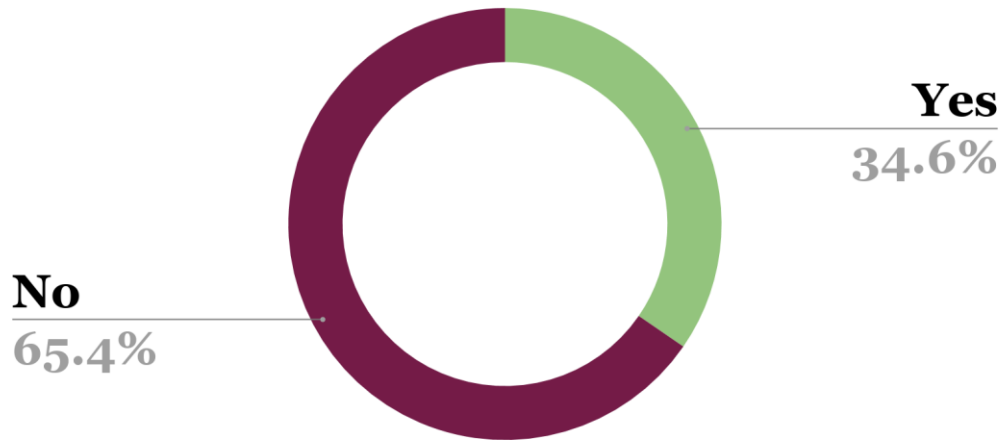


Figure 12. Consumer responses to “Do you have any children?” (Zoo and CBD, n=212)

Following these demographic questions, individuals were asked if they recognized the FSC logo presented on the device’s screen. The purpose of this question was to gauge current awareness of FSC among Zoo visitors and people around the Wellington CBD. As seen from [Figure 13](#), slightly over half of the individuals did not recognize the FSC logo.



Figure 13. Consumer responses to “Do you recognize this logo?” (Zoo and CBD, n=210)

This result was very interesting, because it shows how there is a large portion of the Wellington community that is completely unaware of FSC. Many people are not consciously purchasing FSC-certified products simply because they have never seen or heard about FSC. Wellington Zoo’s community campaign has the potential to promote environmentally friendly purchasing decisions by informing community members about FSC and its aims.

Just under half of the respondents selected that they had seen the FSC logo before. Our team was aware that participants may have tried to “beat the survey”, meaning that they would select all the options that they think are favorable to the survey administrators, instead of what holds true for them. For example, if participants did not actually recognize the FSC logo, there was the possibility that they would respond “yes” anyway. To account for this possibility, our team asked another question on the consumer survey about the aims of FSC. This was a multiple-select question, asking all the participants who recognized the FSC logo to indicate what the goals of the organization are. The options for the answers included three true, and two false goals of FSC. The accurate aims of FSC in the question on our survey included “preventing habitat loss,” “promoting voluntary sustainable forestry practices”, and “promoting the rights of workers, communities, and indigenous peoples.” The two false aims were that FSC “builds sanctuaries for endangered animals,” and that FSC “plants/harvests sustainable timber.” The results from this question can be seen in [Figure 14](#) below. Several of the participants who recognized the FSC logo correctly selected that FSC “prevents habitat loss,” “promotes voluntary sustainable forestry practices,” and incorrectly selected that FSC “plants/harvests sustainable timber.” However, only a few consumers selected “supporting the rights of workers, communities, and indigenous peoples” and “building sanctuaries for endangered animals.”

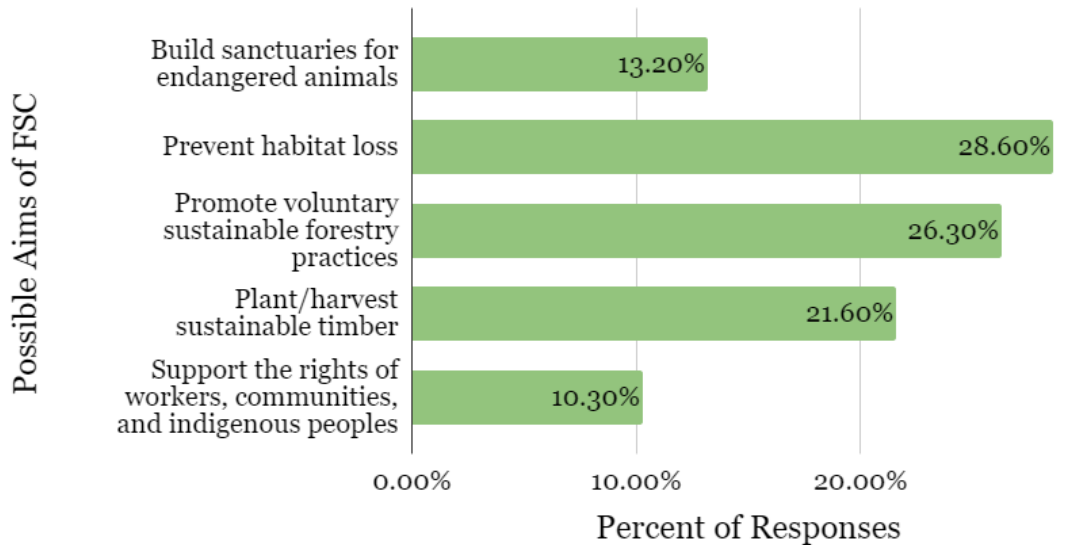


Figure 14. Consumer responses to “What are the main aims of FSC?” (Zoo and CBD, n=99)

This data was crucial for our team to gain an understanding of how educated Zoo visitors and Wellington CBD members were about FSC. Many participants understood that the main aims of FSC included “preventing habitat loss” and “promoting voluntary sustainable forestry practices.” However, a significant number of participants also incorrectly selected that FSC “plants/harvests sustainable timber,” suggesting that many people who recognized the logo have minimal knowledge about this organization and its certification. Furthermore, many of the participants were unaware that FSC “supports workers, communities, and indigenous peoples.” This question suggests to our team that even though people may have seen the FSC logo before, most do not have much knowledge about it. Even if people do not have a deep knowledge about FSC, but still purchase FSC-certified products, that is still beneficial. However, our team wanted to assess the demographic that we would be working with for our campaign.

For our team to gain an understanding of where our consumer survey respondents have gained knowledge about FSC, we asked the individuals who recognized the FSC logo where they had seen or heard about it. The consumer results to this question are displayed in [Figure 15](#) below, where they could choose between “Animal Talks at Wellington Zoo,” “on products,” “word of mouth,” “social media/advertising” and “other.” About half of the respondents

selected that they have seen the logo “on products,” followed by “social media/advertising” and “Animal Talks.”

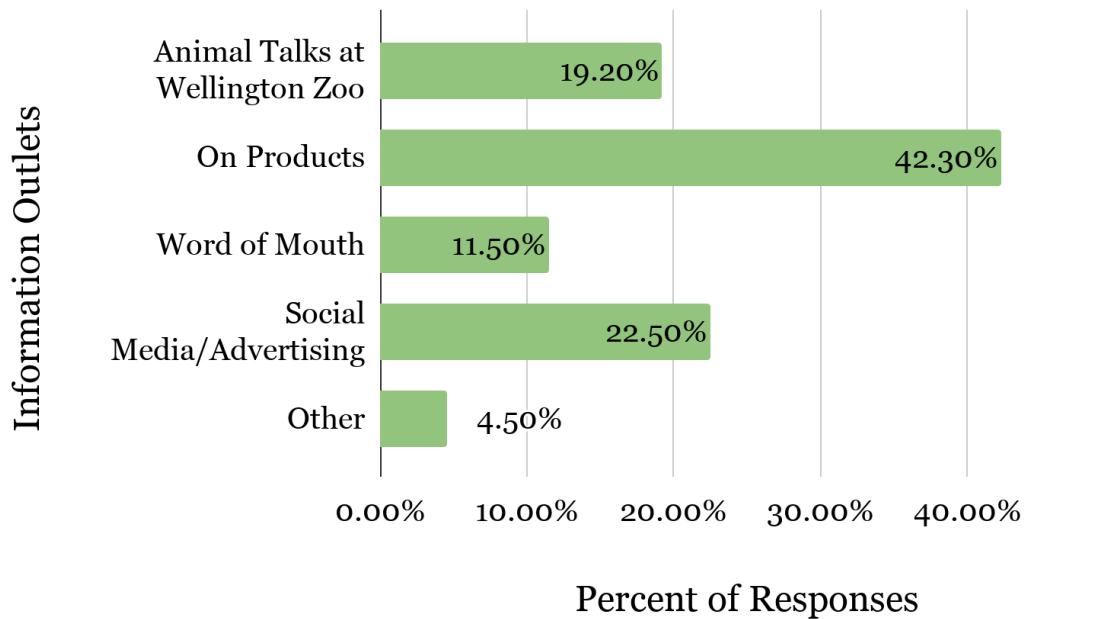


Figure 15. Consumer responses to “Where have you seen/heard about FSC?” (Zoo and CBD, n=156)

The data presented from this question indicates most people recognize the FSC logo from products. If most participants recognized the FSC logo from products, then their understanding about FSC may be very minimal. Most products just display the FSC logo, and do not explain what the organization’s main aims and actions are to help the environment. Furthermore, “Animal Talks” was the third highest option, indicating that Wellington Zoo’s current FSC conservation message is only reaching a small proportion of consumers in the community. Wellington Zoo can build upon their Animal Talks to increase visitor engagement with the conservation messages presented, alongside other campaign means to spread knowledge about FSC throughout the Wellington community.

To determine if demographics are connected to knowledge about FSC, our team created a cross-tab table shown below in [Figure 16](#). As the age group of our participants increased, their recognition of the FSC logo decreased. This demonstrates that there is likely a correlation between an individual’s age and ecoliteracy. A young adult tended to be more aware and knowledgeable about FSC as compared to an individual aged 60+. However, the consumer data

for the age groups 45-60+ is minimal, so more responses would need to be recorded to be more knowledgeable about their age group’s recognition of the FSC logo. Furthermore, this chart shows that individuals without children tend to be more aware of the FSC logo. This result was very interesting to our team, because according to our research in previous studies, spouses and parents should tend to be more ecoliterate.

		What is your age?				Do you have any children?			
		18-29	30-44	45-59	60+	Total	Yes	No	Total
Do you recognize this logo?	Yes	53	28	14	3	98	28	71	99
	No	50	28	19	14	111	44	67	111
Total		103	56	33	17	209	72	138	210

Figure 16. Cross-table of age and children vs. recognition of FSC logo (Zoo and CBD, n=212)

4.2: Motivations and barriers of consumers purchasing FSC products

In this section we investigated the motivations and barriers of consumers purchasing FSC products. We accomplished this through the administration of our consumer survey, performing a local market analysis, and semi-structured interviews with professionals who had FSC experience.

Consumer Survey

The consumer survey, mentioned in Objective 1, gave us an in depth look into the purchasing behaviors of consumers. When consumers recognized the FSC logo on the survey, they were asked “Have you purchased FSC-certified products?” The responses for Zoo visitors and people in the Wellington CBD are shown in [Figure 17](#) below.

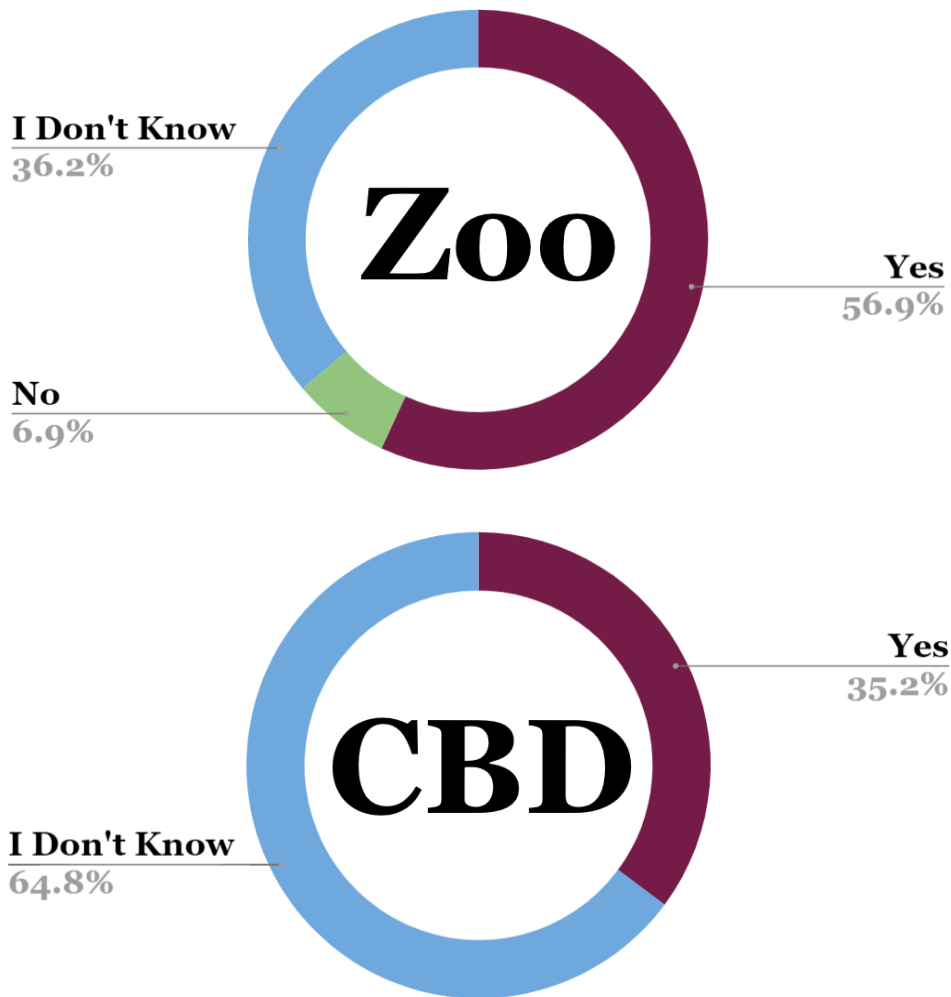


Figure 17. Results of question “Have you purchased FSC-certified products?” (Zoo, n=58, Top) and (CBD, n=41, Bottom)

There was a small selection of Zoo visitors that recognized the logo but still did not purchase FSC-certified products. This could mean that they were aware of FSC but intentionally purchased non-certified products, but it could also indicate that they had recently learned about FSC and realized they did not look for FSC products, but were willing to change their position. The most important group to influence is the “I don’t know” group, because their purchasing decisions can be influenced the most with knowledge about FSC, unlike some of those who selected “No.” Our data shows that many individuals do not know if they have purchased FSC products, informing us that there are many people that need to be further educated about FSC.

When consumers who already purchase FSC products were asked “Why do you purchase FSC-certified products?”, we obtained the results shown in [Figure 18](#). The highest and second highest responses were “I care about the environment” and “I care about animals,” showing the significance of involving animals at the Zoo with the environmental campaign, as it personally links the consumer with the effects of their purchasing behavior.

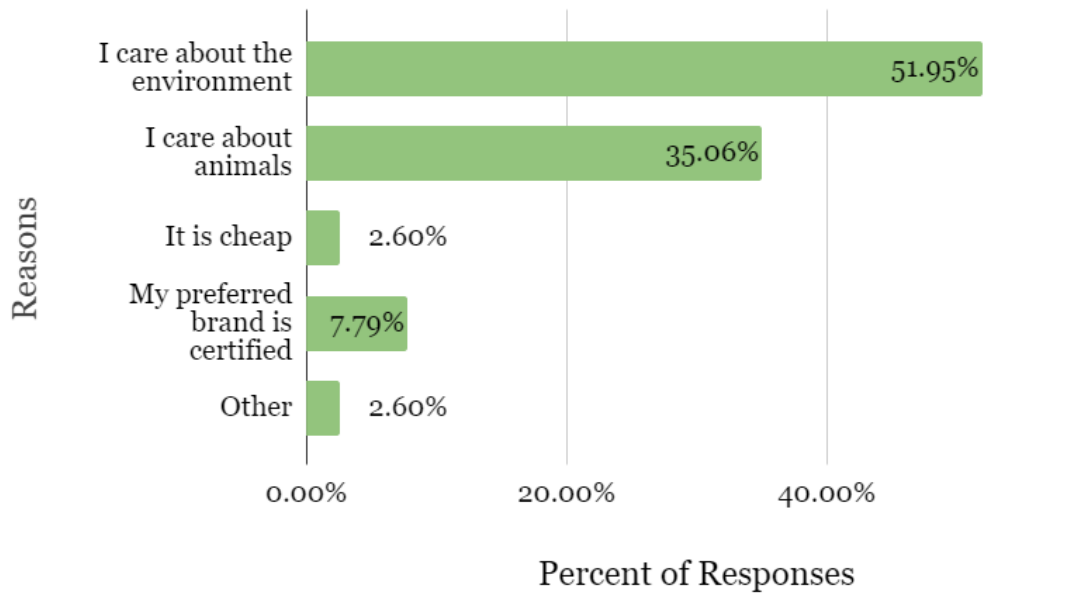


Figure 18. Results of question “Why do you purchase FSC-certified products?” (Zoo and CBD, n=77)

If a consumer did not recognize the FSC logo, or had not purchased FSC products, they are asked “What would encourage you to look for products that carry this logo in the future?” The results of this question are shown in [Figure 19](#) below. The most common responses were “Comparable price”, “More visible logo”, and “I would need more information of FSC first.” As expected, price is critical to many consumers’ behavior, signifying that a detailed market analysis is important to our campaign. Additionally, this suggests a misperception that environmentally friendly products have a large price premium. Furthermore, approximately one quarter of consumers want more information about FSC, showing they are willing to learn from a campaign which could potentially alter their purchasing habits.

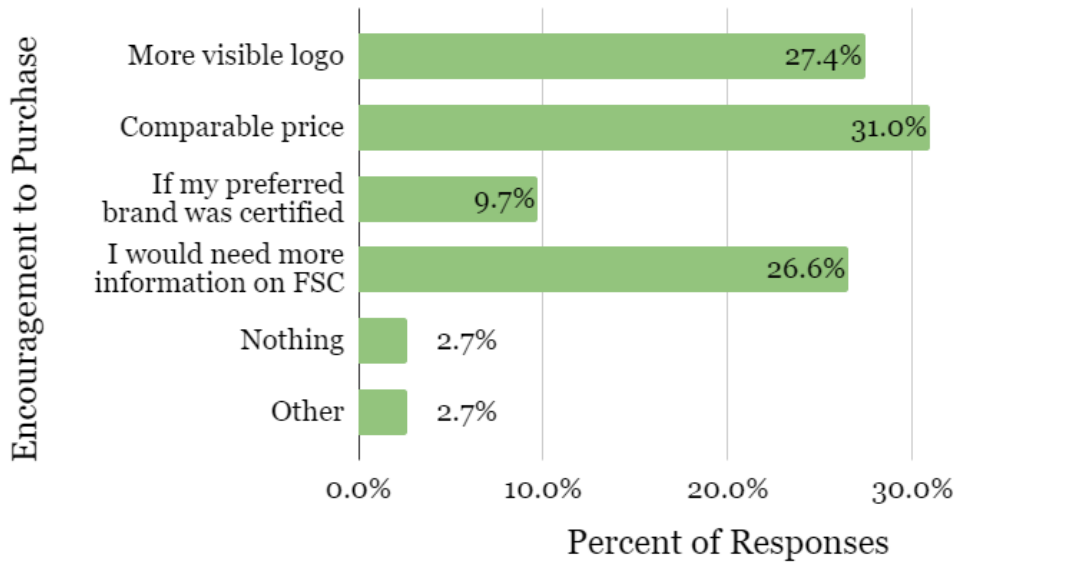


Figure 19: Results of question “What would encourage you to look for products that carry this logo in the future?” (Zoo and CBD, n=113)

As the survey continued, every consumer was asked, “What affects your toilet paper/tissue product purchases?”, shown in [Figure 20](#). Again, price was a crucial factor, encompassing almost half of consumers. Approximately one third of consumers selected “environmental impact”, while “brand” accounted for only about one fifth of the individuals purchasing influences.

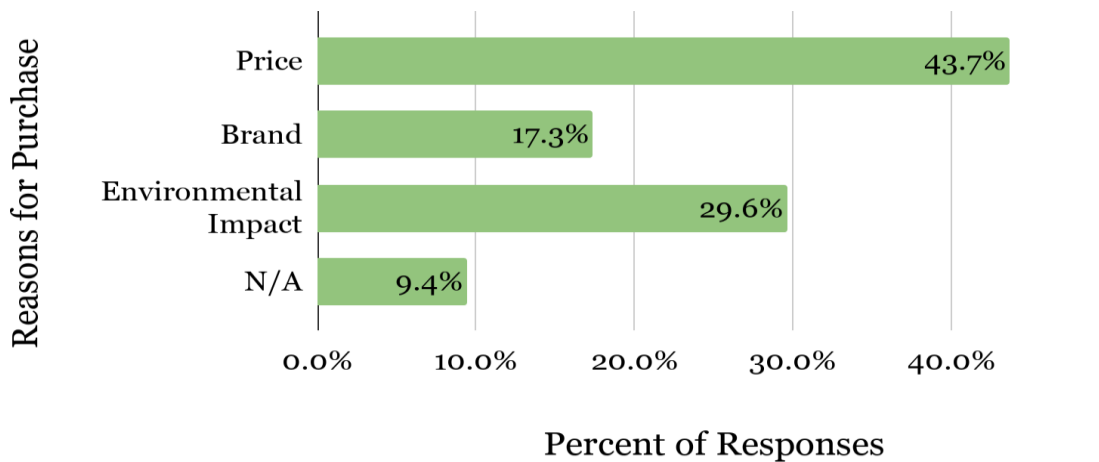


Figure 20. Results of question “What affects your toilet paper/tissue product purchases?” (n=211, Zoo and CBD)

The data above is important when deciding how to target consumers with our campaign, because we wanted to learn what influences purchasing decisions the most. The results show us that price is a major factor affecting purchasing decisions, further stressing the importance of our market analysis to compare the different toilet paper and tissue product prices. Furthermore, this shows us that consumers tend to be more worried about their spending rather than their impact on the environment.

Market Analysis

The results of our consumer surveys suggested that price plays an important role in purchasing behavior. Additionally, the perception of large price premiums on environmentally friendly products was confirmed. To address this concern, we performed a detailed market analysis on toilet paper products in the Wellington region. We decided to only focus on toilet paper products because retailers had significantly more toilet paper choices compared to other paper products. We visited the three largest grocery retailers in the Wellington region: New World, Countdown, and Pak'nSave. At each retailer, we recorded the certification, number of rolls, number of sheets, ply, and unit price per 100 sheets.

In total, we recorded data for 57 toilet paper products, shown in [Appendix J](#). To mitigate any additional factors in price, only 2-ply products were examined. When analyzing this data, it appeared that environmentally friendly products did have a large price premium. As shown in [Table 4](#), FSC products were 76% more expensive than similar non-FSC products. However, we believe this data to be misleading. Several products were much more expensive than the average price because they were hypoallergenic or have additional sought-after features. These luxury brands were generally FSC-certified, heavily altering the average price deviation for FSC products. For the typical consumer who is concerned with price, they are unlikely to purchase these brands. To compensate for this, we also analyzed the data using a standard deviation filter to remove any expensive products from the analysis, as seen in [Table 5](#) below. First, a cutoff price was calculated by adding one quarter ("Filter Degree") of the standard deviation of toilet paper prices to the average price of toilet paper products, as seen in equation (1). Products whose average price was greater than the filter cutoff were excluded from the filtered data analysis. The new filtered data indicated that the average consumer would only have to

pay about 14.3% more for FSC-certified products. Additionally, four of the ten cheapest toilet paper products were FSC-certified, so if consumers are aware of FSC and willing to change their preferred brand, they can purchase an FSC product with little or no premium.

$$\text{Filter Cutoff} = \text{Average Price} + (\text{StDev} * \text{FilterDegree}) \tag{1}$$

Table 4: Results of Market Analysis of Filtered and Unfiltered Data

	Unfiltered	Filtered
FSC Price	\$0.59	\$0.32
Non-FSC Price	\$0.34	\$0.28
Price Premium:	76.71%	14.29%

Table 5: Toilet Paper Product Filter Parameters

	Unfiltered	Filtered
Number of Products	29	20
Average Price	\$0.44	\$0.29
Standard Deviation	0.306	0.091
Filter Degree	0.25	
Filter Cutoff	\$0.52	

Retailer Interview

Our group performed a semi-structured interview with a retail manager, with years of experience in the grocery industry, from a popular grocery store in the Wellington area. The notes from this interview can be found in [Appendix K](#).

The interview focused on how products with environmental certifications are marketed in stores, how conservation campaigns have made impacts on consumer habits in the past, and if there were viable ways for advertisements and displays for conservation campaigns to be implemented into retail stores. The manager gave us insight on the consumer market, and how stores choose which products are stocked. We had two main takeaways from this interview: market share of sustainably sourced products is almost entirely driven by product sales, and

manufacturers will only get involved in educating consumers if it is apparent that a profit will be made from taking this action. He advised us that most decisions for retailers are determined by sales; if a product is making more money, more resources will go into producing it. When asked about the manufacturing of environmentally friendly products, he noted that manufacturers almost never make a product just because it is morally good to make it. The environmental friendliness of a product might be a reason that consumers purchase it, but the sales from the product are what drives the manufacturer to make it. An example the manager provided of this concept was the cage free egg movement, which is very large in not only New Zealand markets, but markets across the world. Cage free eggs were first available at a much higher price than caged eggs, as the market share of cage free eggs was originally very low. However, after more consumers supported the cage free movement and purchased cage free eggs, the market share of cage free eggs dramatically increased. The increase of market share eventually drove prices for cage free eggs down, in turn increasing the support for cage free eggs by consumers even more due to the accessible and comparable price between the two types of eggs. It is important to note here that the cage free movement directly relates to animal welfare concerns, which can easily draw a very strong emotional response from consumers, which is a barrier for deforestation conservation campaigns. Also, the decreasing price element in the cage free movement is not very relatable to FSC, as FSC-certified products are already comparable in price, but the increase in production of cage free eggs due to consumer support is very important to know for our campaign. It is clear from this that the best way to expand the market share of FSC is to get more consumers to support and purchase these products.

Another topic we aimed to learn about in this interview was the viability of having our campaign be involved inside retail stores. The manager advised that conservation campaigns do not usually have a presence in retail stores unless a manufacturer is partnered with the movement, and advertise it on their products. This led us to inquire about how conservation campaigns get advertised on the packaging of products. The manager described that if a manufacturer wants their consumer base to be educated on a topic, they will put a large amount of time and money into ensuring that this occurs, but the manufacturer needs to be assured that there will be a profit from doing so. For example, he noted that for manufacturers

to display larger FSC logos on their products, or add informative text on their products about FSC, they would need to identify that FSC-certified products are selling better than non-certified products within their brands because of the FSC certification. The likelihood that we would be able to get signage from our FSC campaign on retailer shelves would be low, but manufacturers could eventually take on the act of educating consumers about FSC if there was enough consumer support for products certified by the organization.

FSC Professional Interviews

We performed a semi-structured interview with the gift-shop manager at Wellington Zoo. The notes from this interview can be found in [Appendix L](#). The manager has experience in establishing partnerships with FSC product suppliers and convincing non-certified sources the advantages of becoming certified. Currently, 19% of all products in the gift shop are FSC-certified, including those which cannot be certified such as soft toys. He stated that a large communication point with suppliers is that many have never heard of FSC. This provides an opportunity to educate the suppliers about FSC in hopes of convincing them to become certified. If a supplier says their products are PEFC certified or recycled, this can also be a stepping-stone to a deeper conversation about FSC.

Our next interview was with the FSC New Zealand Business Development Manager, Cyrielle Durand. The notes from this interview can be found in [Appendix M](#). Her job was to develop FSC campaigns in New Zealand, establish standards for being certified, and recruit organizations to become certified. First, we sought clarity on the certification process. For a supplier to become certified, they must comply with the 10 FSC principles, adhere to a reasonable chain of custody after the timber leaves the forest, and they cannot mix FSC timber with non-FSC timber. About 70% of timber in New Zealand is sourced from FSC-certified suppliers, and most certified timber is from plantations, rather than natural forests. When asked if FSC products are more expensive, she stated that while businesses sourcing timber for large products will notice a difference, when purchasing everyday products, the difference is minimal. She also gave us insight into how FSC logo placement/size is determined and why it varies by country. This is completely based on the company's marketing strategy. Companies will market their products based on what they think the consumer wants. If the companies

believe consumers are interested in being environmentally active, the logo will be apparent. Conversely, if the consumers are only interested in price, the company will have no reason to show the logo, as it may lead consumers to believe the product is more expensive. This is important to our campaign because it demonstrates the reciprocal relationship between retailers and consumers. Retailers are directly influenced by consumers' behavior due to supply and demand. Consumers also recognize many logos strictly from product labeling, as shown by the consumer survey data. Despite this relationship, it will likely be easier to design a campaign which influences consumers and attempts to make changes up the chain to retailers and manufacturers. If consumers begin purchasing more FSC-certified products, manufacturers of non-certified products may seek to become certified to increase their market share.

Interview Coding

All the interviewees were asked questions where they ended up sharing their opinions about FSC, and the impact of working in a career where FSC is part of everyday life. By coding our compiled interview responses, our team pulled out first order, second order, and aggregate concepts that could be used to learn more about this objective. The tables for our interview coding can be found in [Appendix N](#). The first order concepts were ideas and opinions that came directly out of the notes taken during our semi-structured interviews. The second order concepts were themes that the first order concepts could be clustered into. From our interviews, the second order concepts were general statements about supporting FSC or not supporting FSC, and other opinions that would play into this. From these second order concepts, further clustering could be done to pull out the aggregate concepts from these statements. Overall, there were three themes that came through in our interviews when individuals mentioned their views on FSC. People generally voiced whether they supported FSC or not, but what we could gain from the aggregate concepts was more insightful than this. We could conclude from second order concepts like "increased awareness about environmental impacts after learning about FSC" and "FSC cares about the welfare of the environment, wildlife, and surrounding communities" that themes of environmentally-friendly and humanitarian actions were common in FSC perceptions of our interviewees. Our group could build off these themes with our campaign, using them to stress that FSC is a beneficial

organization to support. This set of interview coding also gave us insight into areas of concern about FSC. We found that there were issues with the transparency of FSC which impede support of the organization from one of our interviews. This was a viewpoint that our team had not originally seen, but that the Zoo could try to address in the information they convey in the campaign.

4.3: Investigate how Wellington Zoo promotes FSC

This section of the study examined how Wellington Zoo had already implemented education programs about FSC, and how effective those implementations were. The main methods of research were semi-structured interviews and the administration of the consumer survey.

Zoo Staff Interviews

The interviews with Zoo Staff were aimed to provide more information about how the Rangers, keepers, and other Zoo staff had involved FSC within the Zoo. Notes from these interviews can be found in [Appendix O](#). Before talking with staff members, we attended multiple Animal Talks to observe how they promoted FSC and how the audience perceived it. An image of an animal talk that we went to is shown in [Figure 21](#). Most staff members talked about FSC towards the end of the talk, and made it somewhat interactive by having visitors look for the FSC logo on their printed copy of the Zoo map. Frequently adolescents appeared to maintain more focus on the animal talk host and interact more than adults during the FSC discussion. Less people appeared to maintain focus on the animal talk host when they were standing off to the side of the habitat, rather than in front of it. During the interviews, we inquired how the Animal Talks were structured and if they actively used any techniques to increase audience engagement. After organizing our notes by common themes, we found that there was no specific structure for the Animal Talks. The keepers and rangers were free to talk about what they are most interested in or passionate about with each animal. They were told which conservation organization to discuss, which only varies from FSC when the animal cannot

be directly related to deforestation or when a specific conservation exists for the species, but the entire structure of the discussion is planned by the speaker. The speakers did not use any specific techniques, but a common theme was that during talks, the speakers ensured that the discussion about deforestation focused more on positive actions people can take to help, rather than any negative facts about it. Many of the keepers and rangers explained that in their opinion, the best way to engage people in a discussion about FSC was to establish the audience's connection with the animal and to explain how easy it is for people to help by looking for FSC products. Keepers and rangers establish a connection between the audience and the animals by explaining the characteristics of each animal's personality, which are often human-like and easy for people to relate to.



Figure 21. Zoo staff member holding an FSC sign during an Animal Talk

The second set of semi-structured interviews included an interview with the Zoo's children program educators, which was designed to understand what children programs currently exist and how they discuss FSC. Notes from this interview can be found in [Appendix P](#). The Educators explained that three types of programs exist; holiday programs, school programs and bush-builder programs. These programs work with over 10,000 children per year, and are generally aimed to teach kids more about animals and the environment. The holiday programs run daily for a few weeks while students are out of school, and kids can sign up for however

many days they wish to attend. For the school programs, a group of students from a school go to the Zoo once for a few hours during school hours. At both the holiday and school programs, the children are given a tour around the Zoo and attend many discussions like Animal Talks. FSC is only talked about at these discussions, even though it could be brought up many other times during the program, but despite this the educators stated that many returning students have retained knowledge about FSC, which shows the effectiveness of the discussions. The educators have tried giving kids the option of having a temporary stamp on their arm with the FSC logo so that they can remember it outside the Zoo, but stopped because the ink logo tended to dissolve into a dark, unrecognizable image in a short period of time. The bush-builder program spans a week or more with a Zoo educator visiting a school daily to talk about animals and to help the students plant trees around the school. Conservation is discussed but FSC is not a topic of focus.

The third set of semi-structured interviews included an interview with the Zoo's retail manager, aimed at getting more information about how the Zoo might be involved with FSC outside of the Animal Talks and children's programs. The retail manager, as highlighted in Chapter 4.2, explained that currently only a small portion of the gift store products are FSC-certified, and that he is working to increase that number. While there are FSC products in the gift store, there is very little media promoting it. The Zoo has a main cafe near the entrance, and a smaller one towards the middle of the park. The cafes are run by an external food service group that does not use FSC-certified products; however, the retail manager could contact the group in hopes of changing this. There is some signage and media promoting FSC around the Zoo as it relates to individual animals, and is often displayed with a large body of text or audio clip. Examples include a wood design showing which types of wood logging tend to be more harmful to tigers as pictured in [Figure 22](#), and an audio loop of a keeper discussing the benefits of FSC to this species.



Figure 22. Wood design promoting FSC outside the tiger habitat

Consumer Survey

The consumer survey was designed to provide us with information on whether people bought FSC products as well as whether they had been to any Animal Talks at the Zoo which happen to discuss FSC. Comparing the buying habits of people who have and have not been to an FSC educating animal talk may provide insight on how effective Animal Talks are on changing people's behavior. [Figure 23](#) below displays people responses to whether they buy FSC products who have and have not been to an FSC-discussing animal talk.

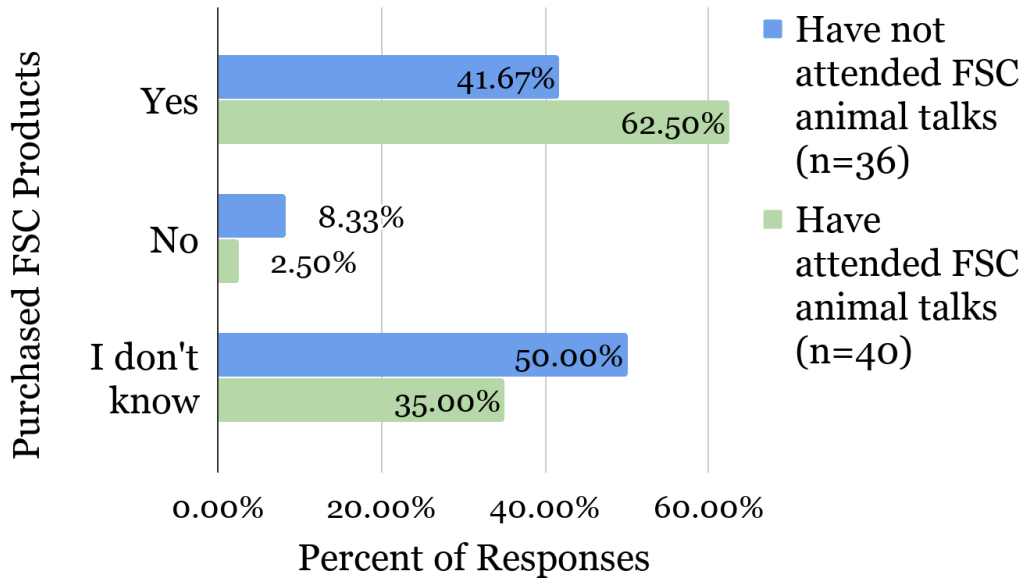


Figure 23. Consumer responses to “Have you purchased FSC-certified products?” who have (n=40) and have not (n=36) been to an FSC animal talk (Zoo and CBD)

People who have attended Animal Talks that happen to discuss FSC said that they have purchased FSC products almost 21% more than people who have not attended these Animal Talks. There are potential lurking variables that exist such as the fact that people who have gone to the Zoo and attended FSC educating Animal Talks might be more likely to buy FSC products in the first place. With such a large difference, however, and with the fact that these Animal Talks are the main form of FSC education at the Zoo, it is reasonable to believe that the FSC educating Animal Talks may be having a measurable impact on people, showing their importance and integrity to the FSC campaign.

4.4: How to design a campaign that can change the purchasing habits of consumers

Our project’s fourth objective aimed to investigate how to positively influence the purchasing behaviors of consumers to be more environmentally sustainable with a campaign.

To do so, our team conducted consumer surveys, semi-structured interviews, past campaign reports/survey data analysis, and interview coding.

Consumer Survey

In the consumer survey, we asked participants about how they would like to learn more about FSC. Multiple options were displayed, and the participants could select multiple answers if desired. The data from this question can be seen in [Figure 24](#), below.

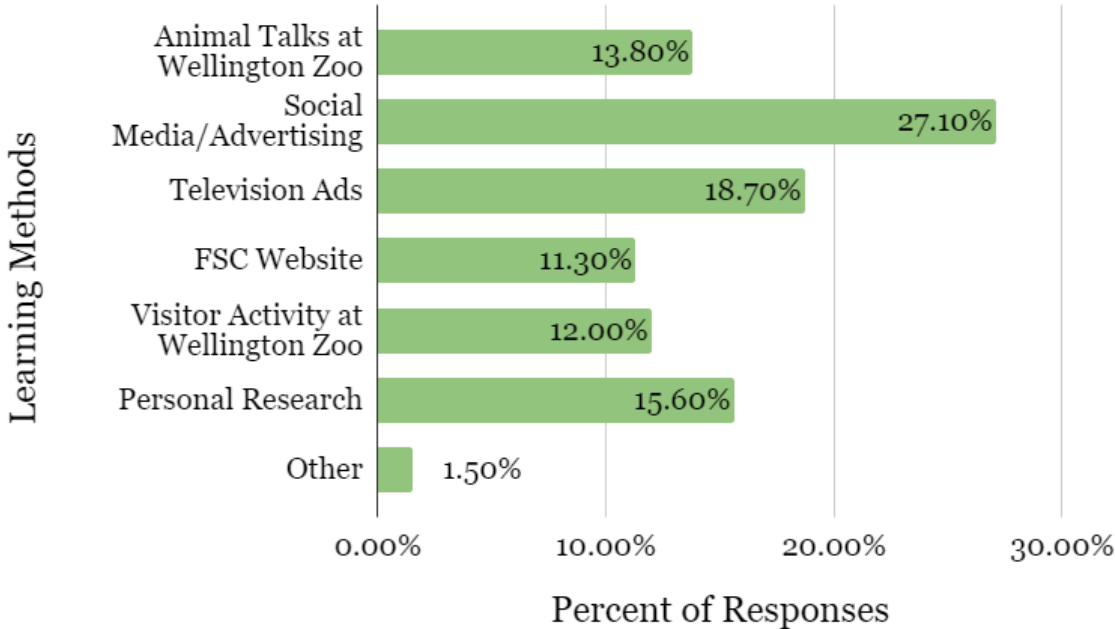


Figure 24. Consumer responses to “How would you like to learn more about FSC?” (n = 211)

The information we gained from this question on the survey was helpful when considering what type of components to include with our campaign suggestions, as this part of the survey essentially asked consumers what type of campaign they would prefer. It was apparent that most of the participants found a media advertising approach attractive, as just under half of the total selections for this question were either the “Social Media” or “Television Ads” options. This information was not surprising, as media advertising is one of the largest markets in the world today, with social media and television being such a huge part of everyday life. There was still a considerable amount of interest in the Animal Talk option at Wellington Zoo, but it was interesting that the “Visitor Activity” option was less popular. The “Visitor Activity” option was in reference to an interactive exhibit in the Zoo, but this may have been

unclear to some participants, and possibly interpreted as an extra program on top of a normal Zoo visit. This may indicate that some consumers are interested in being told the information about FSC, rather than reading the information on an interactive display, or participating in a special program at the Zoo. Interestingly, the amount of “Personal Research” selections was over 4% greater than that for the “FSC Website,” suggesting that not all consumers interested in finding out more about FSC would go directly to FSC for the information. This may indicate that consumers either do not understand what FSC is, how FSC functions as an organization, or do not believe that the FSC website will contain helpful or potentially valid information.

We gave all survey participants a list of 10 other existing environmental certifications with their respective logos, and asked if they looked for any of these certifications on products when shopping. The list was tailored to include certifications that were prominent not only internationally, but also specific to New Zealand markets. The organizations listed included: BioGrow (organic produce), Free Range (cruelty free eggs/poultry products), SPCA Blue Tick (cruelty free meat products), Cruelty Free (non-animal tested cosmetic products), Energy Star/Rating (electrical appliance energy usage), Fairtrade (workers’ rights), EnviroMark (low environmental impact), Environmental Choice (low environmental impact), Roundtable on Sustainable Palm Oil (sustainable palm harvesting), and Programme for the Endorsement of Forest Certification (sustainable timber harvesting). Participants selected Fairtrade, Free Range, SPCA Blue Tick, and Energy Star the most, but none of the certifications ended up with a response of 0%. This question asked if participants actively looked to purchase these logos. So, this data could not be used in a comparison to see how FSC recognition measured up to other environmental certifications, as this focused on if respondents supported any of the organizations, not if they recognized them. However, it was interesting that the most popular organizations supported were causes mainly dealing with animal welfare, energy use, or humanitarian resources- not environmental concerns.

If a participant selected any of the certifications, they were prompted with two questions: “how have you heard of these organizations” and “what motivates you to look for items with these certifications?” The aim of asking these two questions of consumers was to gauge how other environmental certification organizations were successful in advertising their

certification, and why consumers supported the certification. The results from these questions can be seen in [Figure 25](#) and [Figure 26](#), below.

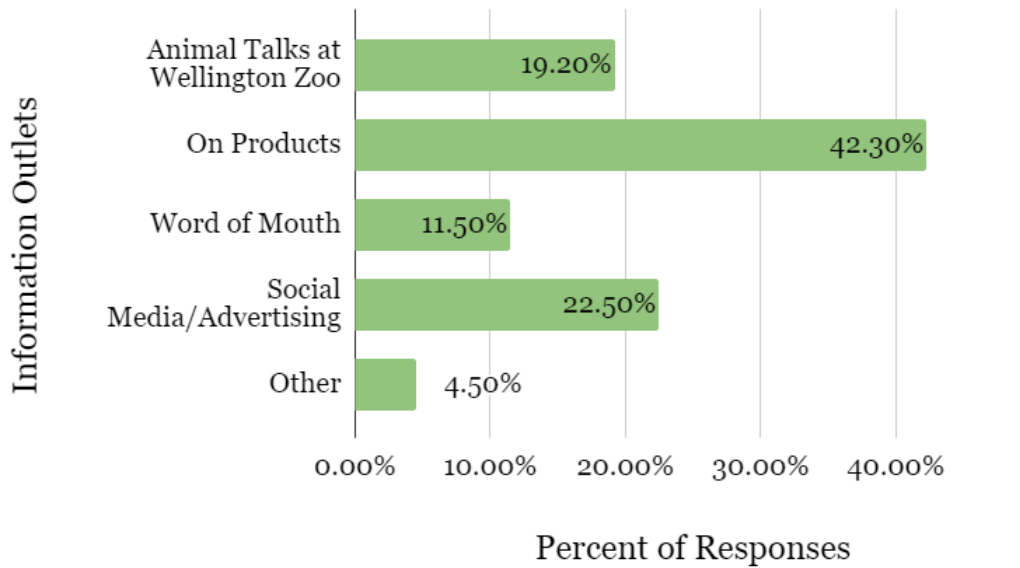


Figure 25. Survey responses to “How have you heard of these organizations?” (n = 211)

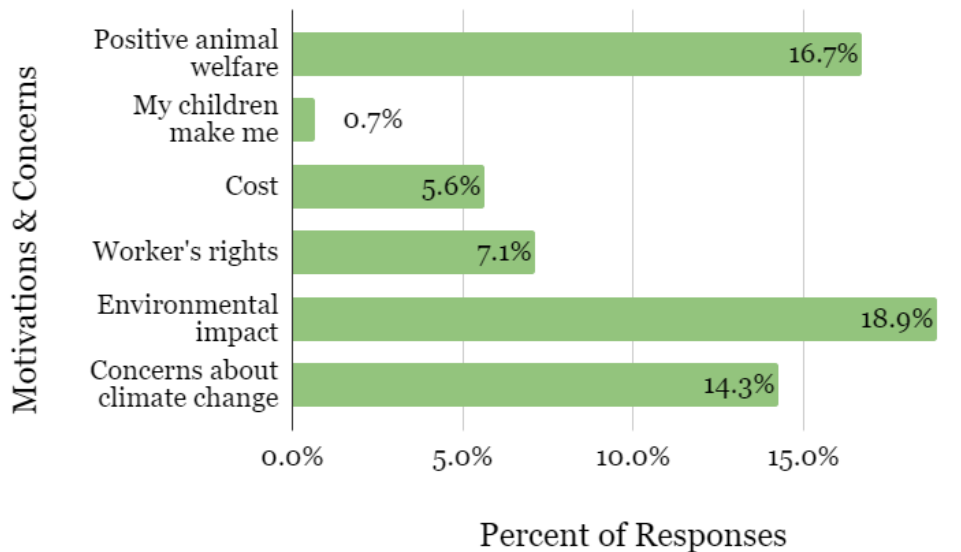


Figure 26. Survey responses to “What motivates you to purchase products with these certifications?” (n = 211)

It was apparent from our survey results that consumers mainly heard of, or remembered, other environmental campaigns from their presence on product packaging. If a product is certified by an environmental organization, this is usually signified by the logo of the

certification on the packaging of the product. This finding suggests that knowledge and understanding of the logo of an environmental certification is a key aspect in the total awareness of the certification. However, this was not the only important factor that we learned about from this section of the survey. The main reasons that consumers supported these organizations was because of environmental impacts, concerns about climate change, and positive animal welfare. These are all areas that FSC is concerned with as well. From this information, we can conclude that it is important to increase the frequency of the FSC logo around consumers, and tie the logo to positive impacts for both the environment, and animals.

Zoo Staff Interviews

To gain insight into how to effectively spread conservation messages, focusing on FSC, our team turned to the expertise of the staff at Wellington Zoo. We had the opportunity to hold semi-structured interviews with four zookeepers, two rangers, two zoo educators, and the marketing team at Wellington Zoo. These interviews were previously discussed in Chapters 4.2 and 4.3. During the zookeeper/ranger interviews, we asked staff which general visitor group to target with our campaign: children or adults. Overwhelmingly, the staff responded with children. During the zookeeper, ranger, and zoo educator interviews, the staff were also asked if there were any components that they would like to see in our campaign. Based on interview coding, some of the main answers to this question are summarized in [Table 6](#), below. All the suggestions from Zoo staff were based on their experience with conveying the FSC message in programs at Wellington Zoo. These suggestions were all components that our team could consider when designing our FSC campaign.

Table 6. Zoo staff suggestions for FSC campaign components.

Staff Group	Suggested FSC Campaign Components
Zookeepers/Rangers	Target children first, then parents with conservation messages
	Focus on grocery shopping habits with the campaign
	Focus on animal welfare for why consumers should support FSC
	Allow easy access for consumers to information about FSC
	Include a social media component where consumers can help spread the FSC message
Zoo Educators	Connect the struggle of animals to the solution of FSC and gain empathy from consumers
	Include a physical item with the FSC logo for kids to take home and spread the message to parents
	Create learning resources about FSC for teachers to use in the classroom

A general theme conveyed in our interviews was that children are more open to change than adults, and they are the group that will be able to help spread the FSC message the longest. The zoo educators reiterated this message during their group interview as well. Also, zookeepers and rangers felt that younger generations generally take on more responsibility when it comes to environmental matters. Additionally, they recommended that we design a physical object with the FSC logo that the Zoo could provide and that children could take home. For example, if children learned about FSC during a field trip to the Zoo and received bracelets with FSC logos on them, they could bring them home to their families. This might not only help strengthen the image of the FSC logo in children’s memories, but also allow the FSC logo and message to branch out to the rest of the household. The educators also recommended that the

campaign focus on showing how easy it is to support FSC due to the range of FSC-certified products available on the market.

A common suggestion for our campaign was to keep our conservation messages positive. During our interview with Wellington Zoo's marketing team, noted in [Appendix Q](#), we were told that individuals do not engage with negative messages, because negative messages make them feel that it is too late make positive changes. As a result, our campaign needs to focus on positivity and how small changes in purchasing decisions can make a major difference to the environment and wildlife. Additionally, the marketing team mentioned that currently the Zoo partners with several media organizations, providing them with opportunities for radio and online advertisements. They indicated that FSC conservation messages could reach the community through the means of these partnerships.

Since Wellington Zoo will be running this campaign, the role of deforestation in the struggles that animals face in the wild may be a way to elicit an emotional response in consumers. There are many species of animal at Wellington Zoo that would feel negative effects of deforestation in the wild, including the Sun Bear, Sumatran Tiger, Giraffe, Red Panda, Gibbon, and Chimpanzee. Interviewees suggested that we try to show how special and unique these animals are, make it known that deforestation threatens the existence of these species, and talk about the role of FSC as a solution that consumers can support.

During these interviews, it was established that many of the staff at Wellington Zoo did not feel as if consumers were fully aware of what FSC stood for, or did as an organization. Many interviewees felt that if consumers could have a better understanding of the organization, there would be an increase in support for FSC. It was also recommended that a social media component be included in the campaign, as social media is very prominent today. Also, our interviewees made the point that many people will do good deeds if they feel that they will get recognition for them, which can easily happen by posting about an action on social media. Enabling consumers to "share" when they purchase FSC products may increase the amount of support among consumers, while spreading the message of FSC at the same time.

The responses in [Table 6](#) above were helpful insights from individuals who have a significant amount of experience with conservation campaigns at the Zoo. It was important for

our team to gain insight into what suggestions staff members at the Zoo had for our campaign, as we could use this information to explore new aspects for our proposed strategies. Also, we could highlight areas of need to be targeted with our campaign. We used these suggestions to guide our design process, but this is not to say that our designs were going to exactly follow any suggestion given to our team.

FSC Professional Interview

To understand past campaign efforts for FSC in other parts of the world, our team had the opportunity to interview with Cyrielle Durand, the FSC representative for New Zealand. This interview was previously discussed in section 4.2. During this interview, we learned about a social media campaign that FSC holds monthly, called “FSC Friday.” In this, consumers are encouraged to post a photo of an FSC-certified product in their house or office with “#FSCFriday” in the caption. The use of the pound symbol, or “hashtag,” allows users to click on the hashtag and be linked to a page with all the other “FSC Friday” posts on the social media platform from other users. Our team was not originally aware of this active social media campaign, and could possibly use this as a component in our campaign plan at the Zoo.

Our team also interviewed the FSC representative about what consumer groups existed, and out of these, which ones we should target with our campaign. According to Ms. Durand, there are three main types of consumers in relation to environmental behaviors: those who are environmentally active, those who would be environmentally active if enabled, and those who are not, and do not wish to be, environmentally active. She recommended that our campaign try to focus on the consumers that need to be enabled. This is because those that are environmentally active will either be supporting FSC already, or would readily support FSC once they hear about the organization. This group would not need to be specifically targeted since those who are not environmentally active and do not wish to be. Meaning, they will not be influenced by a conservation campaign. The group of consumers that need to be enabled to act should be the main focus, as this group just needs information about FSC given to them, showing how easy it is to take part. Ms. Durand recommended to stress to this group that FSC products are a comparable price to other products, and there are many FSC products readily

available on the market. To support FSC all one would have to do is purchase a product with the FSC logo when doing normal shopping.

Interview Coding

Our interviews with zookeepers/rangers, zoo educators, the zoo gift shop manager, and the FSC representative gave us a range of valuable insight into the ways that the FSC message can be incorporated into programs for consumers. The responses on this topic can be seen in [Appendix N](#). Again, first order concepts were taken directly from our interview notes, and then clustered to form second order concepts. The second order concepts all focused on ways different audiences would react to messages about FSC, and methods for successfully conveying messages about FSC. There were three main takeaways from this set of coding. Based on zookeeper and ranger responses, we learned that the audience receiving the FSC message verbally, dictate how well it is received. That is to say, if the audience wants to hear about FSC they will listen, but if not, the message will be disregarded. This is important to understand when creating a way to deliver the FSC message, as we must convince our audience to want to learn about FSC. Zoo staff also conveyed that the way the FSC message is being communicated to Zoo visitors currently is not sufficient. Demographic groups respond to conservation messages in different ways, but the Zoo is currently only talking about FSC during Animal Talks with visitors. However, it was identified from second order concepts that using animals when explaining the impact of FSC, keeping conservation messages simple, and keeping marketing that supports FSC positive, are effective methods for conveying the FSC message.

Also, in all our interviews, we asked respondents if they had any suggestions for our campaign. However, there was more to gain from asking this in interviews other than just gaining ideas for our campaign suggestions. The suggestions were all made for a reason, meaning that there were areas that needed to be addressed in relation to conveying the FSC message at the Zoo.

Although all the suggestions from our interviews could be grouped into six second order concepts, there seemed to be three overarching themes coming out of this topic. It was apparent that current methods of relaying FSC messages are not flexible enough to appeal to all consumers. Based on numerous first order responses, it was apparent that another area to be

addressed was that consumer exposure to FSC is not high enough, meaning that both the correct information about FSC is not reaching consumers like it should, and that many consumers may not even know FSC exists due to poor marketing. Our interviewees stressed that the campaign should focus on children. Also, our interviewees recommended to show the animals at the Zoo that are affected by deforestation to get an emotional response out of our audience.

Past Campaign Analysis

To get a broader perspective of conservation campaigns in the region of Oceania, our group reviewed three conservation campaigns held at zoos across Australia and New Zealand. We reviewed reports on Wipe for Wildlife, a campaign for recycled toilet paper, and Don't Palm Us Off, a campaign for sustainable palm harvesting and orangutan conservation, both held at Zoos Victoria in Australia. Also, we reviewed Cats Inside at Night, a native species conservation campaign held at Wellington Zoo. Our group took notes in a review form to guide the review process; the completed forms can be found in [Appendix R](#). A table summarizing the main points from these reviews can be found in [Table 7](#), below. The goal of this review was to gain insight on what was successful in past campaigns, and possibly what to avoid, in a conservation campaign. Our group had several areas of interest when reviewing the reports to fully understand the campaign: why the campaign was started, what organizations were involved, what were the main campaign strategies, and what were the preliminary results of the campaign.

Table 7. Conservation campaigns review.

	Wipe for Wildlife (Zoos Victoria, 2017)	Don't Palm Us Off (Pearson, Lowry, Dorrian, and Litchfield, 2014)	Cats Inside at Night (MacDonald, 2014)
Campaign goal	Influence Zoo visitor purchasing decisions to use 100% recycled toilet paper, or FSC-certified products.	Raise public awareness about palm oil and gain support for palm oil labeling legislation.	Influence Wellington residents to bring their pet cats inside at night.

Reason for campaign creation	Deforestation is a major cause of animal habitat loss and other negative environmental impacts.	Orangutan habitats in rainforests are seriously threatened by palm harvesting, endangering the species.	Cats are one of the largest threats to New Zealand biodiversity, as many native species in New Zealand are animals that would be prey of cats.
Organizations involved	Zoos Victoria	Zoos Victoria & several other zoos across Australia.	Wellington Zoo, Wellington City Council.
Campaign strategies	A superhero mascot named “Crapman” was used in the campaign. There was an informational video about recycled toilet paper made, then shared with other zoos. Attention grabbing signage and head-in-the-hole photo ops were placed around the Zoo. An interactive maze was constructed in the Zoo, with questions about consumption habits and toilets for decoration. Print-out door hangers for bathrooms were made available online. Posters featuring animals affected by deforestation were made. Information was made available on the Zoos Victoria website. Campaign was advertised on television.	An informational video featuring a popular news anchor, celebrities, and local families highlighted the links between palm oil and orangutan habitat destruction. Focused on the slogan “we want the choice.” The video was played on loop in Zoos Victoria, shared on YouTube, and aired on national television. Petition cards were available for visitors to sign. Informational wallet cards were distributed with ingredient names that represent palm oil on labels. The issue was reported on by national television and radio news programs.	Animal presentations at the Zoo featured native species, and conservation messages about bringing cats inside at night were mentioned three times by the zookeeper/ranger throughout the presentation. Surveys were administered to visitors leaving the presentation, and half were asked to fill out a pledge card stating that they would take their cats inside at night.
Preliminary campaign results	After the conclusion of the campaign, 91% of visitors said they remembered the message from Wipe for Wildlife.	During surveying, visitors that correctly understood palm oil was the major cause for orangutan habitat loss increased. The baseline was 54.3% correct, 6 months into the campaign was 97.3%, 12 months into the campaign was 78.4%, and 6 months after the end of the campaign was 75.2% correct.	From a follow-up survey, 91% from the non-pledge card group recalled the conservation behavior, while 100% of the pledge card group recalled the behavior. From the non-pledge card group, 57% adopted the behavior, while 100% of the pledge card group adopted the behavior.

All three campaigns reviewed had messages about environmental conservation and impacts on animals in the wild. However, the campaigns all took different approaches to elicit the desired behavior in the target audience. Wipe for Wildlife, a campaign with a similar topic to the future FSC community campaign, had many different approaches for campaign strategies to try to convince consumers to switch to 100% recycled toilet paper, or alternatively look for FSC-certified products. This ranged from a brightly colored mascot with an attention-grabbing name, a social media campaign, an interactive exhibit at the Zoo, and creative door hangers and posters for bathroom doors. An interesting result from this campaign was that most respondents indicated that “Crapman” was the component that they remembered the most from the entire campaign, with 91% of visitors indicating that they remembered the campaign (Arup, 2013). Crapman was a “superhero” for the Wipe for Wildlife Campaign, wearing a bright green, comically oversized costume, advocating for the use of 100% recycled toilet paper, or FSC-certified toilet paper as an alternative. An image of the character can be seen below, in [Figure 27](#). Crapman would walk around the Zoo, taking photos with visitors while spreading the message of Wipe for Wildlife. Head-in-the-hole cutouts of Crapman were set up around the Zoo, where visitors could also take photos posing as Crapman themselves. This was an interesting campaign strategy, and this component from the Wipe for Wildlife campaign seemed to linger the longest in visitor’s memories. However, the campaign at Zoos Victoria was cut short due to an Australian legislation from two years prior in 2011. The Baillieu timber industry action plan stated that the government would not fund an organization that supported any forestry certification without also equally supporting the Australian Forestry Standard (Arup, 2013). Zoos Victoria is government funded, and was only supporting FSC with the Wipe for Wildlife campaign.



Figure 27. Crapman from Wipe for Wildlife (2013)

Don't Palm Us Off was successful in educating its target audience. Six months after the conclusion of the year-long campaign, 75.2% of Zoo visitors could correctly identify that palm harvesting for palm oil production was a cause of habitat loss for orangutans. This was a 21.2% increase from the baseline survey conducted six months before the start of the campaign (Pearson et. al., 2014). The focus of the Don't Palm Us Off campaign strategies was the informational video filmed for the campaign. The video had four main components: a popular news anchor as narrator, celebrities as spokespeople, "regular" Australian families, and the slogan, "We want the choice." The video was highly publicized, getting national television airtime. The use of a reputable news anchor that was trusted by the public to deliver news daily could have made it easier for consumers to trust the information being presented in the video. The use of celebrities could have helped validate the cause in some consumers' eyes. Using families in the video could have made the message more relatable to consumers. The slogan "we want the choice" was an interesting strategy for the campaign. The slogan was used to make consumers realize that without labeling of palm oil, they had their choice taken away from them when making purchasing decisions, as they were not given access to the information about palm oil in products in the first place. This component of the Don't Palm Us Off

campaign, focusing on the consumer's freedom of choice when making purchasing decisions, was a possible strategy that our group took away from this study.

The Cats Inside at Night campaign was a valuable report to review, as this campaign was held four years ago at Wellington Zoo. The desired behavior change, bringing cats inside at night, was overwhelmingly adopted when visitors were asked to fill out pledge cards; 100% of these visitors reported that they adopted the behavior. Overall, 70% of the survey respondents that went to the presentations, both pledge card and non-pledge card, adopted the behavior, and just over half of these visitors attributed the behavior change to the message in the Animal Presentation from the Zoo (MacDonald, 2014). The Animal Presentation featured two to three live, native animals of New Zealand. The conservation message was relayed to the audience three times during the presentation. The fact that half of the visitors that adopted the behavior change indicated that they did so because of the conservation message relayed at the Zoo is a key point for our project. From this study, we may be able to suggest a way to get the FSC message to stick with consumers. The influence of pledge cards in this study cannot be ignored, and the component of consumers voluntarily pledging to do a behavior will be explored in our design process.

4.5: Designing the Wellington Zoo FSC Community Campaign

The final objective of our project was to take all our data analysis and use the information gained to design components for Wellington Zoo to consider for their FSC campaign. To do so, we implemented the 4-3-3 method for seven different campaign areas to begin the design process. We decided upon these areas from key components and tactics highlighted from our interviews, surveys, and literature reviews. The focus areas included different components of the campaign that would be implemented at the Zoo, and tactics to expand the campaign past Zoo visitors. The 4-3-3 method made up the front-end of our design process, which resulted in seven groups of preliminary design proposals that had been created with input from all members of the team. At this point, our team reached out for front-end feedback from our sponsor and colleagues at the Zoo. The aim of this process was to gauge

how our preliminary designs were lining up with the abilities of the Zoo to facilitate the campaign, and gain outside feedback to help avoid any notes of groupthink that could have possibly manifest during front-end designing. With the feedback from this meeting, our group could move to our back-end design process. This consisted of building upon the preliminary proposals as a team, outlining solid goals for each of the seven campaign areas, ranking the expanded proposals and then running the top proposals through an impact-effort matrix to assist our group in getting to a final set of proposals that would be most effective and viable for Wellington Zoo's FSC campaign. During this process, two of the campaign areas from the front-end process were combined into one as they were found to have similar goals, resulting in six unique focus areas of strategies for the FSC campaign.

4.6: Discussion of Findings

Through our data analysis, we identified key information about the target audience of the Wellington community and the necessary criteria for a successful conservation campaign in this area. These key points were considered when moving forward with the campaign strategy design process.

Our consumer survey results showed that under half of the Wellington community could recognize the FSC logo, and an even smaller portion correctly understood the aims of FSC. However, from our survey we also found that consumers were interested in learning more about FSC. From our interviews we learned that many Zoo staff members now support FSC, but before working at Wellington Zoo, had never heard of FSC before. This shows that even the people who would most readily support FSC have difficulty finding out about the organization. We found that Wellington consumers support many other sustainably sourced products through purchases of organic foods, cage free eggs, free range meat, energy efficient appliances, Fairtrade products, and the use of reusable, recycled, or compostable shopping bags in stores. Consumers that already support so many environmental certifications would likely also support FSC if they knew more about it.

We learned that a common barrier blocking consumer purchases of FSC-certified products is the belief that FSC products are more expensive than other products. This is reflective of a larger conception that environmentally friendly products are more expensive than regularly sourced products, and can only be purchased if the consumer is at liberty to spend extra money. Our market analysis data showed that this is not necessarily the case for FSC products; products across the price and quality spectrum were FSC-certified, including many “bargain” or “store” brands. This means that the choice to support FSC does not have to come with a significant price premium.

We found that Wellington Zoo has been relaying the FSC message to its visitors during daily Animals Talks and in school programs for children. From our surveying we found that people who attended FSC educating Animal Talks were more likely to also state that they have purchased FSC products, suggesting that an association may exist. Our background research informed us that direct appeals from one person to another are much more likely to change people’s behavior than non-social methods, so we believe that the Animal Talks are effective, and can be further expanded within our campaign. With so many students attending Zoo programs, and with students tending to be very open to being environmentally friendly, it would be ideal to purposefully introduce students to FSC during the programs. Additional activities could be designed around FSC education, and better quality FSC stamps or a similar concept could be reintroduced. The media that exists around the Zoo is well intended, but it was apparent that a small number of visitors took the time to learn from it. Simpler and more eye-catching media could have a higher impact on visitors.

From our retailer interview, we learned that the largest factor contributing to what manufacturers produce and retailers stock is consumer sales numbers. Products that are popular with consumers will have increased production. To generally increase the number of FSC-certified items across all grocery stores, it needs to be clear to retailers and manufacturers that consumers are looking to purchase these types of products. Even if the FSC campaign is slow to catch on at first, if retailers and manufacturers see an increased number of people buying FSC products, then more manufacturers would consider becoming certified and increasing FSC advertisements. From our review of social marketing and behavior change texts,

it became clear that the best time to intervene and recommend a behavior change is at the time and location of the change is occurring, which is why it would be extremely effective for manufacturers and retailers to advertise FSC more.

From all our data, we saw that different types of messages have varying impacts depending on the demographic that receive them, and different types of strategies in a campaign must adapt for this. To be successful in reaching different demographics in an audience, the FSC campaign must have different components in which the core messages of the campaign are relayed, rather than one focused strategy. Rather than only using social media to send out messages, for example, physical advertisements and signage could also be used to send messages to those who do not use social media.

From all our interviews, there was a clear message that this campaign should be kept positive. It is not effective to make people feel accused that their actions are part of a problem that is causing negative impacts, as this will usually cause individuals to further close off to the idea. Rather, it is more effective to help the audience make an emotional connection to the problem at hand, and then encourage them to be part of the solution.

Chapter 5: Recommendations and Conclusions

After analyzing our consumer surveys, interviews, past campaign reports, literature reviews, and market research, and engaged in our design process, our team produced the following recommendations for Wellington Zoo's Forest Stewardship Council (FSC) community campaign. These recommendations are separated into six components:

1. Interactive exhibit in Wellington Zoo.
2. Enhance audience engagement components for Animal Talks.
3. Children's education programs.
4. FSC in Wellington Zoo's gift store.
5. Community outreach.
6. Partnerships with neighboring organizations.

5.1: Interactive Exhibit in Wellington Zoo

Our consumer surveys and interviews informed our team that half of the visitors at Wellington Zoo have minimal knowledge about FSC. To further educate visitors on this topic, our team concluded that an interactive exhibit about FSC will be necessary to engage children and adults at the Zoo. The purpose of this exhibit is to educate visitors about FSC and the impact that their purchasing decisions have on the environment.

We recommend an FSC story walk on the extension of the gibbon habitat walk path.

To educate Wellington Zoo visitors about FSC, we propose that Wellington Zoo should add signage about the story of deforestation to the renovation of the walk path next to the gibbon habitat. Our consumer survey showed us that almost half of the visitors at the Zoo do not recognize the FSC logo, so as a result, the Zoo needs to increase signage of this image throughout its pathways. As visitors walk through the bushed area, they will see fake trees lining the boardwalk, as seen in [Figure 28](#) below. The trees will have messages about FSC and

deforestation on them. These trees will be on an offset axle so that when the tree is rotated, a portion of the tree stump will be exposed, revealing a message about deforestation. The messages at the start of the walk will discuss thriving forests and land biodiversity that lives amongst it. Furthermore, there will be several fake animals that are found within this forested area, displaying the flourishing biodiversity in forests. As the visitor ventures down the path the majority of the trees will be stumps, and there will be no animals in the area. The messages presented will reveal how unsustainable deforestation negatively impacts the environment and survival of wildlife. However, as the pathway continues, the number of interactive trees will increase once again along with the animals in the area. FSC signage will be displayed throughout this area, conveying positive messages. We have learned from our interviews that positivity leads to the most engagement amongst individuals. The messages will reveal how FSC encourages sustainable forestry practices, and the positive impact of the organization on biodiversity and the environment. These messages will resonate with visitors, because they will be able to visually connect the concept of healthy forests and the survival of animals to FSC. Supplement to these fake trees, there will be additional signage along the walkway about FSC and its impact, in case visitors decide not to push the trees back to reveal these messages. At the end of the walkway, there will be a mirror framed with examples of FSC-certified products, displaying a message stating that the visitor can make a difference on the welfare of these animals and forests by purchasing FSC-certified products. The mirror will grab the attention of the visitor by helping them visualize that they can make a positive change through a simple act.

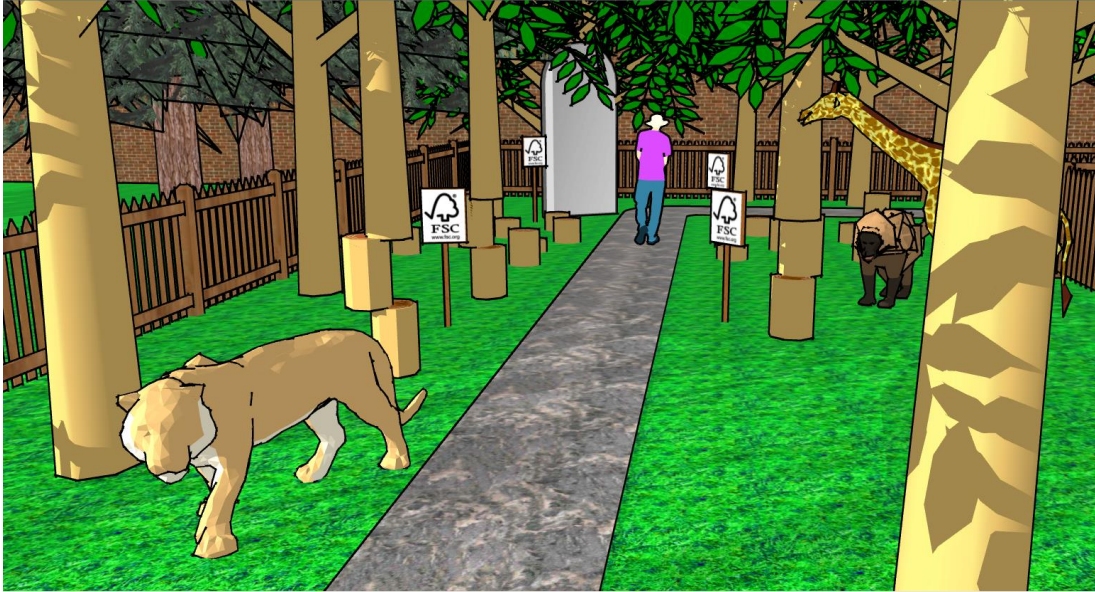


Figure 28: Story of deforestation walkway near gibbons

We recommend a mock grocery store display in Conservation Corner.

After analyzing all our data, we identified convenience and cost as two of the main barriers preventing visitors from purchasing FSC-certified products. Currently, consumers do not understand how easy it is to buy FSC-certified products. To see a behavioral change in their purchasing habits, consumers must realize how simple it is to find the FSC logo when shopping. Most consumers identified that cost blocked purchases of FSC products, however, through our filtered market analysis, it was identified that the average price of all FSC-certified toilet paper is less than 15% more than the average price of non-certified toilet paper. This price difference is only a few cents, and many “bargain” or “store” brands offer FSC-certified products. The grocery store display will consist of various paper products on shelves, representing a retail atmosphere, as represented below in [Figure 29](#).

The name of the store will be related to an animal at the Zoo that is impacted by deforestation, such as “Senja’s Market”, named after Senja the female Sumatran tiger at Wellington Zoo. The items will portray both FSC-certified products, indicated with an FSC logo on the packaging, and non-certified products. The visitors will need to move around many of these products to see the FSC logo, if certified. In addition, all the products will have fictional brands and prices on them. Several of the FSC-certified products will be the store’s “Senja’s

Market brand” to demonstrate to visitors that many of the cheap store brands are FSC-certified. In addition, our team concluded from our consumer surveys that individuals want to learn more about FSC from television advertisements. Because of this data, we decided that this mock store should have television advertisements on the walls comparing the costs of different certified products together. For example, the advertisements will show the comparable prices of an FSC-certified product compared to a non-certified product, portraying the minimal cost differences between products. On a few of these television screens, an FSC promotional video will be playing that visitors can watch.

In “Senja’s market”, children or adults will be able to push a grocery cart through the aisle and lift these different paper products, as if they were in a real retail shop. This shopping cart will have handles on both sides and be attached to a rail underneath, that guides the visitor past the market display and can be directed in either direction. The paper products on the shelves will be made of wood with visible grains to easily connect these everyday products to the wood that they are sourced from. These paper products will include toilet paper, kitchen towels, tissues, notebooks, and paper. As the visitors walk along the display, they will see signage that tells them to try and find all the FSC-certified items. Depending on the item that is moved, an image or message will be exposed beneath it for the visitor to view. If the product is FSC-certified, then an image of a tree and a happy Sumatran tiger will pop-up, with a message reading “Great choice! This product helps animals like me to survive in the wild!” If the item that is chosen is non-certified, then an image of fallen trees and a sad Sumatran tiger will appear with the message “Try again, look for the FSC logo to help me survive in the wild.” The messages will be directed towards making the individual feel positive about the action and that they can personally make a difference to the survival of wildlife, simply through their purchasing decisions. By selecting FSC-certified products, visitors would feel like a hero for the environment and the wildlife that need their help.



Figure 29: Mock grocery store display in Conservation Corner

5.2: Enhance audience interactions during Animal Talks

Our team concluded from naturalistic observations during Animal Talks that audience interactions during the FSC portion of the talk can be increased. From our findings, we discovered that many visitors are focused on watching the animals when the conservation message is being presented and therefore do not learn about FSC and their part in saving wildlife. From our interviews, we found that currently there are no techniques that zookeepers or rangers use to enhance audience engagement, so our team has developed tools to increase visitor attention and effectively convey the FSC message to these individuals. Animal talks should increase their interactions with visitors, such as signing pledge cards or offering membership in an FSC children's program, to better communicate information about FSC.

We recommend handing out magnetic pledge cards for visitors to sign and place on the “FSC Tree of Life”.

After our literature review and analysis of past campaign reports, it was identified that pledge cards are an effective tool to initiate a behavioral change. The act of pledging to purchase FSC-certified products is interactive and therefore influential. To make the pledge program unique and match the theme of saving forests, at the end of each animal talk where FSC is mentioned, the zookeeper or ranger will provide leaf-shaped magnets that visitors can sign with a dry erase marker if they choose to “take the pledge” and support FSC. After, the zookeeper or ranger will place the signed pledges on a magnetic tree on a wall in a high-traffic area of the zoo. The tree in the display will have bare branches unless pledges have been signed and attached to the tree, making the branches full of leaves. This will be a visual in the Zoo, representing that the action of supporting FSC supports sustainable forestry practices, keeping forests and their wildlife full and healthy. This message will resonate with the visitors, showing them that they can make a positive change through a simple, everyday purchase. At the end of each day, the magnets will be cleaned and removed from the tree, to be reused the following day. An example of the “FSC Tree of Life” can be seen below in [Figure 30](#).



Figure 30. FSC Tree of Life pledge

We recommend Wellington Zoo holds the children’s program “Timber Titans” to get children involved with the FSC campaign.

Our team has concluded from literature review and past campaign analysis, that the use of a superhero character as a “spokesperson” in a conservation campaign increases audience engagement and adoption of the target conservation behavior. This is because the individuals in the target audience can identify that superheroes stand for good causes, and believe that supporting the campaign will put the individual on the correct “side” of the issue. Superheroes are a great representation of FSC, because they can grasp children’s attention at the Zoo, putting the act of supporting FSC in a powerfully positive light. We recommend for the Zoo to create a children’s program with a superhero theme, called “Timber Titans.” During the FSC portion of Animal Talks, the zookeeper or ranger can mention that children can help save animals in the wild by joining the “Timber Titans,” and convincing their parents to have FSC-certified products in their home. At this point, the zookeeper or ranger can hand out superhero eye or face masks, that have the FSC logo on them for children to take home. This will not only be an exciting way to get children involved, but also a way to get the FSC logo into the home and in view of parents.

5.3: Children’s Educational Programs

Children can learn about conservation practices and influence three different generations: their parents, their own peers, and their future children. We learned from our interviews with Zoo staff that our campaign should be designed to target children. We believe that by extending children's knowledge about FSC, we will see a current impact on their parents, as well as in the future when they become consumers themselves.

We recommend FSC related arts and crafts during Wellington Zoo programs.

Currently Wellington Zoo holds Conservation Connections and school holiday programs for children, where conservation organizations such as FSC are discussed. During the interview with Zoo educators, they mentioned that there has never been an FSC-themed arts and crafts

activity planned for children at the Zoo. We believe that by doing FSC related crafts while sharing the conservation message with children, the children will be more engaged and take more away from the program. Our team recommends creating origami FSC trees with the children during the holiday programs held at the Zoo. There could also be an FSC craft table set up in the Zoo once a month for visitors to take part in. For the origami activity, the FSC logo should be on the paper as they fold it, so that children can recognize it and be able to relate it to the conservation message presented during this time. Once all the children have created their FSC-certified trees, they should be directed to put all their individual trees together to make an origami FSC-certified forest. Each child will place their tree into the forest, along with a plastic animal, displayed in [Figure 31](#). The message that should be conveyed during this activity is that “for every FSC-certified tree, there are more animals living in the wild”. The children should then be told how they can take part in being heroes to these animals in the forests, simply by telling their parents about FSC and making sure their parents buy FSC-certified products when they go shopping.



Figure 31. FSC origami tree arts and crafts

We recommend having scavenger hunts to find the FSC logo throughout Wellington Zoo.

Through our market research, we discovered that the location of the FSC logo varies amongst products and can be difficult to find. To avoid the barrier of not being able to find the

FSC logo, we recommend making a scavenger hunt for children to “spot the FSC logo”. An example of this scavenger hunt is pictured below in [Figure 32](#). This activity will increase awareness of FSC and establish a behavior to search for the FSC logo. Each child will be given a list of locations on the back of the Zoo map of where this logo can be found and travel with their parents to each location, where they will find the FSC logo on a paper product in the area, or near a habitat. Each location will have a stamp of the FSC logo in a different color, so each child must go to every habitat to complete the activity. The location of each logo should be at the animal habitats that are affected the most by deforestation, so the children can be educated about how FSC benefits the animal at the habitat they are at. Once the child has spotted each FSC logo and received all their stamps, they will receive a small prize, such as a wristband with the FSC logo on it, from the cashier at the Zoo gift shop. This activity will make both children and their parents aware of FSC and to look for the logo when purchasing paper products.

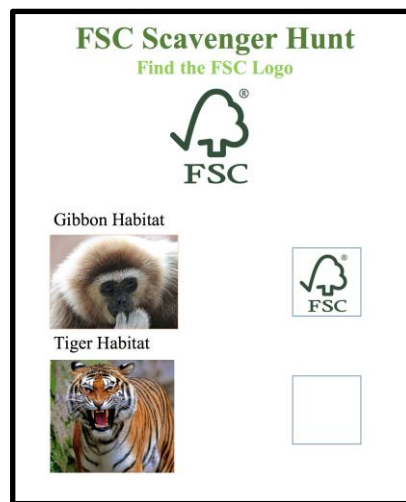


Figure 32. FSC Scavenger Hunt

5.4: FSC in Wellington Zoo’s Gift Store

Our team believes that the presence of FSC signage in Wellington Zoo’s gift store could increase. From our interview analysis and literature review, our team learned that the most effective way to impact behavior change is to intervene at the time of the target behavior, such as while purchasing products. Therefore, messages of FSC on signage need to exist inside

retailers to remind consumers to purchase FSC-certified products. The goal of incorporating the gift shop into the campaign is to help visitors make the realization that the FSC logo can be found easily on many products in an actual retail environment.

We recommend increasing FSC signage.

Currently in Wellington Zoo’s gift store, there are no signs or displays with the FSC logo. Our team believes that this is an area to improve upon, because signage will educate and increase awareness of FSC to consumers. We believe that by having FSC signs around the gift store, visitors will recognize a connection that when they are purchasing products, they should look for the FSC symbol. We believe this signage can be incorporated throughout the gift store in several different forms. This includes posters hung on the walls, stickers at the checkout, storyboards along the walkways, and products with the FSC logo on display, as the Zoo store already carries many FSC-certified items. An example of a possible sign is shown below in [Figure 33](#). By increasing signage, consumer awareness of the FSC logo will also improve.



Figure 33. Example design of FSC signage for Wellington Zoo store.

5.5: Community Outreach

The goal of incorporating strategies focused on community outreach for this campaign is to help the Zoo spread the FSC message to a larger consumer audience. Our consumer surveys displayed that the majority of the Wellington community did not recognize the FSC logo, so the campaign would benefit from extending outward into the community, reaching a larger audience than solely Zoo visitors.

We recommend that Wellington Zoo adopt FSC Friday on their social media accounts.

There is a social media program called “FSC Friday,” which is run by the FSC organization. One Friday every month, FSC posts photos on its social media accounts with the hashtag “FSCFriday,” encouraging their followers to post their own photos of FSC products with the hashtag, allowing other users to search “FSCFriday” and find similar posts. The responses to our consumer survey indicated that consumers want to learn about FSC through means of social media. Our team recommends that Wellington Zoo adapt FSC Friday to use on their Facebook and Instagram social media accounts for the community campaign. Every Friday, the Zoo would create a post showcasing a different Zoo animal that is affected by deforestation, along with fun facts about the animal while voicing that purchasing FSC-certified products helps these animals survive in the wild. Also, the Zoo would be able to take advantage of the story function on Instagram (media posts that are only available for other users to view for 24 hours) to show fun videos of the animals in their habitat, or zookeeper and ranger testimonials about these animals and the positive effects of FSC on these days. Like the original FSC Friday, Wellington Zoo would create catchy hashtags for posts, in addition to the traditional “FSCFriday” hashtag.

We recommend that Wellington Zoo create an FSC themed Snapchat Geotag for the Zoo.

Snapchat is a social media platform featuring photo and video posts that expire after a set amount of time. These “snaps” can be sent directly to other users, or can be posted to a user’s “story,” to be visible to other users for 24 hours. One feature on Snapchat uses the GPS in a mobile device to offer fun graphics for users to add to their “snaps” based on the location

of the user. These location-based graphics are called “geotags,” and organizations can submit designs to Snapchat so that users will be able to showcase their activities at the organization with the tagged location. Currently, Wellington Zoo does not have a Snapchat geotag. The Zoo should have their graphic designer create a geotag for the Zoo incorporating FSC into the graphic, so when users visit the Zoo they will use the geotag and spread the FSC logo to other users. An example of a possible FSC geotag is featured below in [Figure 34](#).

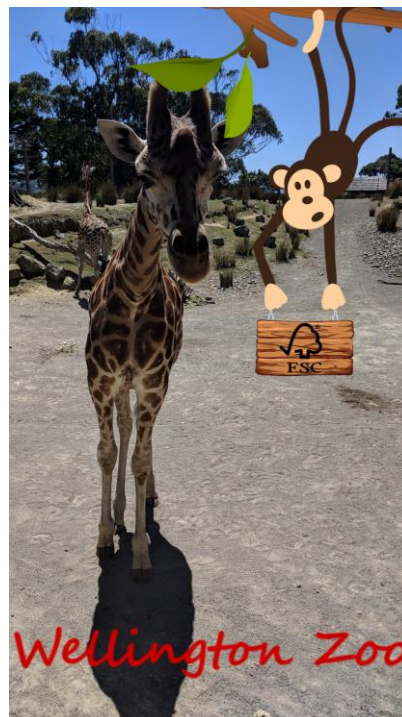


Figure 34: Wellington Zoo Snapchat geotag

We recommend that the Zoo distribute reusable shopping items containing the FSC logo.

Through our research, we discovered that the best way to implement a behavior change is to intervene at the time the behavior takes place. As it is not viable to get an FSC display in every grocery store aisle with FSC-certified products, the Zoo may be able to remind consumers about FSC when they are shopping by distributing canvas shopping bags or reusable shopping lists with the FSC logo prominently displayed on them, seen in [Figure 35](#). This way, consumers will bring a reminder of FSC with them into the store, when purchasing decisions occur.

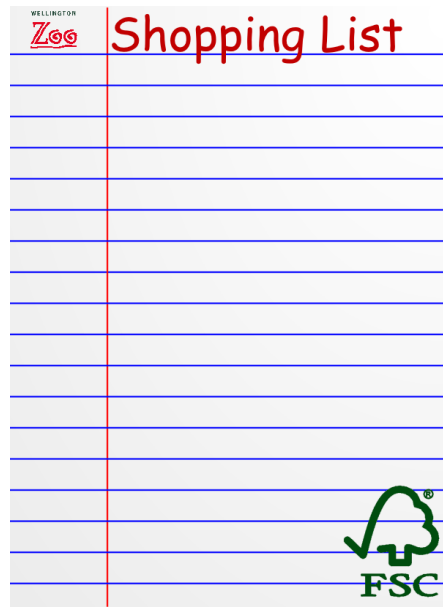


Figure 35. Reusable shopping list with FSC logo

We recommend that useful, everyday items with the FSC logo be made available at the Zoo.

One way to increase awareness about FSC is to increase the frequency that consumers see the FSC logo. Popular items featuring the FSC and Wellington Zoo logos such as bumper stickers, sticky phone wallets (pockets for credit cards that stick to the back of phone cases), and Popsockets (devices that stick to the back of phone cases that prop up phones and make phones easier to hold, as seen in [Figure 36](#)) should be distributed at the Zoo. These are all small and cheap items that visitors would affix to items that are used many times a day in public, increasing the presence of the FSC logo in everyday life.



Figure 36: Wellington Zoo PopSocket featuring FSC logo

5.6: Partnerships with Neighboring Organizations

After the FSC campaign is established at Wellington Zoo, the Zoo should take further steps to increase the impacts of the campaign. Our marketing team interview and past campaign analyses highlighted the benefits of forming partnerships with other organizations to extend messages into the community. In order to spread the FSC conservation method, the Zoo should create partnerships with neighboring organizations.

We recommend that the Zoo creates an FSC Consortium with other large organizations in Wellington.

After the campaign has been initiated at the Zoo, Wellington Zoo should reach out to other organizations in the area to join in and advertise the campaign. Wellington Zoo should start by contacting the organizations within Nature Connections program in the Wellington Region: ZEALANDIA, Battle Hill Farm Forest Park, Kaitoke Regional Park, Matiu Somes Island, Nga Manu Nature Reserve, Otari-Wilton's Bush, Pukaha Mount Bruce, Staglands Wildlife Reserve, and Wellington Botanic Gardens, as well as the natural history museum Te Papa (Nature Connections, n.d.). Beyond the advertisements spread by these organizations, the Zoo could reach out to local city councils, school boards, or hospitality and restaurant chains to get these businesses that consume large amounts of paper products to switch to sourcing FSC-certified products and advertise the FSC campaign.

We recommend that Wellington Zoo reach out to public transportation hubs to gain advertising or display space for the FSC campaign.

The Zoo should build off its existing partnership with Air New Zealand, and explore the possibility of Air New Zealand sourcing FSC-certified toilet paper in airplanes, and get an article written for the on-flight magazine "Kia Ora" about the Zoo's FSC campaign. Also, the Zoo should have face-in-hole displays made, featuring animals that are affected by deforestation and the FSC message, to put up in transportation hubs like airports, ferry terminals, and train stations. This is because many traveling tourists and New Zealanders alike would find this type of display

fun and intriguing, and any photos taken with the display posted on social media would also help spread the FSC logo and message to new audiences.

5.7: Final Thoughts

This project assessed consumer perceptions about FSC and investigated the best ways to influence a purchasing behavior change. Using this information, our team designed multiple components for the FSC community campaign at Wellington Zoo. To accomplish this, our team surveyed consumers, interviewed professionals with knowledge about FSC, and analyzed past campaigns and relevant literature. After our team analyzed all the data that we collected, we moved forward with the design process to create components for the FSC campaign.

Through our data analysis, our team found that consumer recognition of the FSC logo in Wellington was below 50%, so an educational FSC campaign would be beneficial in this area. There were common misconceptions from consumers about FSC, including the theory that FSC-certified products have a large price premium, or the opinion that FSC-certified products are difficult to find in stores. These were topics that our team decided to educate consumers about with our designed campaign components. We also concluded that conservation campaigns need to have many different components to be successful in targeting different demographics. To tackle this, our team designed campaign components that could each reach different age groups.

Our recommendations for campaign components were presented to Wellington Zoo staff at the conclusion of this project. The purpose of delivering a large set of recommendations covering various areas and strategies was to provide Wellington Zoo with the option to choose amongst different strategies that they thought would work best for their organization's FSC community campaign. Through our research, we found that conservation campaigns should routinely be evaluated for effectiveness throughout their existence to ensure that they are changing people's behavior as intended. We recommend that a study be conducted when the campaign is implemented, to evaluate the effectiveness of the strategies used to educate the audience about deforestation and FSC. These findings can be used to help Wellington Zoo adapt

their FSC campaign, or design future campaigns, to be most effective. For future work, we recommend that possibilities for campaign expansion be explored. A study into possible national partnerships and strategies to expand the community campaign to a national scale would be beneficial for Wellington Zoo's goal of spreading the FSC message.

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Appendix A: Consumer Survey



WPI

WELLINGTON



We are students from Worcester Polytechnic Institute in the United States, and we are working in collaboration with Wellington Zoo to better understand community awareness and purchasing behaviors of sustainably sourced products.

This survey should take less than five minutes. All of your answers will be strictly kept anonymous and confidential.

Q1 Where are you from?

- Wellington Region (1)
- Elsewhere in New Zealand (2)
- Other: (3) _____

What is your age?

- 18-29 (1)
 - 30-44 (2)
 - 45-59 (3)
 - 60+ (4)
-

Do you have any children?

- Yes (1)
 - No (2)
-

Are you a regular visitor to Wellington Zoo?

- I am a Zoo Crew Member (1)
- I visit more than once a year (2)
- I visit once a year (3)
- I have visited once (4)
- I haven't been to Wellington Zoo (5)

Display This Question:

If Are you a regular visitor to Wellington Zoo? = I am a Zoo Crew Member

Or Are you a regular visitor to Wellington Zoo? = I visit more than once a year

Or Are you a regular visitor to Wellington Zoo? = I visit once a year

Have you been to any of the following Animal Talks? (You may select more than one answer).

Giraffe (1)

Tiger (2)

Chimpanzee (3)

Sun Bear (4)

I haven't been to any of these talks (5)

Rank the following statements with how strongly you agree with them:

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
It is important to save animals in the wild. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deforestation and species loss is a concern. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I look for products with sustainable logos when I am shopping. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider myself to be environmentally active. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you recognize this logo?



Yes (1)

No (2)

Display This Question:

If Do you recognize this logo? = Yes

Where have you seen/heard about FSC? (You may select multiple answers)

Animal Talks at the Wellington Zoo (1)

On products (2)

Word of mouth (3)

Social media/advertising (4)

Other: (5) _____

Display This Question:

If Do you recognize this logo? = Yes

What are the main aims of FSC? (You may select multiple answers)

- Build sanctuaries for endangered animals (1)
- Prevent habitat loss (2)
- Promote voluntary sustainable forestry practices (3)
- Plant/harvest sustainable timber (4)
- Support the rights of workers, communities, and indigenous peoples (5)

Display This Question:

If Do you recognize this logo? = Yes

Have you purchased FSC-certified products?

- Yes (1)
- No (2)
- I don't know (3)

Display This Question:

If Have you purchased FSC-certified products? = Yes

Which FSC-certified products do you purchase? (You may select multiple answers)

- Toilet Paper (1)
 - Tissues or Paper Towels (2)
 - Stationary (3)
 - Outdoor Furniture (4)
 - Raw Timber (5)
 - Other: (6) _____
-

Display This Question:

If Have you purchased FSC-certified products? = Yes

Why do you purchase FSC-certified products? (You may select multiple answers)

- I care about the environment (1)
 - I care about animals (2)
 - It is cheap (3)
 - My preferred brand is FSC-certified (4)
 - Other: (5) _____
-

Display This Question:

If Have you purchased FSC-certified products? = No

Why don't you purchase FSC-certified products? (You may select multiple answers)

- Preferred brand isn't FSC-certified (1)
- Haven't thought about it (2)
- Price (3)
- Always in a hurry (4)
- Information not available when online shopping (5)
- Other: (6) _____

Display This Question:

If Have you purchased FSC-certified products? = No

Or Do you recognize this logo? = No



The Forest Stewardship Council (FSC) is an international organization that ensures that forests are managed in a way that not only takes care of the animals and plants that call it home, but also workers and local communities who rely on forests, and indigenous groups whose heritage connects them to forest landscapes. The FSC logo can be found on products all around the

world and provides international recognition to organizations who support the growth of responsible forest management.

Display This Question:

If Do you recognize this logo? = No

Or Have you purchased FSC-certified products? = No











What would encourage you to look for products that carry this logo in the future?

- More visible logo (1)
 - Comparable price (2)
 - If my preferred brand was certified (3)
 - I would need more information on FSC (4)
 - Nothing (5)
 - Other (6) _____
-

What affects your toilet paper/tissue product purchases? (You may select multiple answers)

- Price (1)
 - Brand (2)
 - Environmental impact (3)
 - N/A (4)
-

Do you look for any of these logos when you're shopping? (You may select multiple answers)

- Fair Trade 
- BioGrow 
- Enviro Mark 
- Energy Rating/Star 
- Environmental Choice 
- Roundtable on Sustainable Palm Oil 
- Cruelty Free 
- Programme for the Endorsement of Forest Certification (PEFC) 
- SPCA Blue Tick 
- I do not look for any of these logos.
- Free Range 
- I have not heard of any of these organizations

Display This Question:

If Do you look for any of these logos when you're shopping? (You may select multiple answers) != I do not look for any of these logos.

And Do you look for any of these logos when you're shopping? (You may select multiple answers)
 q://QID17/SelectedChoicesCount Is Greater Than 0

And Do you look for any of these logos when you're shopping? (You may select multiple answers) != I have not heard of any of these organizations

How have you heard of these organizations? (You may select multiple answers)

On products (1)

Word of mouth (2)

Social media/advertising (3)

Other: (4) _____

Display This Question:

If Do you look for any of these logos when you're shopping? (You may select multiple answers) != I do not look for any of these logos.

*And Do you look for any of these logos when you're shopping? (You may select multiple answers)
q://QID17/SelectedChoicesCount Is Greater Than 0*

And Do you look for any of these logos when you're shopping? (You may select multiple answers) != I have not heard of any of these organizations

What motivates you to purchase products with these certifications? (You may select multiple answers)

Positive animal welfare (1)

My children make me (2)

Cost (3)

Worker's rights (4)

Environmental impact (5)

Concerns about climate change (6)

Protect animals in the wild (7)

Personal health (8)

Doing the right thing (9)

Other: (10) _____

How would you like to learn more about FSC? (You may select multiple answers)

Animal talks at Wellington Zoo (1)

Social media advertising (2)

Television ads (3)

FSC website (4)

Visitor activity at Wellington Zoo (5)

Personal research (6)

Other: (7) _____

Which of these animals at Wellington Zoo do you think benefit from FSC certification? (You may select more than one answer)

Chimpanzees (1)

Tigers (2)

Kangaroos (3)

Giraffes (4)

Kune Kune Pigs (5)

Lions (6)

None (7)

Thank you for your participation! Have a great day.

Appendix B: Retail Manager Interview Questions

Standard Intro: Hi, we're university students from Worcester Polytechnic Institute in the States, working with Wellington Zoo to create a new conservation campaign about Forest Stewardship Council. We'd like to ask you some questions about your job and your experience with consumer purchasing habits, and it should only take about 30 minutes. This interview can be kept anonymous if you'd prefer, as we will be writing up a report at the end of our project. Is it okay with you if one of our group members takes notes while we chat?

Interview: Retail Manager w/ Years of Experience in Grocery Stores

- What is your role at the store? What types of operations do you oversee?
- Does your store have any type of procurement policy when it comes to products with environmental certifications?
- Are there any purchasing trends related to certifications on products? (For example, free range vs. caged, etc)
- Has your store ever gotten requests from customers for products specific certifications/environmental brands?
- Has there ever been any sort of environmental campaign in the store?
- Are there any types of policies or incentive programs concerned with plastic vs. reusable bags? role

Appendix C: Interview Questions for Gift Shop Manager

Standard Intro: Hi, we're university students from Worcester Polytechnic Institute in the States. We'd like to ask you some questions about your job and your experience with sourcing FSC-certified products at Wellington Zoo, and it should only take about 20 minutes. This interview can be kept anonymous if you'd prefer, as we will be writing up a report at the end of our project. Is it okay with you if one of our group members takes notes while we chat?

- In your own words, how would you describe FSC and their aims?
- What items do you offer in the store? And about what percent are FSC-certified?
- How do you decide what items to stock?
- Are there any challenges you face when stocking FSC-certified items?
- How do you usually bring up being FSC-certified to distributors in a way that would engage them to learn more about the process?
- What is the current presence of FSC in the Zoo store? Would you like to see more/in what fashion?

Appendix D: Interview Questions for FSC Representative

Standard Intro: Hi, we're university students from Worcester Polytechnic Institute in the States. We'd like to ask you some questions about your position in FSC, your experience in dealing with manufacturers/retailers, and any FSC campaigns you've worked with in the past, and it should only take about 30-45 minutes. This interview can be kept anonymous if you'd prefer, as we will be writing up a report at the end of our project. Is it okay with you if one of our group members takes notes while we chat?

- General FSC:
 - What is your role with FSC- what are the main components of your job?
 - Could you explain the certification process/the different types of certifications?
 - Where are most of FSC-certified forests and plantations? What percent of this is from New Zealand?
 - What percentage of deforestation is related to the pulp/paper industry?
- Manufacturers:
 - Can you explain the process for paper/tissue product manufacturing- with relation to the chain of custody?
 - If no: contacts?
 - What are the advantages of becoming certified from a manufacturer's point of view?
 - Why/how can there be different certifications between products of the same brand? Does this cause issues with transparency?
 - Who decides the placement of the FSC logo on packaging, and why is it different between brands or parts of the world?
- Retailers:
 - What's the retailer influence on FSC- do any branches select for FSC product, not on their radar, etc?
 - How do FSC price premiums hit different sectors of the market, and how does it affect consumers?
- Campaign:

- Do you have any prior FSC campaign work that we could learn from?
- Do you have any recommendations on how to foster sustainable behavior in consumers?
- Are there any components you would like to see in our campaign?

Appendix E: Interview Questions for Zookeepers and Rangers

Standard Intro: Hi, we're university students from Worcester Polytechnic Institute in the States. We'd like to ask you some questions about FSC and your experience with giving Animal Talks at Wellington Zoo, and it should only take about 15 minutes. This interview can be kept anonymous if you'd prefer, as we will be writing up a report at the end of our project. Is it okay with you if one of our group members takes notes while we chat?

- In your own words, how would you describe FSC and their aims? What does FSC mean to you?
- Is there a script for the FSC part of the talks? Do you ever make that portion interactive?
- Is there anything more you wished you could convey more about FSC to the audience but don't have time for?
- Do you feel like visitors are engaged during the FSC portion of the talk- is there audience response to anything in particular? What usually grabs the attention of the audience the most (adults vs. kids)?
- Did you know about FSC before you came to the Zoo? Has working here changed any of your behaviors in relation to timber/paper products? What was the main thing that caused this?
- Is there anything you would like to see in the campaign?

Appendix F: Interview Questions for Zoo Marketing Team

Standard Intro: Hi, we're university students from Worcester Polytechnic Institute in the States. We'd like to ask you some questions about your jobs and your experience with conservation campaigns at Wellington Zoo, and it should only take about 15 minutes. This interview can be kept anonymous if you'd prefer, as we will be writing up a report at the end of our project. Is it okay with you if one of our group members takes notes while we chat?

- What does your team primarily do at the Zoo?
- What part does your team play in helping spread the conservation messages that the Zoo is involved in promoting?
- Does your team create/design any of the informational displays around the Zoo?
- Who designs/updates the Zoo website?
- Who runs the social media accounts for the Zoo? How are the posts decided? Is there a theme that the social media tries to stick to?
- When conservation campaigns are ongoing at the Zoo, like Cats Inside at Night for instance, who designed the media that was posted around the Zoo? What goes into this design process?

Appendix G: Interview Questions for Wellington Zoo

Educators

Standard Intro: Hi, we're university students from Worcester Polytechnic Institute in the States. We'd like to ask you some questions about your jobs and your experience with the educational programs run at Wellington Zoo, and it should only take about 20 minutes. This interview can be kept anonymous if you'd prefer, as we will be writing up a report at the end of our project. Is it okay with you if one of our group members takes notes while we chat?

- What is your role at the zoo?
- What kind of children's programs exist?
- In your own words, how would you describe FSC and their aims?
- What are your thoughts on FSC/ how important is it/ do you buy FSC products/ does anything prevent you from buying them?
- How is FSC involved with these children's programs?
- How do you engage kids best and have them retain information?
- Is there anything you would like to see in the FSC campaign / or suggestions?

Appendix H: Past Campaign Report Review Form

Past Campaign Report Review Form

Campaign name:

Why was it started?	
What organizations were involved?	
Research methods when planning	
Consumer data collection methods	
Consumer data results	
Campaign implementation method	
Preliminary results	

Appendix I: Consumer Survey Data

This is the data from the surveying our team did on-site in Wellington, New Zealand. The data is broken up in two parts based on location: at Wellington Zoo, and in the Wellington CBD.

Zoo Visitor Data

Q1 - Where are you from?

#	Answer	%	Count
1	Wellington Region	39.45%	43
2	Elsewhere in New Zealand	30.28%	33
3	Other:	30.28%	33
	Total	100%	109

Q1_3_TEXT - Other:

Other: - Text

Switzerland

US

Usa

Argentina

Argentina

England

United Kingdom

@<#[r@]>a

Australia

Australia

Australia

Australia

Germany

Germay

England

Switzerland

Germany

England

Charlemagne Victoria

Uk

Australia

Australia

Australia

Australia

Australia

Poland

Poland

Switzerland

Samoa

Usa

Rotorua

Q3 - What is your age?

#	Answer	%	Count
1	18-29	48.62%	53
2	30-44	25.69%	28
3	45-59	19.27%	21
4	60+	6.42%	7
	Total	100%	109

Q6 - Do you have any children?

#	Answer	%	Count
1	Yes	37.61%	41
2	No	62.39%	68
	Total	100%	109

Q41 - Are you a regular visitor to Wellington Zoo?

#	Answer	%	Count
1	I am a Zoo Crew Member	8.33%	9
2	I visit more than once a year	12.04%	13
3	I visit once a year	17.59%	19
4	I have visited once	62.04%	67
5	I haven't been to Wellington Zoo	0.00%	0
	Total	100%	108

Q25 - Have you been to any of the following animal talks? (You may select more than one answer).

#	Answer	%	Count
1	Giraffe	13.01%	19
2	Tiger	9.59%	14
3	Chimpanzee	15.07%	22
4	Sun Bear	14.38%	21

5	I haven't been to any of these talks	47.95%	70
	Total	100%	146

Q9 - Rank the following statements with how strongly you agree with them:

#	Question	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	Total
1	It is important to save animals in the wild.	5.61% 6	0.00% 0	1.87% 2	14.02% 15	78.50% 84	107
2	Deforestation and species loss is a concern.	3.77% 4	0.94% 1	0.00% 0	8.49% 9	86.79% 92	106
3	I look for products with sustainable logos when I am shopping.	2.75% 3	10.09% 11	17.43% 19	48.62% 53	21.10% 23	109
4	I consider myself to be environmentally active.	1.83% 2	5.50% 6	23.85% 26	48.62% 53	20.18% 22	109

Q10 - Do you recognize this logo?

#	Answer	%	Count
1	Yes	53.70%	58
2	No	46.30%	50
	Total	100%	108

Q12 - Where have you seen/heard about FSC? (You may select multiple answers)

#	Answer	%	Count
1	Animal Talks at the Wellington Zoo	22.55%	23
2	On products	39.22%	40
3	Word of mouth	12.75%	13
4	Social media/advertising	20.59%	21
5	Other:	4.90%	5
	Total	100%	102

Other:

Other: - Text

Through family

Building industry

Q22 - What are the main aims of FSC? (You may select multiple answers)

#	Answer	%	Count
1	Build sanctuaries for endangered animals	11.89%	17
2	Prevent habitat loss	28.67%	41
3	Promote voluntary sustainable forestry practices	26.57%	38
4	Plant/harvest sustainable timber	22.38%	32
5	Support the rights of workers, communities, and indigenous peoples	10.49%	15
	Total	100%	143

Q15 - Have you purchased FSC-certified products?

#	Answer	%	Count
1	Yes	56.90%	33
2	No	6.90%	4
3	I don't know	36.21%	21
	Total	100%	58

Q25 - Which FSC-certified products do you purchase? (You may select multiple answers)

#	Answer	%	Count
1	Toilet Paper	38.46%	25
2	Tissues or Paper Towels	26.15%	17
3	Stationary	23.08%	15
4	Outdoor Furniture	4.62%	3
5	Raw Timber	7.69%	5
6	Other:	0.00%	0

Total

100%

65

Other:

Other: - Text

Q23 - Why do you purchase FSC-certified products? (You may select multiple answers)

#	Answer	%	Count
5	Other:	1.75%	1
4	My preferred brand is FSC-certified	10.53%	6
3	It is cheap	1.75%	1
1	I care about the environment	50.88%	29
2	I care about animals	35.09%	20
	Total	100%	57

Other:

Other: - Text

My mum makes sure my family does

Q24 - Why don't you purchase FSC-certified products? (You may select multiple answers)

#	Answer	%	Count
1	Preferred brand isn't FSC-certified	0.00%	0
2	Haven't thought about it	66.67%	2
3	Price	0.00%	0
4	Always in a hurry	33.33%	1
5	Information not available when online shopping	0.00%	0
6	Other:	0.00%	0
	Total	100%	3

Other:

Other: - Text

Q43 - What would encourage you to look for products that carry this logo in the future?

#	Answer	%	Count
1	More visible logo	34.62%	18
2	Comparable price	36.54%	19
3	If my preferred brand was certified	11.54%	6
4	I would need more information on FSC	13.46%	7
5	Nothing	1.92%	1
6	Other	1.92%	1
	Total	100%	52

Other

Other - Text

Q19 - What affects your toilet paper/tissue product purchases? (You may select multiple answers)

#	Answer	%	Count
1	Price	44.76%	64
2	Brand	16.78%	24
3	Environmental impact	29.37%	42
4	N/A	9.09%	13
	Total	100%	143

Q17 - Do you look for any of these logos when you're shopping? (You may select multiple answers)

#	Answer	%	Count
1	Fair Trade	15.48%	52
2	Enviro Mark	1.19%	4
3	Environmental Choice	8.04%	27
4	Cruelty Free	11.90%	40
5	SPCA Blue Tick	13.10%	44

6	Free Range	18.45%	62
7	BioGrow	2.98%	10
8	Energy Rating/Star	22.02%	74
9	Roundtable on Sustainable Palm Oil	1.79%	6
10	Programme for the Endorsement of Forest Certification (PEFC)	2.68%	9
11	I do not look for any of these logos.	0.89%	3
12	I have not heard of any of these organizations	1.49%	5
	Total	100%	336

Q18 - How have you heard of these organizations? (You may select multiple answers)

#	Answer	%	Count
1	On products	46.63%	76
2	Word of mouth	28.83%	47
3	Social media/advertising	23.93%	39

4	Other:	0.61%	1
	Total	100%	163

Other:

Other: - Text

No

Q38 - What motivates you to purchase products with these certifications? (You may select multiple answers)

#	Answer	%	Count
1	Positive animal welfare	17.31%	63
2	My children make me	0.27%	1
3	Cost	7.42%	27
4	Worker's rights	6.87%	25
5	Environmental impact	19.51%	71

6	Concerns about climate change	12.64%	46
7	Protect animals in the wild	13.74%	50
8	Personal health	5.77%	21
9	Doing the right thing	16.21%	59
10	Other:	0.27%	1
	Total	100%	364

Other:

Other: - Text

Haven't thought

Q39 - How would you like to learn more about FSC? (You may select multiple answers)

#	Answer	%	Count
1	Animal talks at Wellington Zoo	14.83%	31

2	Social media advertising	24.40%	51
3	Television ads	20.57%	43
4	FSC website	10.05%	21
5	Visitor activity at Wellington Zoo	13.88%	29
6	Personal research	14.83%	31
7	Other:	1.44%	3
	Total	100%	209

Other:

Other: - Text

Ni

Q40 - Which of these animals at Wellington Zoo do you think benefit from FSC certification? (You may select more than one answer)

#	Answer	%	Count
---	--------	---	-------

1	Chimpanzees	22.02%	74
2	Tigers	24.11%	81
3	Kangaroos	10.12%	34
4	Giraffes	15.18%	51
5	Kune Kune Pigs	10.12%	34
6	Lions	16.37%	55
7	None	2.08%	7
	Total	100%	336

Community Member Data

Q1 - Where are you from?

#	Answer	%	Count
1	Wellington Region	60.78%	62
2	Elsewhere in New Zealand	12.75%	13

3	Other:	26.47%	27
	Total	100%	102

Other:

Other: - Text

Belgium
Belgium
England
England
United Kingdom
Australia
SouthAfrica
Uk
England
Mexico
Lithuania

Netherlands

England

Colombia

France

Mexico

France

Germany

Germany

Germany

Belgium

Italy

Virginia, USA

United States

Canada

Q3 - What is your age?

#	Answer	%	Count
1	18-29	49.50%	50
2	30-44	27.72%	28
3	45-59	12.87%	13
4	60+	9.90%	10
	Total	100%	101

Q6 - Do you have any children?

#	Answer	%	Count
1	Yes	31.37%	32
2	No	68.63%	70
	Total	100%	102

Q41 - Are you a regular visitor to Wellington Zoo?

#	Answer	%	Count
1	I am a Zoo Crew Member	1.96%	2
2	I visit more than once a year	8.82%	9
3	I visit once a year	35.29%	36
4	I have visited once	24.51%	25
5	I haven't been to Wellington Zoo	29.41%	30
	Total	100%	102

Q25 - Have you been to any of the following Animal Talks? (You may select more than one answer).

#	Answer	%	Count
1	Giraffe	25.00%	19
2	Tiger	13.16%	10
3	Chimpanzee	17.11%	13
4	Sun Bear	22.37%	17

5	I haven't been to any of these talks	22.37%	17
	Total	100%	76

Q9 - Rank the following statements with how strongly you agree with them:

#	Question	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	Total
1	It is important to save animals in the wild.	6.00% 6	0.00% 0	1.00% 1	11.00% 11	82.00% 82	100
2	Deforestation and species loss is a concern.	7.00% 7	1.00% 1	0.00% 0	7.00% 7	85.00% 85	100
3	I look for products with sustainable logos when I am shopping.	2.94% 3	5.88% 6	22.55% 23	45.10% 46	23.53% 24	102
4	I consider myself to be environmentally active.	0.00% 0	5.94% 6	23.76% 24	53.47% 54	16.83% 17	101

Q10 - Do you recognize this logo?

#	Answer	%	Count
1	Yes	40.20%	41
2	No	59.80%	61
	Total	100%	102

Q12 - Where have you seen/heard about FSC? (You may select multiple answers)

#	Answer	%	Count
1	Animal Talks at the Wellington Zoo	12.96%	7
2	On products	48.15%	26
3	Word of mouth	9.26%	5
4	Social media/advertising	25.93%	14
5	Other:	3.70%	2
	Total	100%	54

Other:

Other: - Text

Unsure

My job we manage responsible investment funds and we actively engaged on topics such as this

Q22 - What are the main aims of FSC? (You may select multiple answers)

#	Answer	%	Count
1	Build sanctuaries for endangered animals	15.71%	11
2	Prevent habitat loss	28.57%	20
3	Promote voluntary sustainable forestry practices	25.71%	18
4	Plant/harvest sustainable timber	20.00%	14
5	Support the rights of workers, communities, and indigenous peoples	10.00%	7
	Total	100%	70

Q15 - Have you purchased FSC-certified products?

#	Answer	%	Count
1	Yes	34.15%	14
2	No	0.00%	0
3	I don't know	65.85%	27
	Total	100%	41

Q25 - Which FSC-certified products do you purchase? (You may select multiple answers)

#	Answer	%	Count
1	Toilet Paper	39.29%	11
2	Tissues or Paper Towels	32.14%	9
3	Stationary	7.14%	2
4	Outdoor Furniture	10.71%	3
5	Raw Timber	7.14%	2
6	Other:	3.57%	1
	Total	100%	28

Other:

Other: - Text

Q23 - Why do you purchase FSC-certified products? (You may select multiple answers)

#	Answer	%	Count
1	I care about the environment	55.00%	11
2	I care about animals	35.00%	7
3	It is cheap	5.00%	1
4	My preferred brand is FSC-certified	0.00%	0
5	Other:	5.00%	1
	Total	100%	20

Other:

Other: - Text

Q24 - Why don't you purchase FSC-certified products? (You many select multiple answers)

#	Answer	%	Count
1	Preferred brand isn't FSC-certified	0.00%	0
2	Haven't thought about it	0.00%	0
3	Price	0.00%	0
4	Always in a hurry	0.00%	0
5	Information not available when online shopping	0.00%	0
6	Other:	0.00%	0
	Total	100%	0

Other:

Other: - Text

Q43 - What would encourage you to look for products that carry this logo in the future?

#	Answer	%	Count
1	More visible logo	21.31%	13
2	Comparable price	26.23%	16

3	If my preferred brand was certified	8.20%	5
4	I would need more information on FSC	37.70%	23
5	Nothing	3.28%	2
6	Other	3.28%	2
	Total	100%	61

Other

Other - Text

More exposure to the brand and its goals

More exposure to the brand and its goals

Q19 - What affects your toilet paper/tissue product purchases? (You may select multiple answers)

#	Answer	%	Count
1	Price	42.54%	57
2	Brand	17.91%	24

3	Environmental impact	29.85%	40
4	N/A	9.70%	13
	Total	100%	134

Q17 - Do you look for any of these logos when you're shopping? (You may select multiple answers)

#	Answer	%	Count
1	Fair Trade	16.90%	61
2	Enviro Mark	0.83%	3
3	Environmental Choice	8.59%	31
4	Cruelty Free	8.31%	30
5	SPCA Blue Tick	14.40%	52
6	Free Range	18.28%	66
7	BioGrow	5.82%	21
8	Energy Rating/Star	18.01%	65

9	Roundtable on Sustainable Palm Oil	3.60%	13
10	Programme for the Endorsement of Forest Certification (PEFC)	2.22%	8
11	I do not look for any of these logos.	1.66%	6
12	I have not heard of any of these organizations	1.39%	5
	Total	100%	361

Q18 - How have you heard of these organizations? (You may select multiple answers)

#	Answer	%	Count
1	On products	45.57%	72
2	Word of mouth	22.15%	35
3	Social media/advertising	31.01%	49
4	Other:	1.27%	2
	Total	100%	158

Other:

Other: - Text

Socially agree

Q38 - What motivates you to purchase products with these certifications? (You may select multiple answers)

#	Answer	%	Count
1	Positive animal welfare	16.12%	59
2	My children make me	1.09%	4
3	Cost	3.83%	14
4	Worker's rights	7.38%	27
5	Environmental impact	18.31%	67
6	Concerns about climate change	15.85%	58
7	Protect animals in the wild	12.02%	44
8	Personal health	9.56%	35
9	Doing the right thing	15.85%	58

10	Other:	0.00%	0
	Total	100%	366

Other:

Other: - Text

Q39 - How would you like to learn more about FSC? (You may select multiple answers)

#	Answer	%	Count
1	Animal talks at Wellington Zoo	12.64%	23
2	Social media advertising	30.22%	55
3	Television ads	16.48%	30
4	FSC website	12.64%	23
5	Visitor activity at Wellington Zoo	9.89%	18
6	Personal research	16.48%	30
7	Other:	1.65%	3
	Total	100%	182

Other:

Other: - Text

Small events to educate the public

Q40 - Which of these animals at Wellington Zoo do you think benefit from FSC certification?
(You may select more than one answer)

#	Answer	%	Count
1	Chimpanzees	23.16%	66
2	Tigers	21.75%	62
3	Kangaroos	8.07%	23
4	Giraffes	16.14%	46
5	Kune Kune Pigs	11.23%	32
6	Lions	16.84%	48
7	None	2.81%	8
	Total	100%	285

Appendix J: Market Analysis Data

Store	Brand	Certification	# Rolls	Sheets/Roll	Total Sheets	Ply	Unit Price (/100ss)
Countdown	HomeBrand	PEFC	24	190	4560	2	\$0.11
Countdown	Value	FSC	40	150	6000	2	0.22
Countdown	EarthCare	Other	4	200	800	2	\$0.19
Countdown	Quilton	FSC	18	180	3240	3	\$0.25
Countdown	Savers	PEFC	18	180	3240	2	\$0.25
Countdown	Savers	Other	18	180	3240	2	0.25
Countdown	Savers	Other	4	180	720	2	0.25
Countdown	KiwiSoft Blue	PEFC	12	190	2280	2	0.25
Countdown	EarthCare	Other	4	200	800	2	0.37
Countdown	Pams	FSC	4	180	720	3	\$0.45
Countdown	Purex	FSC	4	200	800	2	0.45
Countdown	Paseo	PEFC	12	270	3240	3	\$0.37
Countdown	FRESH	FSC	8	300	2400	2	\$1.67
Countdown	KiwiSift	PEFC	18	190	3420	2	N/A
Countdown	Plush Premium	PEFC	9	360	3240	3	N/A
Countdown	EarthCare	Other	12	200	2400	2	N/A
NewWorld	Savers	Other	4	180	720	2	\$0.37
NewWorld	EarthCare	Other	4	200	800	2	\$0.36
NewWorld	EarthCare	Other	12	200	2400	2	\$0.36
NewWorld	CottonPosh	PEFC	4	180	720	3	0.46
NewWorld	Cotton Soft	PEFC	6	434	2604	2	\$0.22
NewWorld	CottonPosh	PEFC	4	180	720	3	\$0.55
NewWorld	Paseo	PEFC	12	180	2160	3	\$0.58
NewWorld	Kleenex	FSC	12	180	2160	3	0.58
NewWorld	Kleenex	FSC	8	270	2160	3	\$0.39

NewWorld	Purex	FSC	12	200	2400	2	\$0.54
NewWorld	Sorbent	FSC	18	180	3240	2	\$0.67
NewWorld	Paseo	PEFC	18	180	3240	3	\$0.67
NewWorld	Paseo	PEFC	4	180	720	3	\$1.02
NewWorld	FRESH	FSC	12	300	3600	2	\$0.62
NewWorld	Pams	FSC	8	270	2160	3	\$0.75
NewWorld	Purex	FSC	6	450	2700	2	0.83
Pak'n Save	Smart Value	PEFC	40	150	6000	2	\$0.25
Pak'n Save	Value (Marine)	FSC	12	180	2160	2	0.24
Pak'n Save	Quilton	FSC	18	180	3240	3	\$0.25
Pak'n Save	KiwiSoft Value	PEFC	18	190	3420	2	0.24
Pak'n Save	Value	FSC	4	150	600	2	\$0.32
Pak'n Save	Cotton Posh	PEFC	12	170	2040	3	0.33
Pak'n Save	Sorbent	FSC	12	180	2160	2	\$0.37
Pak'n Save	Pams Luxury	FSC	4	180	720	3	0.45
Pak'n Save	Cotton Posh	PEFC	4	180	720	3	\$0.50
Pak'n Save	CottonSofts	PEFC	12	200	2400	2	\$0.48
Pak'n Save	Kleenex	FSC	24	180	4320	3	0.54
Pak'n Save	Kleenex	FSC	18	180	3240	2	\$0.56
Pak'n Save	Purex	PEFC	6	450	2700	2	\$0.25
Pak'n Save	Fresh	FSC	8	300	2400	2	\$0.62
Pak'n Save	Pams Luxury	FSC	8	270	2160	3	0.72
Pak'n Save	Paseol	PEFC	8	270	2160	3	0.75
Pak'n Save	Paseo	PEFC	8	270	2160	3	0.75
Pak'n Save	Kleenex	FSC	8	270	2160	3	0.87
Pak'n Save	CottonSofts	PEFC	6	434	2604	2	0.67
Pak'n Save	CottonSofts	PEFC	12	434	5208	2	0.83
Pak'n Save	CottonSofts	PEFC	24	200	4800	2	N/A
Pak'n Save	Purex	FSC	24	200	4800	2	N/A
Pak'n Save	Paseo	PEFC	12	270	3240	3	N/A
Pak'n Save	Paseo	PEFC	18	180	3240	3	N/A
Pak'n Save	EarthCare	Other	12	200	2400	2	N/A

Appendix K: Retail Manager Interview Notes

The following are the compiled notes taken during the retail manager semi-structured interview that members of our team conducted. The interviewee gave permission for our team to take notes during the interview. However, it was asked that we omit the interviewee's name, and the name of the retail store has been omitted due to company policy. None of the notes are direct quotes from the interviews, and this is not a transcript of the interviews.

Interview: Retail Manager w/ Years of Experience in Grocery Stores

Date: 2/16/2018

Time: 2:00 PM NZT

Location: Grocery Store in Wellington Area

Interview Notes:

What is your role at the store? What types of operations do you oversee?

- Oversees anything in the store with a barcode
- There are four buyers at the store: chilled/frozen food, beer/wine, and two for dry groceries
- More involved with dry grocery buyers

Does your store have any type of procurement policy when it comes to products with environmental certifications?

- Products are stocked based off of what people want, and what companies want people to want
- Companies will push for products that are more profitable to make, and advertise in a way that will get consumers to want these products
- Examples of this are liquid vs. powder laundry detergent, and body wash vs. bar soap

Are there any purchasing trends related to certifications on products? (For example, free range vs. caged, etc)

- No microbeads or microplastics in New Zealand products, which was largely pushed for by customers. In this example, microbeads were easily substitutable with ground apricot stones so this may have been why the change was so easy to make happen.

- Customer support of environmental certifications depends a lot on demographics. Most people in the area of this store are well off, so they have interest in buying organic for example, but stores in lower income areas will not have a large organic section as the price is more expensive and people cannot afford it.
- For cage free eggs, the support of this movement was originally very small, and there not many cage free products on the market. However after the visibility of the problem was increased and more consumers purchased these products, manufacturers started getting behind the movement and supplying more cage free products to get this profit share. Then, after the price lowered because of this, more and more people bought these products because there wasn't much of a price difference, and they could feel good about themselves from supporting this cause.

Has your store ever gotten requests from customers for products specific certifications/environmental brands?

- No, usually the sales numbers speak for themselves

Has there ever been any sort of environmental campaign in the store?

- Any kind of campaign has to rely on manufacturers to support it/advertise it on their labeling
- Manufacturers will only get on board with these types of partnerships if they believe that there is profit to be made from doing so
- Currently, there is not enough consumer knowledge about forest certifications, the problem that deforestation poses, or the difference between FSC and PEFC

Are there any types of policies or incentive programs concerned with plastic vs. reusable bags?

- The store now supplies compostable plastic bags for 15 cents more to reduce plastic waste. However, consumers are stealing these bags because they like the idea of them but do not want to pay extra for them
- In the past, stores have started programs where consumers are charged an extra 10 cents for not bringing their own reusable bags, and part of this fee was donated to an organization aimed at cleaning up plastic from the oceans

Appendix L: Wellington Zoo Gift Shop Manager Interview

Notes

The following are the compiled notes taken during the interview with the Wellington Zoo gift shop manager that our team conducted while on site at Wellington Zoo. The interviewee gave permission for our team to take notes during the interview. Names have been omitted to protect the interviewee, as this interview was conducted at the interviewee's place of work, and may contain sensitive information. None of the notes are direct quotes from the interview, and this is not a transcript of the interview.

Date: 1/18/2018

Time: 2:30 PM NZT

Location: Living Room, Wellington Zoo

Interview Notes:

In your own words, how would you describe FSC and their aims? How does FSC relate to your role at the Zoo?

- In a team called business in partnership- the commercial arm. There are two areas: partnerships and cells and services. Works with retail and has a booking and visitor emissions office
- FSC relates to the position when communicating with retailers and suppliers. Looks for not just the products but also the tags, or anything that is paper based. Looks to convert anything that is not sustainably based to be sustainable and FSC
- Changed the printer here at the zoo to be FSC-certified
- FSC representative talked to Zoo staff at Wellington Zoo last year

How do you decide what items to stock? Are there any challenges you face when stocking FSC-certified items?

- One exciting thing is to get the FSC trademark licensing for the gift shop
- A large communication point with suppliers is that they don't even know what FSC is

- Most suppliers are receptive of learning more about it, but several give false hope about supporting the values
- If the suppliers say their products are PEFC certified or recycled, the Zoo doesn't turn a blind eye to those products and instead look to go into a deeper conversation
- When FSC is brought up to suppliers, then the suppliers did further research into where their timber was sourced and was actually FSC
- A few stalk was FSC-certified but didn't have the logo before the push for FSC at the Zoo had been started- this has been a learning experience to the Zoo, now the tagging of items is important
- The other major part to the zoo-nutrition center-ideally wants food, uniforms, etc. to be FSC- will show what areas are still a problem and what aren't
- By forming a relationship with the FSC print shop, they have formed a collateral with this organization
- Want to be FSC trademarked: Providing FSC-certified stock, unlocking the marketing offering that FSC provides (more about items that you are selling mainly). Unless they get the trademark license then our campaign use the storyboard or FSC logos
- There have been a couple of situations where the supplier learned that they are FSC-certified even though they don't know about it. Now the supplier looks at their supply and see what products they have that are FSC-certified and advertise them to the Wellington Zoo
- One challenge is books- they are not a big seller in the past, but now they have a bigger demand. A lot of time they aren't being sustainably sourced, but slowly they are gaining relationships with FSC-certified publishing houses
- Another challenge are soft toys- it is a major business so the influence of the Zoo on these suppliers to be FSC is very minimal. They have to look to other zoos to combine to increase their influence

How do you usually bring up being FSC-certified to distributors in a way that would engage them to learn more about the process?

- Have to be hard-nosed with suppliers because some products may be good, but others become a closed-door or not sustainably sourced, so the Zoo backs out

- Just because the product is FSC-certified, that doesn't mean the company is
- This information often doesn't exist, but the zoo has to call them and pull this information out of them
- Wellington Zoo is doing wonderful work around conservation and one thing found out recently is FSC- when talking to suppliers just keep a simple definition and see what their response is.
- Mojo cafe has paper based menus on papertop. Zoo partnered and got them cards that are FSC-certified

What is the current presence of FSC in the Zoo store? Would you like to see more/in what fashion?

- 19% of all of the items/materials in the store are FSC-certified- some obviously can't be like soft toys, etc., but FSC-certified tagging could increase
- Books, greeting cards, pencils, posters, etc. are offered
- No customers generally notice the FSC logo- that is what getting the FSC trademark may help with
- By setting up a storyboard in the store for the different conservation messages the Zoo partners with, the store employees get questions about the various campaigns because of them
- No visitors ever come to ask questions about the FSC even after the Animal Talks
- Maybe a wristband with the FSC logo would be helpful- there is a stamp of FSC for school programs to use

Appendix M: New Zealand FSC Representative Interview

Notes

The following are the compiled notes taken during our semi-structured interview with Cyrielle Durand, the New Zealand FSC Representative that our team conducted over Skype. The interviewee gave permission for our team to take notes during the interview, but any comments from this interview were personal views and not official stances from the FSC organization. The representative's name has been omitted to protect the interviewee, as it may contain sensitive information. None of the notes are direct quotes from the interview, and this is not a transcript of the interview.

Date: 1/23/2018

Time: 11:00 AM NZT

Setting: Skype Interview

Interview Notes:

What is your role with FSC?

- Develops the FSC brand in New Zealand
- Develops the standards for being FSC-certified
- Recruits new organizations and members to get FSC-certified
- Develops FSC campaigns in New Zealand

Can you explain the certification process of becoming FSC-certified?

- Must comply with the 10 principles on how to manage forests in a responsible way, including the environmental and social aspects
- Must comply with a responsible chain of custody after the timber leaves the forest
- Won't become certified if you mix FSC timber with non-FSC timber

Where does most sourcing of timber come from and how much is from New Zealand?

- Most timber is sourced from Europe, US and Canada

- New Zealand sources about 70% FSC-certified timber
- New Zealand sources mainly from plantations
- Europe sources mainly from native forests
- Regions like Africa, South America, and Asian are increasing their development of becoming more FSC-certified
- Asia and the Pacific region is the fastest growing region for FSC-certified forests

What is the difference between plantations and native forests?

- Plantations are more efficient than natural forests when removing trees, because all of the trees are the same age and can be removed at one time
- Plantations are more commonly certified in New Zealand because of the Maori people and their protection of native trees. They have little biodiversity, since the same types of trees are planted
- Native forests are more difficult to manage because of its different aged trees, but they have biodiversity which is essential for both wildlife and surrounding communities

What is the difference between being FSC-certified vs. non-FSC-certified?

- Same idea as being sustainable vs. unsustainable
- Being certified positively impacts the trees, wildlife, and indigenous peoples
- Indigenous peoples' personal rights and cultural beliefs are protected by a forest that is FSC-certified, since native trees that are important to them are protected

Do the majority of pulp and paper companies in New Zealand work with certified suppliers?

- Yes, most do
- It is risky to not, because they will have to deal with several complaints and accusations of their company adding to deforestation from wildlife conservation organizations
- Many of these companies work directly with the supplier only, and don't go back to the source of their timber, because of the chain of custody certification

What are the advantages and disadvantages of becoming certified from a manufacturer's point of view?

- Some disadvantages include:

- It is difficult to be certified, since it is a lot of work and every year they are audited
- Becoming certified is an extra cost
- In construction, FSC-certified material are more expensive and so companies are reluctant to share. But, this is different for each sector (Printing and packaging won't notice a big difference unless you are doing a large job sourcing large amounts of materials).
- Some advantages include:
 - They have increased access to more markets because it is such a rigorous certification (FSC has the highest standards compared to other certifications)
 - Companies will improve their reputation when dealing with FSC-certified materials

Are FSC-certified products actually more expensive?

- This perception is generally false
- When purchasing everyday products you won't really notice a difference

Why are there different certifications between different products of the same brand?

- Most companies use both FSC and PEFC because they need to work with multiple suppliers to fill that large amount of product, but there may not be enough FSC-certified timber available

Do you have any issues with the transparency of companies? Should consumers be supporting companies that only have a small portion of their products being FSC-certified?

- People should be happy to support a company trying to be FSC-certified, even if it's partially
- Once the company sees their FSC products are popular in rising sales, they will look to increase their FSC-certified products
- A lot of manufacturers don't have much of a choice, because there aren't enough FSC-certified timber to support the demand
- Ikea is one company that is trying to get 100% FSC-certified timber for their furnitures, but it takes time to get all of that sourcing switched over

- Greenpeace is looking closely at Ikea's actions, and attacking Ikea because they are trying to grow into being 100% FSC-certified but it takes time to be, but Greenpeace is misinterpreting Ikea.

Who decides the logo placement on products, and why is it different between the same brands in different parts of the World?

- United States doesn't have a prominent logo on products, but New Zealand does
- Depends on the marketing strategy of the company
 - Companies may want to use a sustainable marketing approach
 - Or they may want to focus on the quality/aesthetics instead of the certification logo
- Some brands may not prominently show it, because the supplies of FSC-certified timber varies year by year, so many companies don't want to take the risk of labeling products in case they can't get the FSC-certified supplies that they would need the next year and have to remove their logo
- Representative doesn't think that the consumers' awareness of FSC or environmental impacts are higher in New Zealand as compared to the United States.
- 1 in 5 people in New Zealand can recognize the logo or understand what it means
- New Zealand brands itself to be environmentally friendly to attract certain types of tourists
 - Air New Zealand brands New Zealand as a green country with views of hiking and conservation to draw people to the country with this image
 - France and Germany have a much lower pollution to person rate as compared to New Zealand, but this statistic gets lost with the scales of the countries
 - In New Zealand 60% of the water is too polluted to use

What's the retailer influence on FSC? Do retailers select for FSC products in their stores?

- Some retailers will specifically include FSC in their procurement policy
 - Bunnings for example is a warehouse store that has stationary that must be at least FSC or PEFC certified
 - HSBC (New Zealand's global bank) will not invest in non-certified forests

- Few companies will procure FSC products because they are passionate. Most will do it from pressure from customers or ENGOs (environmental non-governmental organizations)
- Have to increase consumer awareness and get them to push retailers to want to stock more FSC-certified products. Should focus on consumers and not convincing companies to care.

Do you have any prior experience with FSC campaigns?

- In the progress of doing global campaign
- Uses social media as a base- FSC Friday
 - But FSC doesn't have a huge amount of followers
- Currently FSC is working with FairTrade, Mediterranean Shipping Company (MSC), and BioGrow in a combined campaign to mimic "Label Wise" that occurred in South Africa, to implement in New Zealand

How do you recommend us to foster sustainable behavior in consumers?

- Focus on the consumer group of people who want to be environmentally sustainable but do not know how to be
- Consumers are broken into three sections: Environmentally friendly, want to be environmentally friendly but do not know how to be, and those who aren't interested in being environmentally friendly
- Drive home the fact that FSC-certified products are easy to find and are the same price as other products at the normal stores in their community
- People don't know how to make the difference in saving the environment and how easy it can be
- Make people feel positive and good about themselves instead of negative
 - Say "thank you for helping our forests and wildlife"
 - Or say "By buying FSC products you are helping endangered species living in the rainforest"

Do you have any ideas or components that you would like to see incorporated in this campaign?

- Build upon the animal talks at Wellington Zoo

- Use the Zoo store. They are currently trying to get certified to have big FSC logos around
- Create content about FSC and get access to the marketing platform from the FSC media to use as part of branding

Appendix N: Interview Coding

Interview Responses: Views/Opinions on FSC and Impact of Having a Career that Deals with FSC		
First Order Concepts	Second Order Concepts	Aggregate Concepts
I buy FSC products whenever they are available	I purchase FSC products when they are available	I support FSC when I can, in any way possible, and the choice is easy
Went back to purchasing paper books when favorite author became FSC certified		
Not having the FSC certification will not stop a purchase, but will look for other options first		
Learned about FSC from working at Wellington Zoo	After learning about FSC, I support it	
Now shops for FSC products after learning about FSC		
Changed purchasing habits after learning about FSC at an animal talk at WZ		
"Practice what you preach"	I encourage others to support FSC	
Encourage friends/family to buy FSC products		
Only allows flat mates to purchase FSC for the apartment		
People should support organizations that have any level of FSC certification	I support businesses that support FSC	
Knowing a store has FSC certified bags/tags makes it easier to support them		
Supporting FSC/purchasing FSC products is easy	The choice to support FSC is simple	
NZ culture makes buying FSC a positive social aspect		
FSC products are the same quality		
FSC works to get bigger retail stores interested in showing support	The FSC message/goal is easily accessible	
FSC allows small actions to have large impacts		
FSC logo translates across languages		
Easy to relate FSC logo to preventing deforestation		

Starts off being a small action people can take to save animals		
Learning about effects of deforestation strengthened the FSC message		
I have more awareness about the environmental impacts of my purchases	Increased awareness about environmental impacts after learning about FSC	The FSC organization is tied to themes of environmentally friendly and humanitarian actions.
Being aware of FSC makes me very conscious of where I spend my money		
Learning about FSC specifics changed my outlook on forestry certifications		
FSC helps animals in the wild	FSC cares about the welfare of the environment, wildlife, and surrounding communities	
FSC acknowledges companies trying to help conservation		
FSC helps workers and communities		
FSC looks after the entire supply chain		
FSC is a responsible organization		
Cannot be sure who certifies companies for FSC	Need more information about FSC-certification	There are issues with the transparency of FSC which impede my support of the organization
Skeptical about transparency of FSC		
Need reports on how effective FSC/selective tree cutting is		
Supporting FSC/purchasing FSC products is expensive	FSC products are expensive	
FSC products are more expensive		
Issue with supporting a brand that is only partially certified	Issues with companies that are only partially FSC-certified	
Some manufacturers cannot get enough FSC supply to be fully certified		
eNGO's criticize partially certified companies for not being 100% FSC certified		
Zookeeper/Ranger Interview Data		
Zoo Educator Interview Data		
FSC Representative Interview Data		

Interview Responses: Experiences with Creating Programs Relaying the FSC Message and Resulting Audience Response		
First Order Concepts	Second Order Concepts	Aggregate Concepts
Smaller crowds are more engaged	Smaller crowds respond better to the FSC message	The target audience dictates delivery of the FSC message
Smaller crowds ask more questions		
Animal Talks change based on the crowd	The crowd dictates how the FSC message is relayed/how well it can be received	
Bigger crowds have too many different demographics to tailor the FSC message to		
The FSC message must be catered to the crowd		
If the crowd has a short attention span the message must be brought up early in the Animal Talk		
Making the Animal Talk interactive helps convey the FSC message to children	Children respond better to the FSC message than adults	
Crowds with children can be more interactive during Animal Talks		
Adults do not seem to care about FSC		
Younger children/young adults are interested in the FSC message		
Some Animal Talks are harder to relate to deforestation/FSC	The FSC message is not easily conveyed during all Animal Talks	Currently the FSC message is not effectively conveyed to target audiences
Delivering the FSC message during animal talks can feel like preaching		
The FSC message is required to be included in Animal Talks		
If an animal's habitat isn't threatened by deforestation, FSC will not be proposed as a solution		
Hard to get attention of people during the Animal Talk		
Different animals can convey the FSC message better than others		
Should focus on the consumer group that wants to be environmentally sustainable but does not know how	There is a disconnect caused by lack of information	

People do not know how easy it is to help save the environment		
People do not understand that FSC products are about the same price		
Companies/suppliers do not usually know what FSC is		
Only 1 in 5 people in New Zealand can recognize the FSC logo and understand what it means	The FSC message is not fully getting through to all the target audiences	
Children's programs get the FSC message through to children, but missing the connection to parents		
Customers in the Zoo gift shop do not notice the FSC certification on items		
No visitors ask questions about FSC in the gift shop		
During school sessions children get a special Animal Talk that relays the FSC message	Connecting conservation to the Zoo animals resonates with the audience	Identification of effective methods to convey the FSC message
The FSC message delivered as a solution to habitat loss connects with people		
Animal conservation storyboards in the gift shop cause visitors to ask employees questions		
Children will really pay attention to the FSC message if the animal is in front of them	The FSC message should be kept positive	
Conservation campaigns should make people feel good about themselves rather than guilty		
Use a good news, bad news, good news approach when relaying the FSC message in Animal Talks	The FSC logo is helpful when relaying the FSC message	
Ask Zoo visitors to check the FSC certification logo on the Zoo map		
The FSC message can be kept simple by using the logo		
Talk about available products after showing the logo		
FSC stamp for children has great response, and brings the logo home to parents		
Some visitors ask about where to find the logo on products		
Children can understand what the FSC logo is and find it		
Zookeeper/Ranger Interview Data		

Zoo Educator Interview Data		
Zoo Gift Shop Manager Data		
FSC Representative Interview Data		

Interview Responses: Suggestions for an FSC Campaign and Highlighted Need Areas		
First Order Concepts	Second Order Concepts	Aggregate Concepts
Address children first, then parents	Children should be targeted with the campaign	Animals and children are important parts to include in a successful campaign
Children are more open to change		
Younger generations take on the most responsibility in relation to the environment		
Use the animals to help convey the FSC message	People can easily make connections with Zoo animals	
Could use more interactive displays in the Zoo		
Explain how Zoo animals are affected by deforestation		
Build up empathy		
Increase frequency of FSC around the Zoo	Frequency of FSC around consumers should be increased	FSC needs to become more accessible to consumers
Increase frequency of FSC around stores		
Extend from the Zoo into the community		
Partner with local grocery stores		
Partner with external companies		
Partner with other conservation organizations around Wellington		
A physical take-away object would spread the FSC logo		
FSC logo on something for kids to take home	Consumers need more information about FSC	
Add FSC posters/storyboards to the Zoo gift shop		
Provide more information about forestry certifications		
Barcode app to use when shopping		
Easier access to information		
Show that FSC products are not more expensive		
Consumers are not aware of all the FSC products		

available		
Do not be accusatory	Essential to encourage rather than discourage	The way the FSC message is conveyed is important to the campaign
Can "share" purchased FSC products on social media		
Sharing proof that one has done a good thing is important to some people		
Simplicity is key	Keep the campaign simple	
Do not include too much reading		
Do not ask too much of people		
Do not take too much time out of a person's day		
Different demographic groups respond to different types of messages	Different demographics need different types of messages	
Target different socioeconomic groups		
Zookeeper/Ranger Interview Data		
Zoo Educator Interview Data		
Zoo Gift Shop Manager Data		
FSC Representative Interview Data		

Appendix O: Wellington Zoo Zookeeper and Ranger Interview Notes

The following are the compiled notes taken during the four zookeeper and two ranger semi-structured interviews that our team conducted while on site at Wellington Zoo. The interviewees gave permission for our team to take notes during the interview. Names have been omitted to protect the interviewees, as these interviews were conducted at the interviewees' place of work, and may contain sensitive information. None of the notes are direct quotes from the interviews, and this is not a transcript of the interviews.

Interview #1: Ranger

Date: 1/18/2018

Time: 12:00 PM NZT

Location: Giraffe House, Wellington Zoo

Interview Notes:

In your own words, how would you describe FSC and their aims? What does FSC mean to you?

- Didn't know about the logos before working at Wellington Zoo
- Now looks for FSC products when shopping, and notices the FSC logo more and more after starting to buy these products
- Main motivation for supporting FSC is to make sure that the animals are healthy in the wild, and the audience shares this view during the Animal Talks
Hopes to reach a wider audience through the use of Animal Talks

Is there a script for the FSC part of the talks? Do you ever make that portion interactive?

- All of the zookeepers/rangers go through a communications training
- The giraffe talk can be more difficult to easily tie in the FSC message, usually mentions how giraffes are efficient with their resources and how we can help them out by supporting FSC when grocery shopping

- Tries to make the talks interactive when FSC is brought up- has people check the zoo maps to find the FSC logo
- Does not spread misinformation about FSC during the Animal Talks, if the animal's habitat is not threatened by deforestation practices then that will not be said at that animal talk, for example. Instead, FSC will be brought into the conversation in a different way.
- Rangers do many different Animal Talks so they have to be creative at times to tie in FSC their talk

Do you feel like visitors are engaged during the FSC portion of the talk- is there audience response to anything in particular? What usually grabs the attention of the audience the most (adults vs. kids)?

- It is often hard to get people's attention during the talk, and often will use the animal to try and reign in the crowd to listen to the message

Has working here changed any of your behaviors in relation to timber/paper products? What was the main thing that caused this?

- Always talk to friends and family about trying to buy FSC products, especially if in the store shopping with them
- Buys FSC products anytime they are available

Is there anything you would like to see in the campaign?

- Don't accuse anyone when conveying environmental messages
- Address kids first, then it will get their parents to be engaged
- Would like to see FSC more frequently around the Zoo, on products in stores
- Wants more info about other forestry certifications
- Use the animals as advocates

Interview #2: Carnivore Keeper

Date: 1/19/2018

Time: 11:00 AM NZT

Location: Tiger Habitat, Wellington Zoo

Interview Notes:

In your own words, how would you describe FSC and their aims? What does FSC mean to you?

- Favourite part about talking about FSC is making the connection with people to the bigger picture of saving animals with simple actions

Is there a script for the FSC part of the talks? Do you ever make that portion interactive?

- Talks change every time based on the conditions around, what the crowd is like, etc.
- With smaller groups, can ask questions of the crowd to make it more engaging
- If the crowd has a lot of children, the talk can be made more interactive and it will provoke more questions from the crowd
- Tigers have strong personalities and depending on how the animal is acting the talk may change

Do you feel like visitors are engaged during the FSC portion of the talk- is there audience response to anything in particular? What usually grabs the attention of the audience the most (adults vs. kids)?

- Have to read the crowd before delivering the FSC portion of the talk
- Introduce the animal first, give some facts, then tie to FSC usually works well for people to make the connections
- Use a good news, bad news, good news approach when delivering FSC message
- Can read the faces of people in the audience, delivering FSC as the solution to problems that tigers have is a good way to get people engaged/responsive to the message

Did you know about FSC before you came to the Zoo? Has working here changed any of your behaviors in relation to timber/paper products? What was the main thing that caused this?

- Didn't know about FSC before working at Wellington Zoo- from a different part of Oceania
- More awareness now with purchases of paper products
- Culture in New Zealand makes buying FSC/being conscious more of a social aspect

Is there anything you would like to see in the campaign?

- Should target both kids and adults- adults do the buying but kids can influence the adults

- Parents are the long term role models, and kids might forget long term without that presence
- Actually saw a child check toilet paper that the mother was buying to make sure it was FSC-certified
- Very interested in seeing our consumer survey results
- Would like to see the campaign extend from the Zoo into the community
- Maybe could work with local grocery stores in promoting FSC or more external companies
- Roundtable on Sustainable Palm Oil campaign worked great because many zoos across New Zealand and Australia worked together to then petition the government to force legislation about labeling palm oil

Interview #3: Primate Keeper

Date: 1/19/2018

Time: 12:30 PM NZT

Location: Chimpanzee Habitat, Wellington Zoo

Interview Notes:

In your own words, how would you describe FSC and their aims? What does FSC mean to you?

- Cannot be sure of who is certifying companies
- No studies into selective tree cutting and if it is helpful/harmful
- Wants reports to see actually how effective FSC is
- Skeptical about the transparency of organizations like FSC or free-range
- If only some products from a company are certified, skeptical about supporting that brand as overall it would be supporting the non-FSC side of their business as well
- It would be much better to know the specifics of each certification, or what percent of a company's products are FSC-certified

Is there a script for the FSC part of the talks? Do you ever make that portion interactive?

- Sometimes feels like delivering the FSC message in the Animal Talks is preaching FSC
- The message has to be included in the talks

- It is easier to get the message across to smaller groups, but with bigger groups there are so many different socioeconomic classes that the message can't be tailored to all of them
- Doesn't usually keep track of what is being said during the FSC portion of the talk

Do you feel like visitors are engaged during the FSC portion of the talk- is there audience response to anything in particular? What usually grabs the attention of the audience the most (adults vs. kids)?

- People usually aren't interested in the FSC message

Did you know about FSC before you came to the Zoo? Has working here changed any of your behaviors in relation to timber/paper products? What was the main thing that caused this?

- Didn't know about FSC before the zoo
- Can't afford items that are more expensive, so doesn't usually buy FSC
- Doesn't know what PEFC was

Is there anything you would like to see in the campaign?

- Might be better to target children with the campaign, as kids are more open to change and can influence their parents
- Target different socioeconomic groups, or smaller/more similar groups of people
- Need to build up more empathy on the audience before relaying the FSC message
- Could use more interactive displays or stuff that people can go out of their way to do if they choose
- Photos of different products around the Zoo to remind people of what they should look for in stores could be helpful
- Doing a back-to-school campaign could be effective- FSC notebooks, pencils
- The Palm Oil barcode app would be an interesting angle for an FSC campaign

Interview #4: Carnivore Keeper

Date: 1/23/2018

Time: 3:00 PM NZT

Location: T-Room, Wellington Zoo

Interview Notes:

In your own words, how would you describe FSC and their aims? What does FSC mean to you?

- Tries to “practice what you preach”

Is there a script for the FSC part of the talks? Do you ever make that portion interactive?

- Went through a training
- Some animals are harder to connect FSC into their talks, but lemurs, sun bears and tigers are easy
- Mentions a lot about hardwood products
- Homeschooling parents sometimes will want to talk more about conservation campaigns/FSC

Do you feel like visitors are engaged during the FSC portion of the talk- is there audience response to anything in particular? What usually grabs the attention of the audience the most (adults vs. kids)?

- Adults don't seem to care
- Tells kids to look at the map when FSC is referenced in the talk

Did you know about FSC before you came to the Zoo? Has working here changed any of your behaviors in relation to timber/paper products? What was the main thing that caused this?

- Didn't know about FSC before working at Wellington Zoo, but now tries to support it

Is there anything you would like to see in the campaign?

- Look to Wipe for Wildlife
- Need easier access to more information
- Social media would be a great aspect to bring in, maybe “share” when you've purchased FSC products

Interview #5: Ranger

Date: 1/26/2018

Time: 12:00 PM NZT

Location: Living Room, Wellington Zoo

Interview Notes:

In your own words, how would you describe FSC and their aims? What does FSC mean to you?

- There's an actual logo, so it is super helpful to actually look at
- Very easy to relate the logo to preventing deforestation
- Noticed that most toilet paper products are certified
- Symbol translates over language barriers

Is there a script for the FSC part of the talks? Do you ever make that portion interactive?/ Do you feel like visitors are engaged during the FSC portion of the talk- is there audience response to anything in particular? What usually grabs the attention of the audience the most (adults vs. kids)?

- Always tells kids to look at the map when talking about FSC
- Keeps it simple with the logo
- Caters to the crowd- if they have a short attention span, it will be brought up early
- Make the connection with kids between the animals and trees
- Some people only come to see the animal and don't listen to the talk

Did you know about FSC before you came to the Zoo? Has working here changed any of your behaviors in relation to timber/paper products? What was the main thing that caused this?

- "Practice what you preach"
- Doesn't allow flatmates to purchase non-FSC
- Buys all FSC-certified art supplies

Is there anything you would like to see in the campaign?

- Focus on kids to young adults
- Younger generations usually will take on the most in relation to conservation and the environment
- Older people may be more set in their ways
- Local New Zealanders tend to be more interested, as it can be hard to find the logo in other countries
- Potentially have people share on social media when they have found the FSC logo- like a treasure hunt
- Definitely show people that the price won't be more expensive

- Sharing proof that a person has done a good thing is important to some people- might drive more results/activity

Interview #6: Herbivore Keeper

Date: 1/26/2018

Time: 1:00 PM NZT

Location: Computer Room, Wellington Zoo

Interview Notes:

In your own words, how would you describe FSC and their aims? What does FSC mean to you?

- Appreciate FSC because people don't have to go too far out of their way to support it
- Mostly relates FSC to giraffes

Is there a script for the FSC part of the talks? Do you ever make that portion interactive?

- Incorporate the FSC message easily with giraffe talks- the main food source for giraffes is leaves
- Make the connection to FSC, show the logo, then talk about available products

Do you feel like visitors are engaged during the FSC portion of the talk- is there audience response to anything in particular? What usually grabs the attention of the audience the most (adults vs. kids)?

- Engagement depends on the crowd- some people just want to feed the animal
- Younger children, and young adults are interested
- Some visitors ask where to find the logo on products, and if there are any alternative certifications
- Younger kids are easier to target and will affect the future the most
- Adults tend to be more stubborn
- The logo is a tangible thing, kids are able to look for it and know they are positively changing the world

Did you know about FSC before you came to the Zoo? Has working here changed any of your behaviors in relation to timber/paper products? What was the main thing that caused this?

- Recognized the logo before working at the Zoo, and knew they helped prevent deforestation but didn't know many specifics, didn't really make the connection

Is there anything you would like to see in the campaign?

- Simplicity is key
- Make it simple, fun and exciting
- Don't include too much reading
- Don't take too much out of the person's day, and don't ask too much of people

Appendix P: Wellington Zoo Educators Interview

The following are the compiled notes taken during a semi-structured interview that our team conducted while on site at Wellington Zoo, with two Zoo Educators. The interviewees gave permission for our team to take notes during the interview. Names have been omitted to protect the interviewees, as this interview was conducted at the interviewees' place of work, and may contain sensitive information. None of the notes are direct quotes from the interview, and this is not a transcript of the interview.

Interview: Zoo Educators

Date: 2/1/2018

Time: 1:00 PM NZT

Location: Living Room, Wellington Zoo

Interview Notes:

What is your role at the zoo?

- School groups come, get a subsidized rate
- 45 minutes to one hour long enrichment sessions
- Cover animal adaptations all the way up to animal evolutions
- Also run the school holiday programs (4 breaks a year, jan, feb, april, october)
- Over 10,000 students per year

What kind of children's programs exist?

- Holiday programs- groups of kids (5-12 year olds, but usually 5-8) come in during their school breaks. Run from 8:30 to 4:30, they can do programs like animal enrichments, zoo keeper assistants. Everything is about learning through fun. Some come once, two days a week, or some are regulars. Regulars are great because children can continue to learn and build off of the messages.

- School Programs- kids come in for a day long field trip. Usually one a day at the school, but have had up to 15 in one day.
- Bush Builders- at the zoo and in their schools, cover conservation projects with primary school ages kids. Includes monitoring wildlife, planting native bush at the school, learn about conservation. The kids learn, and then they come up with an action plan to do at their own school. Pretty intense in terms of time, they come in for a morning and then the educators go back to the school a few times. Target is 400 children, but they've done around 1000.

In your own words, how would you describe FSC and their aims? What are your thoughts on FSC/ how important is it/ do you buy FSC products/ does anything prevent you from buying them?

- Starts off being a small action but can turn into a big action that people can take to save animals
- FSC acknowledges companies that are trying to be better about conservation, not just if they 100% have attained that already
- FSC doesn't just look after animals, but also the people that are working in these environments
- FSC looks down the whole supply chain which is very responsible
- It's very helpful that bigger retail stores are making FSC products readily available- the Warehouse is making it easy for kids to get FSC books
- FSC products aren't different from the other products- sometimes kids worry about having products that are different from their peers
- One of the stores frequently shopped at has FSC-certified paper bags and tags in their clothes- makes it easier to support that business
- Not having the FSC certification won't stop a purchase, but will always support when available
- Actually went back from buying eBooks to paper books because a favorite author started printing on FSC-certified paper

- Makes you very conscious of where to spend money/what products/companies to support
- Was aware that certification programs existed, but working at the Zoo has highlighted FSC and has changed the outlook
- Actually saw FSC at the tiger talk before working here, started buying FSC toilet paper because of the talk, but now from working here the conservation message is a lot stronger in life and thinks about it in all aspects in life
- Doesn't usually hear stories about FSC, but now SFC is brought up a lot at lunch for example since working here so it definitely helps get the FSC message engrained
- Learning about how much these animals actually are affected by deforestation and how amazing these animals really are has made the FSC message hit so hard

How is FSC involved with these children's programs?

- There is an FSC stamp that the kids love- they will take it home to their parents and check if the products at their house is FSC-certified. One child that did this, his mother wrote about the program and FSC on her blog.
- Changes with the different programs, the different animals can be tied in better
- If gibbons, tigers, sun bears, giraffes, chimps are involved in the session, FSC definitely gets involved
- Conservation Connection- FSC features as part of it
- Usually kids get enrichment by getting an "animal talk" and this is where the FSC message will get relayed
- A direct cause and effect link is key for children- clear connection between habitat loss and deforestation to FSC solving this
- Holiday programs are pretty flexible with getting FSC into the program- messages are more in the moment/coincidental (using the map, or construction sites)
- Using the stamp makes sure that the kids won't forget the FSC logo by the end of the day- but the stamp bleeds so maybe a better stamp could be used but the principle of it is a great take away. The stamp gets brought out during the FSC message

- Yes, the FSC message is getting through to the kids- but is it getting through to the adults? This can be frustrating, it can be like a missing link. Trying to be the bridge to the home
- Don't do any FSC crafts as of now

How do you engage kids best and have them retain information?

- Definitely the animals- if the kids are in front of an interesting animal they will really pay attention

Is there anything you would like to see in the FSC campaign / or suggestions?

- Should explain how amazing these animals are, and how much they actually do get affected by deforestation will really hit the FSC message home
- Usually only talk about toilet paper, but there are so many products that are FSC-certified that we could spread the message about even more
- Nothing physical that the kids can take away with them- maybe FSC objects
 - Maybe little bracelets- even the paper ones (festival bracelets)
- No learning resources on the FSC NZ website, but every other one does. Could be helpful for teachers, follow up resources are usually asked for but there currently are none readily available
- QR codes aren't very popular in NZ

Appendix Q: Zoo Marketing Team Interview Notes

The following are the compiled notes taken during a semi-structured group interview that our team conducted while on site at Wellington Zoo, with two members of the Zoo's marketing team. The interviewees gave permission for our team to take notes during the interview. Names have been omitted to protect the interviewees, as this interview was conducted at the interviewees' place of work, and may contain sensitive information. None of the notes are direct quotes from the interview, and this is not a transcript of the interview.

Interview: Zoo Marketing Team

Date: 2/22/2018

Time: 11:00 AM NZT

Location: Living Room, Wellington Zoo

Interview Notes:

What does your team primarily do at the Zoo?

- Marketing coms advisor-twitter fb insta, internal/external coms-zoo crew/other advisors, marketing, manage media
- goals=get people to visit (external marketing-fun aspects of the zoo, not FSC stuff) when they are here, they talk about FSC/zoo crew etc (internal marketing)

What part does your team play in helping spread the conservation messages that the Zoo is involved in promoting?

- Tie in conservation partners-red panda network
- FB and insta keep posts short
- Mention FSC
- Posted video about FSC and tagged them and got reposted
- 12-13 conservation projects
- Different projects/animal news/events-lots of things to talk about
- Try to tie in FSC to animals-don't do anything specific
- A lot is just talking about FSC in the zoo
- Kid found fsc logo in a market

What goes into this design process?

- Always positive
- Don't dwell on it being too late
- You can make a difference

- It's not too late
- People don't engage with sad messages, but if you show them a behavior they can do, then they will be more interested
- Show its easy to buy FSC products
- Don't do signage-Jude does
- Did the billboard/posters in toilets
- Someone else does graphic designing

What partnerships exist between the Zoo and outside organizations?

- Air nz wasn't partnership-qr mag included it-luck
- Nz media-zoo pays but gets air space on the radio, on site promotions, zoo chats (60 sec radio chat)
- Trade me-get free online ads (10,000 worth of impressions)
- Pay for ads
- Reta?-have challenges on websites and share zoo stuff

Did you have involvement with Cats Inside at Night?

- Not directly, but they do talk about it, like during conservation week
- Door hanger that says your cat is home
- They put it out to people for them to send pics of this sign and they would be entered to win a zoo crew pass
- Got a cheetah to hold a hanger and people could download it
- Biggest thing is about getting the message out
- They always talk about issues (ex. Cat being dead in zoo)

What social media accounts does the Zoo have, and who runs them?

- Snapchat-don't use it/havent started it-snapchat is going downhill
- FB-can use more characters
- Instagram is good too, but just post pictures not much about conservation messages
- Such a small team that they would rather do a few and do it well
- Looking into Linkedin (to connect to agencies, etc. avoiding the general public)

Appendix R: Past Conservation Campaign Report Analysis

Past Campaign Report Review Form

Campaign Name: Wipe for Wildlife- Recycled Toilet Paper (Australia)

Why was it started?	<ul style="list-style-type: none"> ● Aimed to influence visitor’s purchasing decisions and use of 100% recycled toilet paper
What organizations were involved?	<ul style="list-style-type: none"> ● Zoos Victoria ● 8 zoos around Australia were part of a project called “Fostering pro-environmental behavior of zoo visitors through strategic communication”
Research methods when planning	
Consumer data collection methods	
Consumer data results	
Campaign implementation method	<ul style="list-style-type: none"> ● “Crap Man” superhero mascot was the spokesperson for the campaign ● An informational video about the benefits of recycled toilet paper was released and shared on the internet ● Signage was posted around the Zoo ● An interactive quiz/maze was set up in the Zoo, and visitors choose which path to take at each junction based on their answers to questions about their habits. Attention grabbing appearance, decorated with toilets ● Face-in-hole photo ops were used ● Information about recycled toilet paper was made available on the Zoos Victoria website ● Door-hangers and posters were available for printing online that were to be posted in bathrooms, promoting recycled toilet paper

	<ul style="list-style-type: none"> ● Marketed places that supported recycled toilet paper as “Wipe for Wildlife Zones” ● Slogan “Wipe for Wildlife: Saving animals, one bottom at a time” ● Posters featuring animals in the Zoo affected by deforestation playing with toilet paper rolls were featured with the Wipe for Wildlife logo
Preliminary results	<ul style="list-style-type: none"> ● After the conclusion of the campaign, 91% of visitors said they remembered the message from Wipe for Wildlife.

Past Campaign Report Review Form

Campaign Name: Don’t Palm Us Off- Anti-Palm Oil & Orangutan Conservation (Australia)

Why was it started?	<ul style="list-style-type: none"> ● Orangutan habitat in rainforests of Borneo and Sumatra are being cleared for timber and palm oil crops ● Orangutans are being pushed towards extinction because of this habitat loss ● Goals: <ul style="list-style-type: none"> ○ Raise public awareness about what palm oil is and what products it is found in ○ Change food labeling laws in Australia and New Zealand ○ Drive a market need for certified palm oil
What organizations were involved?	<ul style="list-style-type: none"> ● Zoos Victoria ● Several other Australian zoos ● Australia Channel Ten
Campaign implementation method	<ul style="list-style-type: none"> ● Video describing links between palm oil and orangutan habitat destruction and use of palm oil in Australian products, played on loop in the Zoo visitor center, featuring popular news anchors and celebrities, with regular Australian

	<p>families</p> <ul style="list-style-type: none"> ● “We want the choice” was a slogan in the video ● Petition cards for visitors to sign- support mandatory palm labeling ● Video was made available to share on YouTube ● Several Australian zoos started similar campaigns ● Video was screened on Channel Ten ● Zoos Victoria had information on palm oil available on the website (links to conservation organizations, general info, link to online petition) ● Wallet cards given out at Zoo and available for print out online listing names that palm oil is commonly listed under to help consumers avoid buying it ● Facebook/social media pages were established for the campaign ● National media coverage through radio and 7PM Project tv news program
<p>Preliminary results</p>	<ul style="list-style-type: none"> ● Outcome profiles (knowledge, attitudes, behavior, social norms) in relation to palm oil suggest campaign was successful ● Zoos Victoria successfully educated the public which in turn led to an increase in concern for orangutans, support for mandatory palm oil labeling, and donations to orangutan conservation organizations ● Visitors correctly understanding palm oil as the major cause of orangutan habitat: <ul style="list-style-type: none"> ○ Baseline (6 mo prior): 54.3% ○ 6 mo in: 97% ○ 12 mo in: 78.4% ○ Follow-up (6 mo after): 75.2%

Past Campaign Report Review Form

Campaign Name: Cats Inside at Night- Native Species Conservation (New Zealand)

<p>Why was it started?</p>	<ul style="list-style-type: none"> ● Cats are one of the largest threats to New Zealand biodiversity ● New Zealand has highest rate of cat ownership per capita (51% of homes have at least one cat) ● Estimated 16-24 million animals are killed every year by cats ● Several bird extinctions have been heavily affected by cats ● Only 13% of Zoo visitors believed that invasive species were a threat to native bird species ● Only 8% of Wellington residents that brought their cat inside at night did so to protect native wildlife
<p>What organizations were involved?</p>	<ul style="list-style-type: none"> ● Wellington Zoo ● Wellington City Council
<p>Research methods when planning</p>	<ul style="list-style-type: none"> ● Researched social marketing approaches and consumer psychology studies
<p>Campaign implementation method</p>	<ul style="list-style-type: none"> ● Animal presentations at the Zoo spread the conservation message about cats and advocated for bringing cats inside at night- this was mentioned three times a presentation and was presented in a way that did not stress that cats were a threat (“your cat would rather be inside and warm with you”) ● Surveys were administered to the visitors after the presentation asking about conservation/cats inside at night ● Pledge cards were administered to half of the visitors after the presentation ● Six weeks later, respondents were contacted again to answer a follow-up survey
<p>Preliminary results</p>	<ul style="list-style-type: none"> ● Non-pledge card group: <ul style="list-style-type: none"> ○ 91% recalled the conservation behavior ○ 57% implemented the behavior ● Pledge card group: <ul style="list-style-type: none"> ○ 100% recalled the behavior

	<ul style="list-style-type: none">○ 100% implemented the behavior● Overall:<ul style="list-style-type: none">○ 70% of visitors that attended the presentations adopted the desired behavior○ Over half attributed this behavior to the message heard at the Zoo
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