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The Feasibility for Providing a More Sustainable Menu in Hong Kong's Seafood Businesses

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Abstract

To determine the feasibility for Hong Kong's hotels and restaurants to provide a more sustainable seafood menu, this project conducted a survey to accomplish the following: identify factors that influence businesses' purchasing decisions; assess their knowledge on sustainable seafood; reveal business concerns about transitioning to a more sustainable menu, and determine the percentage of wedding banquets that request no shark fin menus. Analysis of the survey indicates that it is feasible for hotels and restaurants to implement more sustainable menus. However, businesses and consumers require more education on sustainability for this to occur. WWF-Hong Kong should provide access to resources such as sustainable seafood product databases and new mobile/computer applications to further educate and assist both businesses and consumers towards choosing sustainable seafood alternatives.

Executive Summary

The world's fish and seafood production has grown exponentially in the last few decades, reaching an all-time high of 143 million metric tons, valued at 208 billion USD (FAO, 2008, *Summary Tables*). About 80 percent of this produce is used for human consumption. If these current patterns continue, then all commercially fished seafood may be completely depleted as early as the year 2050 (Bon Appétit Management Company, 2007).

Hong Kong Special Administrative Region (SAR), People's Republic of China (PRC), is recognized for having the best and most expensive seafood dining in the world and is noted for experiencing consumption rates that are four times greater than the world's average (FAO, 2008, *Summary Tables*). Hong Kong is home to over 1300 restaurants and 170 hotels that include seafood in their menus; however, the ones that provide sustainable seafood options are limited (Openrice Group Inc., 2010). Seafood has long been an integral part of Chinese culture and tradition, and its high demand causes businesses to actively try to meet the consumers' demands. However, this often leads these businesses to overlook the environmental impacts of unsustainable fishing practices when deciding what fish and/or seafood to provide. Previous studies have looked at consumer awareness of sustainable seafood, but little has been done to address the large population of seafood businesses. This project looks at the key seafood retail businesses in Hong Kong, that is, hotels and restaurants, and determines if offering a more sustainable seafood menu is feasible for those businesses.

In cooperation with the WWF-Hong Kong and under the guidance of Conservation Marine Officer, Dr. Allen To, the project team conducted a survey with popular and targeted hotels and restaurants. The content of the survey questionnaire was designed to do the following:

identify the factors that influence the businesses' purchasing decisions in regards to their regular and catering menus; address businesses that already provide sustainable seafood options to identify the reasons for their transition to a more sustainable menu and to see what problems they have encountered; evaluate businesses' knowledge of sustainable seafood, and identify actions to be taken by non-governmental organizations to educate and influence hotel and restaurant managers to offer more sustainable seafood within their menus.

The survey questionnaire, written in both English and Traditional Chinese, was completed by a total of 30 hotels and 70 restaurants across several regions in Hong Kong within a two week time period in January, 2011. The types of questions varied depending on the required information, but a majority of the queries were multiple-choice or scaled questions to allow the participants to easily comprehend the material. Although the same questionnaire was given to both hotels and restaurants, two strategies were used to administer the survey in order to complement the nature of each type of business. For instance, restaurants are mostly locally-owned, so the language barrier needed to be addressed. In comparison, the hotel strategy needed to incorporate ways to deal with a corporate office and/or Public Relations departments.

Many businesses highly value the reputation of the supplier and quality of their seafood, along with the stability and popularity of the seafood species. Although results from this study indicate that hotels and restaurants think that sustainability is not as important as other criteria when choosing suppliers and seafood products, it is still considered moderately important. Among businesses that offer catering services, it was found that a majority of them can cater shark-free banquet menus, provided that customers will choose that option. Overall, the team concluded that only 14 percent of the respondents truly consider environmental effects in their businesses' operations.

The study found that the majority of the sample population has insufficient knowledge about sustainable seafood. Only 22 percent of the sample demonstrated adequate knowledge of sustainable seafood species and the general conditions that make seafood sustainable. There is some correlation between the respondents' self-assessment on their knowledge of sustainable seafood and their results on the knowledge-based questions. Generally, respondents are as knowledgeable about sustainable seafood as they perceive themselves to be, with the exception of a few outliers. The team recognizes that the businesses' limited knowledge on sustainable seafood may be hindering their ability to make smart purchasing decisions that take into account environmental effects.

In summary, this investigation concluded that it is feasible for seafood businesses in Hong Kong to provide a more sustainable seafood menu. Sustainability still proved to be of some importance among businesses' purchasing decisions and this essentially provides a basis for future improvement and growth. However, businesses and consumers require more education on sustainability for this to occur. Many hotels and restaurants found NGO's to be an influential stakeholder in the sustainability movement and believe that they should develop and offer a sustainable seafood database along with online tutorials and educational courses for both businesses and consumers. Non-governmental organizations, such as WWF, should create forms of media that promote and distinguish the businesses that currently offer sustainable seafood. Eventually these efforts will create a competitive market for sustainable seafood, where businesses will compete for customers that seek sustainable seafood products. The team suggests utilizing technology, such as cell phone and computer applications and commercials, to advance this educational process.

Chapter 1: Introduction

In the last 30 years, the total amount of freshwater fish and seafood produced worldwide has almost tripled, reaching up to a reported 143 million metric tons, valued at 208 billion USD (FAO, 2008, *Summary Tables*). Approximately 80 percent of this produce is used for human consumption. If these current patterns continue, then all commercially-fished seafood may be completely depleted as early as the year 2050 (Bon Appétit Management Company, 2007). In order to prevent the degradation of the world's aquatic ecosystems, sustainable practices in fish farming and harvesting need to be implemented. Addressing the sustainability of seafood involves not only considering consumers' attitudes, but more importantly the viewpoint of the distributors, such as hotels and restaurants, that directly provide the seafood to consumers.

Hong Kong Special Administrative Region (SAR), People's Republic of China (PRC), has four times the world's consumption of fish and fishery products per capita, with 67 kilograms per year (FAO, 2008, *Summary Tables*). The region consumes 463 thousand metric tons of seafood each year, more than three times its annual production. Recognized for being one of the best and most exotic seafood locations in the world, Hong Kong's seafood culture is rich and abundant, and businesses play an enormous role in reinforcing this fact. Seafood has long been an integral part of Chinese cuisine and tradition, especially in wedding banquets. The high demand for unsustainable seafood species results in businesses actively trying to meet consumers' needs which may cause them to disregard the environmental impacts of unsustainable fishing practices. There are over 1300 restaurants and 170 hotels in Hong Kong that include seafood in their regular and banquet menus (Openrice Group Inc., 2010). However, the ones that provide sustainable seafood options are limited. According to WWF-Hong Kong

(2011), there are only 23 restaurants in Hong Kong participating in WWF's Blue-fin Tuna Initiative, six hotels and restaurants participating in their Seafood Choice Initiative, and 48 restaurants pledging to provide shark-free banquet menus.

Providing environmentally friendly fish and seafood really comes down to modifying the supply and demand process. In Hong Kong, most fish and seafood go through a common supply system, starting from their capture, on to distributors and/or processors, then retailers, and ending in the hands of consumers. As this system has followed a regular pattern for many years, trying to change any of the steps in the supply chain is difficult. Thus, it is more feasible to influence the demand (i.e. consumers and suppliers) of fish and seafood to alter the flow of products within the system. In 2008, a survey conducted by a team of WPI students found that many consumers had heard of eco-friendly fish and seafood but did not consider the health of the environment as an important criterion when buying a fish product; some admitted to not knowing what constituted seafood as being sustainable or unsustainable (Boulanger, DeMott, Nikitas, & Patchel, 2008). With suppliers, many conservation organizations, such as the Blue Ocean Institute and the Marine Stewardship Council (MSC), have created programs to educate and encourage retailers to provide more sustainable menus. A number of organizations even provide eco-label certifications to promote sustainable seafood within seafood businesses (Blue Ocean Institute, 2010; Marine Stewardship Council, 2010).

Nevertheless, these programs are not as widely advertised among retailers as the conservation organizations had hoped. For example, most of the MSC-certified businesses in China and Hong Kong are wholesale fish suppliers (Marine Stewardship Council, 2010, *Find a Supplier*). However, only a limited number of retailers are involved with conservation organizations, and it is important to understand the reasons for this minimal response. It is also

necessary to identify the motives that influence the types of fish and seafood products they sell, for example, why they lean towards an unsustainable fish product versus a sustainable alternative.

This research involves looking at retailers in Hong Kong, particularly hotels and restaurants, to uncover the possible options that they might have when selecting their fish and seafood products while increasing the percentage of sustainable products they sell. In cooperation with the WWF-Hong Kong and under the guidance of Conservation Marine Officer, Dr. Allen To, the project team conducted a survey with popular hotels and restaurants in Hong Kong to determine the factors involved in their fish and seafood purchasing decisions and to assess their knowledge of sustainable seafood. Results from the survey indicated that businesses need to be educated more on sustainable seafood. Additionally, many businesses base their purchasing decisions on consumer demands, so it is necessary to continue educating consumers as well. Based on our results, the team recommends WWF-Hong Kong to develop and expand educational programs and databases for both businesses and consumers, which will boost the demand for sustainable products and make it feasible for businesses to offer a more sustainable menu.

Chapter 2: Background

This chapter discusses the many aspects of the seafood trade system in Hong Kong. Fish and seafood are a large part of Chinese culture and tradition, and is especially evident in wedding banquet menus. Due to increasing demands, much of the fish and fishery products sold in the market are considered unsustainable. As “unsustainable” can have a variety of definitions, this project focuses more on the precarious fishing and harvesting methods that contribute to the degradation of the world’s marine ecosystems. In addition, this chapter describes the live and frozen/processed seafood trade system in Hong Kong, which involves wholesale fish markets, the distributors, and the retailers. Laws, policies, and campaigns developed to promote the sustainability of fish and seafood are also reviewed to elucidate actions taken in recent years to conserve aquatic ecosystems.

2.1 Hong Kong’s Geography

Hong Kong is located in the South China Sea at the mouth of the Pearl River Delta. It has 260 territorial islands and peninsulas that are divided into five main territories: Hong Kong Island, Kowloon Peninsula, New Territories, Lantau Island, and Sai Kung Peninsula (see Figure 1). Because of its central location among Southeast Asia, China, Korea and Japan (see Figure 2), Hong Kong has been the center of many of the world’s biggest and most important maritime trading routes throughout its history. Hong Kong harbor is one of the busiest seaports in the world. Its total cargo throughput in the first half of 2010 was reported to be 130.0 million tons, with an inward port cargo throughput of 75.4 million tons and an outward cargo throughput of 54.7 million tons (Census and Statistics Department, 2010). Today, Hong Kong still plays a

major part in China's seafood market as the majority of Mainland China's seafood is imported through its port (Clarke, 2004).



Figure 1: Map of Hong Kong (Goway, 2011, *Hong Kong*)



Figure 2: Hong Kong's Geographic Location in Asia (Google Maps, 2010)

2.2 Seafood Culture

Today, seafood is becoming a popular dish as people are becoming more aware of the substantial health benefits that fish and seafood products have over other traditional protein sources, such as red meat and poultry. According to the Fisheries Research and Development Corporation (2004), seafood has long been considered a low calorie, highly nutritious source of protein. It contains significant amounts of iodine, has low saturated fat content, and a variety of health-benefiting fats such as Omega-3 and Omega-6. Seafood has been found to reduce risks of many common diseases such as heart disease, high blood pressure, arrhythmia, diabetes, and even some types of cancer (2004).

Seafood consumption worldwide has been steadily increasing each year. According to Steven Hedlund (2010), editor of *The Seafood Source*, the global annual seafood consumption in 2008 reached 143 million metric tons with an average per capita of 17 kilograms; a four percent increase from reports in 2006. In China, the average person eats 3.6 times more seafood than the world's average per capita consumption (WWF, 2010). Due to having the largest population, China is now the world's biggest seafood consumer, topping both Japan and the United States.

The Chinese have a tradition of consuming fish or seafood in their everyday meals. In the 7th century, Marco Polo witnessed the abundance of shrimp and other seafood in the Chinese diet (Gascoigne, 2001). This trend has continued until present day and consequently is putting a substantial strain on seafood supplies worldwide. Moreover, many of the traditional Chinese seafood dishes require red-list species as ingredients. Red-list refers to fish and other marine species that are “over-exploited, caught, or farmed in an ecologically unfriendly manner, or come from fisheries that are not well managed” (WWF, 2007, p.1). The following sections list some of the most popular seafood types or species in Chinese cuisine.

2.2.1 Shark Fins

Shark fin has been a delicacy in Chinese cuisine since the Sung dynasty (960-1279 AD) and was a “traditional component of formal banquets” (Clarke, 2004, p.56). Priced at over HK\$3100 (US\$400) per kilogram, shark fin is currently one of the most expensive seafood products in China. Its price and exclusivity makes shark fin very popular for high-class meals, which are becoming more common in China. Hong Kong is the main trading port for shark fin for Mainland China. Hong Kong now imports between 50 and 80 percent of the world’s supply from 125 countries (Clarke, 2004; Vannuccini, 1999). Since shark meat has a much lower demand because of the dangers associated with it (such as mercury contamination), only the demand for the fins drive shark fishing worldwide.

2.2.2 Abalone

Abalone has been an integral part of Chinese cuisine for more than two thousand years. During the Han dynasty (206 B.C.-220 A.D.), Emperor Liu Bang noticed fishermen eating abalone for the first time and incorporated it into the official Han dynasty cuisine (Clarke, 2004). While abalone is still widely consumed today, its complex preparation requirements make dried and canned abalone the more popular forms in China. High-grade abalone products are imported from Japan, South Africa, the Middle East, and Australia, while lower grade products come from Indonesia and the Philippines. Although it is not recognized as an endangered species, abalone from South Africa is on the WWF (2007) seafood red-list due to many years of illegal commercial harvesting.

2.2.3 Dried Fish

In China, the main consumers of dried fish products are low income families or people from older generations (Clarke, 2004). Most of Hong Kong dried fish imports are from Mainland

China, Bangladesh, Vietnam, India, Indonesia, Thailand, and Kenya. There are many types of dried seafood, some of which are on the WWF (2007) seafood red-list, including Hairtail and Bigeye.

2.2.4 Live Seafood

Driven by their preference to consume the freshest seafood, Chinese consumers consider live seafood a luxury item. In Hong Kong, live seafood restaurants are abundant and located in many different areas. Many of these restaurants maintain seafood tanks, from which individuals can select a live fish that will be prepared for the meal. Depending on the type of species, live seafood retails from HK\$40 to HK\$1400 per kilogram (Sadovy, 2003). Hong Kong's main sources of live seafood come from the coral reef areas in Southeast Asia. Many of the live seafood types from this area are listed on the WWF (2007) seafood red-list due to fishing practices that are damaging to the coral reefs. These live fish types include high-finned grouper, squaretail coral trout, and leopard coral trout (see Appendix D).



Figure 3: Live Fish Tanks at a Seafood Restaurant in Sai Kung, Hong Kong

2.3 Chinese Wedding Banquets

While Hong Kong is becoming more modern and westernized, the local residents still hold onto their traditional Chinese customs. Many weddings in Hong Kong incorporate a civil ceremony, similar to those seen in Western culture, in addition to the numerous Chinese traditions such as the hair and tea ceremonies. The reception is an important part of a Chinese wedding as the banquet provided in the reception is symbolic of wealth and good luck for the newlyweds (Huffine, 2010, *The Popular Chinese Wedding Reception*). The Chinese believe in many customs and superstitions regarding luck, happiness, and longevity. These superstitions are evident in the types of dishes served in wedding banquets as well as in other events like birthdays.

A typical Chinese wedding banquet menu consists of eight courses and a dessert. In Chinese, the word “eight” is homophonous to “good luck” (Yee, 2011, *Chinese Wedding Foods*). If you include dessert, then in Chinese, “nine” sounds similar to “long” or “everlasting” (Just r, 2006, *Banquet Details*). The banquet menu can have variations, but there are some courses that are essential to the wedding meal (refer to Figure 4 for a sample menu).

Menu 菜單	
1.	Grace Special Cold Cuts Platter 恩典拼盤
2.	Abalone & Crab Meats with Shark's Fin Soup 鮑魚蟹肉魚翅湯
3.	Baked Lobster with French Butter Sauce 牛油焗龍蝦
4.	Stir Fried Sea Cucumber & Abalone 海參碧綠鮑片
5.	Honey Walnut with Prawn 核桃大蝦
6.	Stewed Duck with Dry Scallops & Black Mushroom 香菇瑤柱扒鴨
7.	Steamed Whole Fish 古法蒸海魚
8.	Richman Fried Rice 富人炒飯
9.	Wedding Cake 結婚蛋糕

Figure 4: Chinese Wedding Banquet Sample Menu (ChinaBridal, 2003)

Roast suckling pig, which is included in the cold cuts platter, symbolizes the bride's purity and virginity. It is more commonly served whole (i.e. with the head and legs) as it would signify togetherness as well as prosperity. Although it is one of the more affordable dishes now, in the olden days, it would have been very expensive to buy a whole carcass (Bonita, 2010, *Food Culture: Chinese Wedding Banquets*). As per tradition, the groom would also present a whole roasted pig to the family of the bride to make the engagement official (Just r, 2010).

Peking duck and lobster represent the bride and groom, respectively. Together, they follow the Chinese philosophy of yin and yang where seemingly two opposite principles are interconnected (Hooker, 1996, *Chinese Philosophy: Yin and Yang*). The lobster symbolizes a

dragon which represents the groom. Likewise, the duck signifies a phoenix and is characteristic of the bride. “Having the lobster and [duck] at the dinner would represent balance in the new relationship” (Karen, 2010, *The Chinese wedding banquet: A feast of meaning*). The red color of the lobster and the sauce of the Peking duck represents happiness, so serving these two dishes would “signify joy and celebration” (ChinaBridal, 2003). Like the roast suckling pig, if the dishes are whole, it would indicate completeness.

Seafood, such as abalone and sea cucumber, is essential to any banquet menu as the Chinese word for “fish” sounds like “plentiful” or “abundance” (China Bridal, 2003). Sea cucumbers are a “sign of selflessness because ‘sea cucumber’ sounds like ‘good heart’” (Karen, 2010). This dish wishes the couple to avoid conflict in their future life. “Serving fish represents hope that the couple will experience a life together with abundance.”

The most popular course in the banquet menu would be shark’s fin soup. Symbolizing wealth and prosperity, it is the most expensive dish served. The price of one bowl can easily exceed HK\$800. The use of shark’s fin is also very controversial because of the exploitive fishing practices and health issues that can be encountered with consuming shark meat. A few restaurants in Hong Kong provide imitation shark fin made of gelatin that looks the same as the real thing, but lacks the right texture (Stout, 2009, *Faking shark fin soup*). Nevertheless, real shark’s fin soup is a staple in Chinese wedding banquets and the number of bowls served will only increase along with the rise of the middle class.

The last course is dessert. In addition to the wedding cake, pastries such as red bean soup and buns can be served and are used to wish the newlyweds a sweet life. The sweet red bean soup “contains lotus seeds and [bak hop (a bark-like vegetable)] to wish the newlyweds a

hundred years of togetherness” (Karen, 2010). The seeds indicate fertility, and the bun is shaped to resemble a peach as it is a symbol of long life.

2.4 Unsustainable Seafood

As defined by the United Nations (1987), sustainable development implies “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (*Report of the World Commission on Environment and Development*). In regards to seafood, this includes the methods used to catch and process fish for consumers. In 2007, the Fisheries and Aquaculture Department of the Food and Agriculture Organization of the United Nations (FAO) (2010) reported the total world fishery production to be about 140 million metric tons, a 23 percent increase from ten years earlier. This section reviews unsustainable fishing methods that are quickly depleting fish resources, damaging ecosystems, and reducing the populations of the endangered and threatened species that are at risk and should be avoided altogether.

2.4.1 Overfishing

Overfishing is the exploitation of fish stocks and “occurs when they are caught faster than they can reproduce” (Giuliani et al, 2004, p. 1). It is a major concern and threatens the marine ecosystem, causing great declines in marine and mammalian species. Overfishing consists of two subtypes: growth overfishing and recruitment overfishing (Murawski, 2000).

Growth overfishing refers to the capture of fish and other marine life before they reach their optimal size. It involves taking “too many of a targeted species at too small a size” (Blakenship, 1998, *Signs of 'growth overfishing' seen in Bay's crab population*) to produce a maximum yield per recruit: you fish less but harvest larger catches. Gathering the fish much

earlier than they should be reduces the value of the catch as they are much smaller and weigh less. In addition, there is not sufficient time for the fish to reproduce and their natural stock eventually decreases in size.

Recruitment overfishing is characterized by the “reduction of the spawning stock and coastal environmental degradation, which usually affects the size or suitability of nursery areas” (Pauly, 1988, p. 14). As a result of over-harvesting, there is a decrease in the number of adult fish that are capable of reproducing and thus replenishing the fish stock. Eventually, there will not be enough fish left to sustain their own population.

2.4.2 By-catch

As the majority of fish are caught in larger quantities nowadays, by-catch is more of a pressing issue. By-catch, which has existed since fishing first began, refers to the capture of fish species that are not wanted and are usually thrown away dead or dying (Hall, Alverson, & Metuzals, 2000). The main reason for discarding a fish is because it is a non-targeted species or is not commercially viable. Other forms of by-catch include damaged or spoiled fish, or fish discarded due to lack of space in the boat’s storage unit.

By-catch also includes the portions of the fish that are discarded at sea. For example, as referenced from Hoffard’s (2010) short film “Man & Shark,” shark-finning consists of catching a shark, de-finning it, and discarding the body back to the sea to let it die. The fins are considered the catch, and the rest of the shark is considered the by-catch.

2.4.3 Dynamite Fishing & Fishing with Poisons

Dynamite fishing, which is often illegal but still practiced in many countries worldwide, involves the use of explosives to harvest schools of fish. The explosives are intended to stun, but

the fish are often killed due to the intensity of the blast, leaving some portion of the group dead at the surface of the water and the rest sinking underneath (Guard & Masaiganah, 1997). The most commonly used instruments are fish bombs, which are made from artificial (chemical) fertilizers mixed with kerosene (Komodo National Park, 2007). These bombs, depending on their size, can also destroy the surrounding area, notably the coral reefs where many schools of fish linger.

The most common poisons used in fishing are cyanide solutions which are “nominally illegal in virtually all Indo-Pacific countries” (World Resources Institute, 2010, *Cyanide Fishing: A Poison Tide on the Reef*). These poisons are not meant to kill fish but rather tranquilize them, which facilitates their capture (Komodo National Park, 2007). Like dynamite fishing, the cyanide eventually kills the surrounding ecosystem from continual exposure to this poison. Additionally, fishing with poisons and dynamite fishing pose threats to human lives in which accidents and injuries can occur to both fishermen and bystanders.

2.4.4 Endangered and Threatened Species

As a result of unsustainable fishing practices, many fish species are becoming endangered. According to the IUCN Red List of Threatened Species, about 18 percent of fish species are threatened, while freshwater fish are contaminated more so than marine species (Baillie, Hilton-Taylor, & Stuart, 2004). Although this would equate to a small amount because the number of species evaluated was much smaller than the number of described species (1,721 to 28,500), it is still a significant portion of the aquatic ecosystems. Unfortunately, marine species have been neglected by extinction risk assessment until recently, which is the reason a full list of threatened fish is yet to be produced. Moreover, many species of fish and seafood are not considered edible for various reasons (i.e. venomous and poisonous fish).

2.5 Hong Kong's Seafood Trade System

Due to the high demand for seafood, local fisheries have been facing an uncertain future due to depleted fish stocks in Hong Kong waters and the associated destruction of the marine ecosystem. Thus, fishing is currently branded as a “sunset industry” or declining industry. In order to supplement the local seafood industry to keep up with consumers’ demand, about 80 percent of the fresh seafood consumed in Hong Kong is imported by sea or air (Wilson, 2002, p. 158).

All live seafood imported to Hong Kong is required to go through several traders (wholesalers, distributors, and sales services) before it reaches the retailer. Most retailers buy seafood from wholesalers to control Hong Kong’s seafood market distribution to consumers. Seafood restaurants, hotels, supermarkets or other merchants serve as the supply chain middlemen. As a seafood researcher notes, “a well-developed relationship among the importers, wholesalers, and seafood restaurants is clearly seen in live reef fishing trading in Hong Kong” (Chan, 1999a, p. 201). Additionally, Hong Kong offers “a trading environment with zero tariffs and zero taxes for seafood imports” (Chan, 2009, p. 3), which links major opportunities in the seafood market relationships between Hong Kong and Mainland China as well as other exporting countries. In 2009, Hong Kong’s seafood market was valued at HK\$21 billion, with about 30 percent of the imports being re-exported to major countries like China and the United States.

Hong Kong is very prominent for obtaining the highest quality products from all over the world and promoting them to customers. Despite suppliers from Mainland China having the advantage of being geographically close to Hong Kong, the increasing number of food safety incidents in Mainland China has driven Hong Kong consumers to pay more attention to alternative aquatic products with better track records (Chan, 2009, p. 4). Presently, Hong Kong

does not have an official or mandatory safety standard for food imports. Live marine seafood is exempt from required health certificates (Center for Food Safety-Hong Kong, 2010, *Import Control/Export Certification*). However, any chilled or frozen seafood is required to have a health certificate.

“Consumers' preference for fresh and live fish and seafood products, and the use of dried products also add to the range of fish and seafood products available in the market” (Chan, 2009, p. 4). In 2008, most of Hong Kong's seafood imports came from Japan due to its high quality dried fish products such as abalone and scallops. Japanese fish products account for 15 percent of Hong Kong's seafood market, followed by Australia, China, and the United States with 11.4, 10.7, and 5 percent, respectively (p. 5). Of these importers, Australia offers Hong Kong the highest valued live seafood, including crayfish and abalone, whereas China offers significantly lower valued seafood products.

2.5.1 Live Seafood Supply Chain

The live seafood culture has prompted the growth and expansion of Hong Kong's market system for live seafood trade. Typically, there are four channels in Hong Kong's live seafood supply chain; importers, distributors, sub-distributors, and retailers (Tsui, personal communication, November 3, 2010). Seven wholesale fish markets are operated by the Fish Marketing Organization and dominate the live seafood distribution in Hong Kong. These markets are located in Aberdeen, Shau Kei Wan, Kwun Tong, Cheung Sha Wan, Tuen Mun, Tai Po and Sai Kung (refer to Figure 5).



The Locations of Fish Markets:

- 01-Aberdeen
- 02-Shau Kei Wan
- 03-Kwun Tong
- 04-Cheung Sha Wan
- 05-Tuen Mun
- 06-Tai Po
- 07-Sai Kung

Figure 5: Seven Major Fish Markets in Hong Kong (FMO, 2006, *Home*)

Live seafood imports are stored in the wholesale markets. The roles of distributors and sub-distributors are based on the access to clients and the relationships with retailers. “Those who have access to sales channels and [maintain] good relationships with retailers, but are unable to obtain products from the top of value chain, act as middle men; they employ sub-distributors on a case-by-case basis between themselves and retailers” (New Zealand Trade & Enterprise, 2010, p. 5). However, many retailers in Hong Kong prefer to directly purchase and import live seafood to replenish their stocks. A schematic of Hong Kong’s live seafood supply chain process is shown in Figure 6 below.

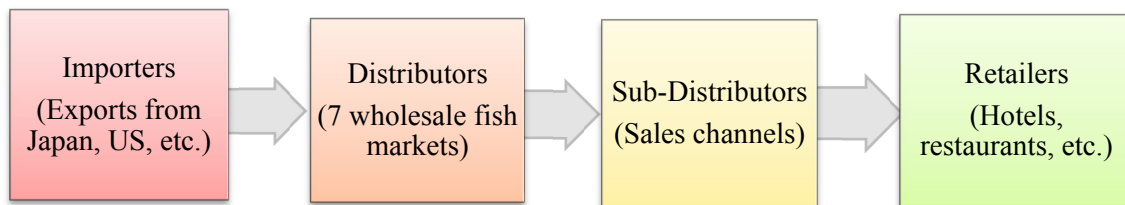


Figure 6: Live Seafood Supply Chain in Hong Kong
 (Adapted from Tsui, 2010; New Zealand Trade & Enterprise, 2010, p.6)

2.5.2 Frozen and Processed (Dried) Seafood Supply Chain

Though Chinese consumers traditionally prefer live seafood, the preference for frozen or processed seafood has been increasing. Along with the rising population of mainland Chinese workers who favor processed and non-perishable seafood, “rising incomes, increased ownership of fridges and freezers, more exposure to western and international cuisine, and a greater array of retail goods” all increase the sales of frozen and processed seafood in Hong Kong seafood markets (New Zealand Trade & Enterprise, 2010, p. 6). According to Candace Tsui (personal communication, November 3, 2010), who works for the Fish Marketing Organization, the traditional consumption pattern of live seafood is changing to fit the fast lifestyle of Hong Kong residents. Frozen and processed seafood products, including processed fish, shrimp, and prawns, are becoming more popular due to their shorter preparation times. There are three main channels in the frozen and processed seafood supply chains, which slightly differ from the live seafood system. A diagram of the frozen and processed seafood supply chain process is shown in Figure 7.

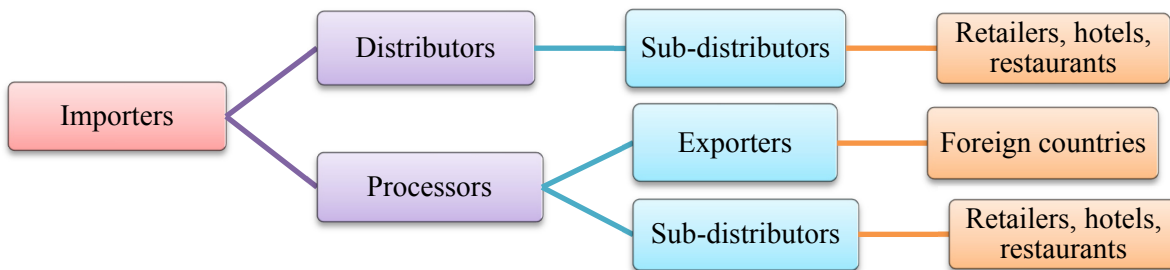


Figure 7: Frozen and Processed Seafood Supply Chain in Hong Kong
(Adapted from Tsui, 2010; New Zealand Trade Enterprise, 2010, p.9)

Fishermen unload their frozen seafood either at the seven major fish wholesale markets or at the processors’ facilities. It is estimated that as much as 60-75 percent of frozen seafood

imported to Hong Kong is directed to processing facilities and is then re-exported (New Zealand Trade & Enterprise, 2010, p. 6). More sub-distributors can link into the supply chain due to “longer shelf lives and larger geographic distribution coverage.” A number of sophisticated seafood sale channels and retailers help promote branded, processed seafood products to the young and wealthy in Hong Kong, who generally prefer to shop in supermarkets rather than wet markets.

2.5.3 Distributors

The seven major wholesale fish markets adopt the distributor roles in both live and frozen/processed seafood supply chain systems. The live seafood trade system has been maintained since the local fisheries declined in 2005. However, “operators with a chain of restaurants have bought fish directly from the wholesalers in the recent two or three years. This situation was not seen in the past and now restaurant operators have to take whatever means possible to cut operating costs” (Chan, 1999a, p. 201). Many buyers have the impression that the price for live seafood from wholesalers is lower than any other place because fishermen and wholesalers want to sell their seafood as quickly as possible to reduce the mortality rate of their stock.

“Wholesalers normally settle the payment with the importers within one week after the sale, unless the importers need to stay in Hong Kong for urgent repairs of their live carriers” (p. 202). Many wholesalers are not interested in selling small quantities of their products, though many customers find it more convenient to visit the wholesalers’ booths, select the seafood products they need, and pay upfront, rather than keeping a tab (New Zealand Trade & Enterprise, 2010, p. 8). Large volumes of orders for hotels or restaurants are delivered daily or over the

course of a few days throughout the week. The deliveries are usually billed weekly or monthly according to agreed terms.

2.5.4 Merchants, Hotels, and Restaurants

Nowadays, consumers can have seafood from all channels of the trade systems, including private, public, or collective stores, processing companies, supermarkets, wet markets, hotels and restaurants, or even fishermen themselves. With more places where consumers can buy seafood, competition has risen among the different retailers, although most of the seafood goes through at least two separate channels (importers, distributors, and/or sub-distributors) before being sold to the consumers.

As explained in a report of National Oceanic and Atmospheric Administration (National Marine Fisheries Services, 2010, *Marketing and Trade*), many retailers, especially the government-owned or collective stores, specialize not only in the sale of seafood, but also retail a wider variety of products. The private sector/restaurants have played a relatively important role in the retail structure as they provide a better representation of seafood in terms of prices, qualities, and services. Supermarkets have developed rapidly in recent years and will be expected to take a larger share of the seafood market. Many catering services, such as restaurants, hotels, hospitals, and schools, obtain their seafood from wet markets and wholesale markets.

In Hong Kong, live seafood is sold in more than 170 hotels and 681 restaurants (Allen To, personal communication, November 15, 2010). “There are four prime seafood locations for waterfront dining: Sai Kung, Lei Yue Mun, and the islands of Lamma and Cheung Chau” (Hong Kong Tourism Board, 2010, *Seafood*). Freshly caught seafood that is held in tanks and prepared using gourmet cooking methods and appetizing flavors is one of the culinary arts found in Hong

Kong restaurants. As a rule of thumb in Cantonese cuisine, the freshest seafood is always odorless and best cooked by steaming with light seasoning.

Sai Kung

Sai Kung is located in the Sai Kung district in New Territories, Hong Kong (refer to Figure 8). Meaning "Leisure Garden of Hong Kong", Sai Kung encapsulates incredible seafood culture and a slow-paced lifestyle, seemingly opposite of the cities of Kowloon and Hong Kong Island. Hoi Pong Square, which faces the Inner Port Shelter, is home to dozens of quality seafood restaurants and street stalls that line Sai Kung's waterfront. The town used to be a fishing village where fishermen would often gather. Now, it has developed into one of Hong Kong's top seafood destinations. Although Sai Kung is developing well economically, fisheries have declined and many fishermen have come ashore to settle. Many of the boats once used to gather hoards of seafood are now for just recreational use.

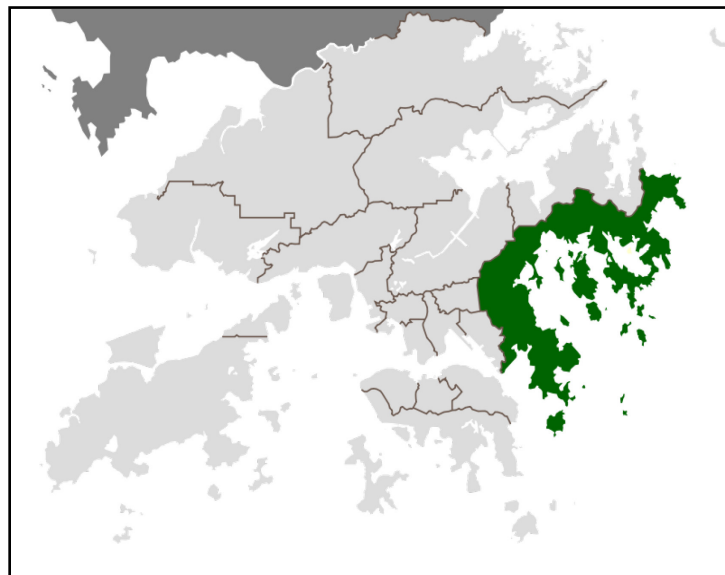


Figure 8: Sai Kung (Green Region) (Wikipedia.org, 2011, *Hong Kong Sai Kung District*)



Figure 9: Fishing Boats in Sai Kung

Cheung Chau

Literally translated as “Long Island”, Cheung Chau is one of the most visited islands in the Island District. The island possesses a natural harbor on the west side, allowing it to become a place for one of Hong Kong’s principal fishing villages. During the weekdays, Cheung Chau is a quiet residential island compared to the central area of Kowloon and Hong Kong Island. However, during the weekends, the island bustles with ferries, visitors, and various cultural activities. Seafood is definitely the chief cuisine in Cheung Chau. There are many seafood vendors in the wet markets who sell fresh and live seafood. Customers can buy seafood from these vendors and ask the restaurants nearby to process and cook it for them.



Figure 10: Fishing Boats in Cheung Chau Island

2.6 Promoting Sustainability

Diminishing supplies of resources, along with a growing demand for seafood, has led to an increasing number of sustainable seafood campaigns, many of which are primarily geared towards raising public awareness of sustainable seafood (Jacquet & Pauly, 2006). Organizations have recognized that major businesses, such as hotels and restaurants, need to provide more sustainable seafood to their customers. To achieve those goals, organizations must influence these stakeholders' purchasing decisions and provide necessary resources and support. This will allow chefs to incorporate more sustainable products into their menus while still maintaining good economic and social standing.

2.6.1 Eco-labeling Campaigns

Eco-labels are a form of measurement used to identify to consumers which products are environmentally sustainable. These labels educate consumers on the environmental effects

involved with purchasing or consuming certain types of food (Jacquet & Pauly, 2006). One of the most recognized eco-labeling initiatives took place in the 1990's with the "dolphin safe" logos on tuna cans.

Organizations have realized that unless the eco-labeling program is mandatory and regulated by government agencies, participation and accredited certifications will be limited. From a business perspective, companies use eco-friendly labels to try to expand their customer base and therefore increase their profit. But, since there are no laws or policies regarding the validity and use of eco-labels, manufacturers can easily make up their own "green label" and falsely advertise their products as sustainable. For instance, researchers have found through DNA testing that of all the red snapper fish being sold in the United States, nearly three-quarters of it actually belongs to a different species. If eco-labels are not regulated, suppliers and manufacturers will not be held accountable for false product labels.

2.6.2 Addressing Stakeholders' Purchasing Decisions

Conservation organizations across the United States and Canada have taken actions to address seafood sustainability concerns. The most highly recognized organizations joined together in 2008 to form the Conservation Alliance for Seafood Solutions (2010, *Who We Are*). Among their many goals, the fifteen organizations in the alliance seek to help companies understand various certification and eco-label models, and educate catering businesses on methods that raise consumer demand for sustainable seafood products with a more sustainable menu.

Blue Ocean's Institute

In partnership with Chefs Collaborative, Blue Ocean Institute developed a sustainable seafood course entitled “Green Chefs, Blue Ocean” (Conservation Alliance for Seafood Solutions, 2010). This interactive course aims to educate chef professionals and culinary students about all aspects of sustainable seafood within the restaurant industry and how to properly provide new sustainable seafood options on their menu. It equips its members with tools to “purchase, prepare, and promote sustainable seafood in their kitchens and restaurants,” (Blue Ocean Institute, 2010, *Green Chefs*). Blue Ocean Institute has designed two separate courses for students and professionals. Both courses contain a sequence of seven major step-by-step components: an introduction to sustainable seafood, wild finfish, farmed finfish, shellfish, local/regional/imported seafood, sustainable seafood in your restaurant, and menu design. The program also includes multiple video interviews with chefs from around the world who have already introduced sustainable seafood in their menus. This enables participants to gain insight on the benefits and consequences encountered by some restaurants in their transition to a more sustainable seafood menu. In the course’s closing phase, it allows participants to create new sustainable seafood menus based on the information that they have learned throughout the course. If the program is completed successfully, the participant acquires the necessary tools needed to make future decisions that will be sustainable and beneficial to their business.

In addition to their online course, Blue Ocean Institute offers technical advice and assistance to restaurants that are members of their organization (Conservation Alliance for Seafood Solutions, 2010). This facilitates existing restaurants to utilize Blue Ocean Institute’s services on a continuing basis to keep improving their seafood purchasing decisions. Blue Ocean

Institute hopes to build a sustainable seafood community where partnerships can be formed to achieve sustainable goals.

Fish Wise

Fish Wise (2010, *Our Services*) offers numerous services for a wide array of businesses in the seafood industry. It is Fish Wise's main focus to work with retailers to ensure their businesses continuously generate profit while being environmentally responsible. Fish Wise reviews a business' inventory, and then organizes the different products into recognizable groups according to sustainability criteria. This allows customers of these businesses to make more informed decisions on the seafood that they purchase from a specific retailer. Fish Wise believes that if the customer realizes that a business is trying to be environmentally friendly in their menu, then it will increase the trust and loyalty that the customer has to that business. This should, in turn, boost sales and profit for the restaurant. Fish Wise also works closely with restaurants in advertising and marketing methods, such as brochures, campaigns, in-store events, and business publications.

Fish Wise (2010, *Our Services*) has also made a commitment to keeping the entire staff of businesses well-educated through online and personal training. They provide educational supplements such as information binders, species flow charts, and other simple materials for the members of the staff to properly ensure they are knowledgeable about sustainable seafood options on the restaurant menu. This will convince customers that the business is dedicated to being environmentally friendly and to making a difference.

Along with their other programs, Fish Wise provides access for businesses to FishChoice, an online database of seafood products that are considered to be highly sustainable. It is much

easier and more time efficient for restaurants to choose seafood products that will best meet sustainability requirements.

Monterey Bay Aquarium

The Monterey Bay Aquarium (2010, *Restaurant Program*) has initiated a Seafood Watch Restaurant Program where if a restaurant chooses to participate in the program, it agrees to not serve seafood that is placed on the “avoid” list by the Aquarium in their seafood guide. The Monterey Bay Aquarium provides restaurants with educational materials as well as numerous sustainable seafood recipes that restaurant owners can utilize. The recipes often include testimonials from chefs that have experimented with a variety of dishes to show that customers are equally as satisfied with the menu even with the more sustainable options. As an incentive, restaurants that participate in the program receive a plaque for their participation and highly valuable recommendations from the Monterey Bay Aquarium through media coverage and other promotions.

New England Aquarium

Initiated in 2000, The New England Aquarium’s (2010, *Sustainable Seafood Advisory*) sustainable seafood program has partnered with retailers across the mid-Atlantic region to incorporate useful sourcing policies and practices to ensure that their seafood products are environmentally friendly. Besides preventing the decline of aquatic and marine resources, the New England Aquarium also hopes to show participants that by branding themselves as “environmentally responsible”, they will gain a competitive edge over other businesses. They ensure that the company’s products will not decrease in quality and will gain additional value by being sustainable. Along with these economic benefits, participating businesses gain access to the following services:

- Detailed sustainability information and purchasing recommendations for individual seafood species
- Support during the implementation and integration of purchasing recommendations
- New and ongoing research and reports specifically tailored to the company's needs
- Training opportunities for point-of-purchase staff and managers
- Assistance and support with the development of public outreach materials, including consumer brochures, annual reports, and web-based publications
- Aid in communication program findings and company actions to a broad range of audiences, from the media to the environmental community, and in a diverse setting, from internal meetings to global conferences and tradeshows
- Support in developing metrics for monitoring purchasing practices and buying specifications to quantify the program's impact within the company
- Support in navigating the environmental advocacy community
- Access to staff of skilled professionals with extensive experience working on sustainability and environmental responsibility from a scientific and conservation perspective (*Services and Benefits*)

The New England Aquarium's (2010) in-depth program guides seafood businesses in the transition to sustainable seafood throughout the entire process. This program serves as an ideal outline for future sustainable seafood programs as it reduces uncertainty among participants and ensures that following the program will help protect both the environment and the businesses' economic and social status.

Conservation Organizations in Hong Kong

WWF-Hong Kong (2010) has initiated many programs in recent years to help address the seafood sustainability problem that Hong Kong faces. In 2007, WWF-Hong Kong (2007) worked closely with the Marine Stewardship Council (MSC) and founded the Seafood Choice Initiative, which incorporated a seafood guide catered specifically to Hong Kong (refer to Appendix D). The initiative "outlines recommended and [should-be-avoided] seafood species and [teaches consumers] how to identify sustainably sourced marine products" (*Seafood*). WWF-Hong Kong listed sixty-seven of the most common types of seafood consumed in Hong Kong and separated

them into three categories: recommended, think twice, and avoid. The “recommended” section suggests species that are considered sustainable and fine to eat. These types of fish are either farmed using responsible aquaculture practices or are supplied by well-managed fisheries. Fish that are at risk of being moved to the “avoid” list if an increase in their demand could affect the sustainability of fishing practices, are listed under the “think twice” category. Consumers are advised to conservatively order or consume those species of fish. The “avoid” species are a big concern for the WWF-Hong Kong as they are over-exploited, caught or farmed unsustainably, or are part of a threatened or endangered species.

WWF-Hong Kong (2010) has also implemented a “shark initiative” that hopes to address the issues behind Hong Kong’s high shark consumption, in particular, the consumption of shark fin. In the past decade, the list of endangered shark species has grown eight-fold, making shark species a primary focus of the WWF. In early 2010, WWF-Hong Kong developed an “Alternative Shark-Free Menu” that helps caterers provide environmentally friendly alternatives to shark dishes. WWF-Hong Kong realizes that it would be difficult to enforce regulations on shark fisheries, so they focus more on asking consumers to completely avoid eating shark fins, especially at banquets and restaurants.

Many other existing programs in the Hong Kong region have taken steps to improve seafood sustainability. The Marine Stewardship Council (MSC) was founded in 1997 from initiatives of WWF and Unilever that sought to establish rewards for well-managed fisheries. (Leadbitter, Gomez, & McGilvray, 2009). Originally, the MSC desired to find a feasible strategy to incorporate economics and ecology into seafood programs. Eventually, it put a majority of its attention towards an eco-labeling program with a governing body that oversees it. The MSC implemented a curriculum that accredited independent bodies to evaluate fisheries and determine

if they are practicing sustainable fishing methods. To determine sustainable methods, the MSC developed a “Principles and Criteria” (p. 2) document as a result of a two-year research program that involved industries, fishery managers, and environmental groups. Currently, the MSC has certified several fisheries, while many others are working towards getting certified.

Living Seas Hong Kong (2010, *About Us*), another local organization comprised of Hong Kong residents concerned with the depletion of marine resources, is working to implement protection programs and policies to improve Hong Kong’s marine ecosystem. Their comprehensive program promotes the consumption of sustainable seafood and exposes the lack of government policies in place to protect Hong Kong’s waters. In addition, Living Seas Hong Kong is trying to establish marine reserves that will promote the recovery of certain fish species. It has also taken steps to address sustainability problems within retail businesses and is enthusiastic to work with them to improve their seafood purchasing decisions. In order to carry out and address their organization’s key foci, Living Seas Hong Kong is willing to work in cooperation with legislative and other governmental bodies.

2.6.3 Laws and Policies

One major contributing factor to the sale of unsustainable seafood is that often times, certain species of seafood are sold under multiple identities at different restaurants and hotels. As a result of mislabeling, it is increasingly hard for consumers to properly utilize available resources (e.g. seafood guides). The United States Congress has begun implementing policies to address such issues of mislabeled seafood to ensure that consumers are fully aware of the species origin and quality (Buck, 2010). The most critical policy is the Federal Food, Drug, and Cosmetic Act (FFDCA) which aims to keep interstate commerce free of mislabeled food products. This act not only regulates seafood that is being imported and exported from the U.S,

but also places strict regulations on retailers and puts them under a legal obligation to advertise their seafood products as the correct and intended species. If retailers fail to advertise their products correctly, they face criminal prosecutions administered by the Food and Drug Administration (FDA). Individual states such as Alaska and California have implemented altered versions of the FFDCA to add additional regulations that address the mislabeling of species in their respective states. Although much of the reasoning behind the FFDCA is to protect consumers from fraud, it consequently helps the fight against unsustainable seafood by making consumers more aware of the species of fish that are being served by retailers.

The WWF (2010, *What We Do*) has also been pressuring local governments worldwide to take affirmative action that will support sustainable seafood practices, such as government policies that reduce fishing capacity and stop illegal fishing. WWF (2010, *What We Do*) proposed that in order for fish to become more sustainable, the overall fishing capacity must be reduced to allow species to replenish themselves. One way to lower the fishing capacity is for the government to regulate the number of commercial fishing boats allowed in Hong Kong's waters and to limit the number of subsidies that are provided to commercial fisherman. Subsidies help maintain a healthy fishing community, but the money that has been provided to commercial fisheries has "artificially sustained more fishing vessels than the oceans can sustainably support" (*Perverse Subsidies*). To address this problem, WWF formed the "Stop Overfishing" campaign that encourages local governments to stop providing subsidies for building new boats and modernizing old ones. Since the campaign began, Hong Kong has worked with other organizations, such as the World Trade Organization, to eliminate these subsidies (Bigdeli, 2007).

WWF (2010, *Curbing Illegal Fishing*) also supports the Fisheries Ordinance developed in Hong Kong (Living Seas Hong Kong, 2010, *Marine Species Protection*). This ordinance bans

improper fishing techniques that include, but is not limited to, the use of explosives, toxic materials, and electrical equipment. However, the ordinance does not protect threatened and endangered species from being captured. Recently, the chief executive of the Hong Kong Special Administrative Region, Donald Tsang, announced plans to address the problems associated with trawling in his 2010-2011 policy address (Living Seas Hong Kong, 2010). Trawling occurs when fishing boats drag a net through the water to catch fish. Mr. Tsang states “to protect our precious marine resources and ecology, we will implement a basket of management measures such as banning trawling in Hong Kong waters through legislation in order to restore our seabed and marine resources as early as possible” (*Banning Trawling*).

2.6.4 Stakeholders that Currently Market Sustainable Seafood

To help influence the sustainable movement, a few restaurants have created more sustainable seafood menus. One of the first restaurants to do this in Hong Kong is The Bostonian, an American-based company at the Langham Hotel in Kowloon (Traveling Greener, 2010, *Sustainable Dining in Hong Kong*). It has expanded its sustainable seafood selections and has received attention from many conservation organizations for offering a completely sustainable seafood menu.

Dot Cod Seafood Restaurant and Oyster Bar, another restaurant in Hong Kong, has made huge strides towards providing only sustainable seafood (WWF-Hong Kong, 2010, *Green Seafood*). The restaurant provides recommended seafood based off of the seafood guide that WWF-Hong Kong developed. Dot Cod hopes that by taking the initiative to provide green seafood choices, other companies will soon follow its lead. Colin Gouldsbury, the Executive Chef at Dot Cod, believes that if a substantial number of people begin to see that green seafood

can be just as delicious and fulfilling as unsustainable seafood, they will begin to order more of the sustainable seafood choices.

Like Dot Cod Seafood Restaurant, Swire Properties Limited has stopped serving seafood items in the “avoid” category of WWF-Hong Kong’s seafood guide, especially at company outings and banquets (WWF-Hong Kong, 2010, *Green Seafood*). Swire Properties Limited, in support of WWF, has also started formulating internal policies to make their staff more aware of environmental issues that revolve around marine resources. They hope to serve as a catalyst for sustainable seafood recognition and rely on convincing other corporations that marine conservation issues must be addressed in the immediate future.

Fish Bar, located in the J.W. Marriot Hong Kong, has been very supportive of WWF’s mission to provide sustainable seafood within Hong Kong hotels, according to Director of Communications Fiona Szeto (personal communication, January 18, 2010). This particular restaurant supports the seafood guide, as evident in their sustainable seafood menus, and has said “no” to Bluefin tuna for the last five years. Szeto mentioned that customers are “generally very supportive” of the sustainable seafood menus. Fish Bar hopes that with their interminable support they can continue providing green alternatives. Along with Fish Bar, the rest of the restaurants in the J.W. Marriot hotel also offer some sort of sustainable seafood menus.

As previously mentioned, WWF-Hong Kong (2010) has instituted an “Alternative Shark-Free Menu” that WWF hopes restaurants and catering companies will consider when developing their menus. Over seventy-five corporations in Hong Kong have already adopted the Shark-Free Menu into their seafood selection and have pledged not to buy or serve shark fins (*Companies*

Say No). These lists of corporations and catering companies can be found in Appendices E and F, respectively.

2.7 Summary

Fish and seafood have been a large part of Chinese culture and tradition for thousands of years, as evident in their diet and ceremonial banquets. Hong Kong's increasing demand for seafood has endangered many types of fish species and cause many fishermen to rely on improper fishing practices, such as overfishing and fishing with poisons. Thus, large quantities of seafood sold in Hong Kong are considered unsustainable. Many organizations and movements are promoting sustainable fish and seafood products to help conserve the marine and aquatic ecosystems through educational and informative programs. A number of studies have examined consumers' awareness of sustainable fish products; however, few have analyzed the roles of major seafood businesses, specifically restaurants and hotels, in seafood sustainability. This project looks to understand their role in the seafood market and the motives that influence the fish and seafood products they sell. If retailers can become advocates for sustainable seafood, then perhaps their customers will be able to follow their footsteps. Businesses switching to more eco-friendly menus can be a substantial step towards making the Hong Kong seafood market sustainable. The methods used in this study are outlined in the next section.

Chapter 3: Methodology

This project diagnoses the feasibility for major hotels and restaurants in Hong Kong to increase the percentage of sustainable seafood offered in their regular and banquet menus. The study involves a survey that identifies factors that influence a business's seafood purchases through a trade perspective, and evaluates a restaurant's general knowledge of sustainability among the employees as well as the presence of sustainable seafood in their menu dishes. It is necessary to address concerns and difficulties that restaurants may experience if they decide to exercise a more sustainable seafood menu. With this feedback, conservation organizations, like the WWF, can develop sustainable seafood programs that cater to the different types of restaurants in Hong Kong.

3.1 Survey of Hotels and Restaurants

The survey questionnaire (as shown in Appendix G) was administered to restaurant representatives, namely managers, head chefs, and owners, within a two-week time period in January 2011, before the Chinese New Year. Although the same questionnaire was used for hotels and restaurants, the approach in which the team garnered responses varied accordingly and is outlined in the following section.

3.1.1 Survey Strategy for Hotels

The project's WWF-Hong Kong liaison, Dr. Allen To, provided a list of all 136 registered hotels in Hong Kong to target. However, due to time constraints and the remote locations of a number of hotels, this investigation decreased the targeted sample size to 98 hotels. The current sample includes hotels in the more populated areas of Hong Kong, specifically the central areas of Kowloon and Hong Kong Island. The hotels were organized and categorized by

location, resulting in eight region groups: Tai Kok Tsui and Mong Kok, Yau Ma Tei, Jordan, Central and Admiralty, Tsim Sha Tsui, Hung Hom, Wan Chai, and Causeway Bay (refer to Appendix H). This enabled the survey team to schedule appointments with hotels assigned to each group on, ideally, the same day.

The first attempt to arrange meetings with hotel managers occurred Friday, January 14 and involved making phone calls. The eight region groups were split between the team members and separately, each person called the hotels in their assigned groups during non-peak hours to ensure the restaurant managers were not busy and therefore more inclined to schedule a meeting. For hotels, non-peak hours were typically between 10 A.M. to 12 A.M and 3 P.M. to 5 P.M. In addition, it was noted by Dr. To that many managers regard native English speakers as being very important, so the phone calls were carried out in English to increase their willingness to cooperate.

In almost all cases, the phone call reached the front desk of the hotel, from which the group member making the call asked to get transferred to the restaurant manager. All hotel calls loosely referred to a calling script (Appendix I) that included a brief description of the objectives of this study and the expected outcomes from this research. Continuing to follow the script, the caller asked for a meeting with the restaurant manager or a head chef so that he or she could complete the survey questionnaire in person. After several initial phone calls, all members agreed that it was important to follow a script when arranging appointments so that everyone would mention the same key points of the project and survey. The caller indicated that the research project was being done on behalf of Worcester Polytechnic Institute (WPI) to emphasize that the study was being conducted for a neutral institution and thus, a non-biased perspective. WWF was not mentioned as this fact could influence their decision to schedule a

meeting. If the respondents chose to participate in the survey, they would choose a meeting time that was convenient for them and the team made every effort to meet their request. If they refused a meeting, the caller made a note and continued calling down the list. Many times, the manager would request an email with further information involving the study. In these cases the caller would follow the strategy as outlined in section 3.1.3.

After completing the first round of phone calls, the sample size was further reduced to 87 because a few hotels either did not have a restaurant or did not serve seafood at their restaurant. Additionally, the number of appointments set was extremely low. The group decided that it was necessary to personally visit the hotels that declined a meeting time to increase the survey return rate.

Starting Monday, January 17, the four members split up into two pairs and started visiting hotels in Kowloon and Hong Kong Island. The two groups visited hotel restaurants during non-peak hours and asked for the restaurant manager. All members found that wearing business casual attire for these visits worked best with the hotels as it portrayed a sense of professionalism. When the restaurant manager arrived, one person would explain to them the purpose of the project and tell them that it is part of WPI's graduation requirements. The managers were assured that the questionnaire was anonymous and that they could refuse to answer any question they desired. The survey questionnaire was presented and accompanied by a business card specific to the team member speaking. Each member had their own business card showing their affiliation to WPI, which helped diminish doubts among restaurant managers and employees concerning the legitimacy of the research project. The back of each card had the team member's local phone and fax numbers in Hong Kong.

When the restaurant manager agreed to fill out the survey, the group requested to sit down with the participant to complete the questionnaire and help clarify any ambiguity in the questionnaire. However, if the request was denied, there were alternative options including picking it up at a later date or time, coming back another day, and having the manager send the completed survey by fax or email. This gave the managers several ways to complete the questionnaire while accommodating their schedule. If the interview team was referred to the Public Relations (PR) department, one member made sure to get the proper contact information to call the PR personnel on a different date. While one group member interacted more with the restaurant manager, the other member noted observations, particularly the behavior of the respondents and their reactions toward certain questions. Once they finished the questionnaire, both members made sure to thank them for taking the time to participate in the survey and asked for a business card to keep as reference.

One interview pair stopped visiting hotels on Wednesday, January 19 while the other two members continued to go through the hotel list through the next week (January 24-28) and concluded collection on January 31. After visiting all the hotels, the team proceeded to follow up with those that said they would fax, email, or had referred the survey to the PR department. This was the last attempt at the remaining hotels in the sample to make sure that all possibilities had been exhausted before concluding all data collecting activities. A few more hotels followed through using one of these communication methods, but this response rate was much lower than that of respondents who had filled out the questionnaire in person.

3.1.2 Survey Strategy for Restaurants

The team compiled a list of 255 chained and non-chained Chinese and seafood restaurants in greater Hong Kong from openrice.com (refer to Appendix J). The restaurants on

the list were categorized into regions according to high traffic areas in Kowloon, Hong Kong Island, and the New Territories. The Kowloon area is represented by Tai Kok Tsui, Mong Kok, Jordan, Yau Ma Tei, Tsim Sha Tsui, and Hung Hom. The Hong Kong Island area is represented by Central, Admiralty, Wan Chai, and Causeway Bay. Several districts that have many seafood restaurants or stalls were in the New Territories and the Outlying Islands, such as Sai Kung, Tsuen Wan and Lei Yue Mun, and Cheung Chau, respectively. Due to time and travel constraints, the team aimed to visit approximately 50 percent of the list. Unlike the first hotel strategy, the strategy was changed such that team members went directly to the restaurants without any prior phone calls.

From Wednesday, January 19 to Monday, January 31, two groups carried out the anonymous survey with the managers and/or head chefs of the Chinese and seafood restaurants on the list. One student pair started visiting restaurants on January 19 while the other pair continued to canvass the hotels. Data collection from restaurants involved both pairs canvassing for a number of days during the week of January 24. Each group was designated to one region and the goal was to have as many restaurants as possible complete the questionnaire. For larger regions such as Mong Kok and Tsim Sha Tsui, two days were dedicated for covering those areas. The visits to restaurants occurred from 11:00 A.M. to 12:30 P.M. and 2:00 P.M. to 4:30 P.M. to avoid peak operation hours and the over-representation of lower staff (i.e. waiters). At the restaurants, one member briefed the restaurant managers about the purpose and goal of the project and presented the questionnaire and their business card, although, it was discovered that exchanging business cards was not very common among restaurants. The different available methods to completing the questionnaire were the same as those described in the hotel strategy (section 3.1.1).

In contrast to the hotel managers, most of the restaurant staff could only speak Cantonese, so two fluent Cantonese-speaking interns from WWF-Hong Kong assisted the team throughout the restaurant surveying process. Unlike hotels, dressing in business attire to administer the survey for restaurants was more inappropriate than dressing casually. A few restaurants had gotten the impression that the interview groups were sales marketers and refused to even listen. Dressing more extravagantly than the restaurant owners could also be considered as a sign of disrespect.

Many of the restaurant managers preferred completing the survey in-person and rarely took the option to send a fax or email. Referral to the PR department was more common with major chain restaurants. One interview group attempted to contact their PR personnel's at a later date, but this strategy never yielded success. For non-chained restaurants, response rates were significantly higher because many of them did not have PR departments that must approve the survey. Similarly, the return rate was much higher with restaurants than with hotels.

3.1.3 Email Protocol

The team prepared an email letter protocol for restaurant managers who had requested additional information regarding the survey (refer to Appendix K). The email was sent directly to the manager using a WPI mailing account, to further reiterate the association to the institute, and was carbon copied to the project team. The email signature also contained the sender's local mobile phone number and the fax number.

The letter introduced the sender—a member of the team—and briefly outlined the goal of the project and the involvement of a survey as part of the research study. It requested an in-person meeting with the restaurant manager where two members could deliver the questionnaire.

A Portable Document Format (PDF) file of the survey questionnaire was attached in the email as reference and could be printed and filled out by the respondent if this option was more convenient for them. The questionnaire could then be picked up or faxed to the team's apartment complex.

If the managers did not respond within four to five business days, one member sent a follow-up email (also in Appendix K). The follow-up was a forwarded copy of the original email sent with an added note that asked if they had received the previous email. The forwarded copy eliminated the inconvenience of the manager locating the original email.

3.2 Use of Survey Questionnaire

The questionnaire consists of twenty-two multiple-choice and scaled questions that cover hotels' and restaurants' opinions on sustainable seafood and their social, economic, and demographic factors. It also includes an additional section with eight questions for those restaurants that provide wedding catering. The questionnaire was written in both English and Traditional Chinese for accessibility to ensure that every respondent would be able to comprehend it. The following section highlights the importance of the survey data to the project goals.

3.2.1 Identify Factors that Influence Purchasing Decisions

There are many reasons why restaurants serve the types of seafood they do. The questionnaire tries to cover a wide range of topics that include deciding who will supply the seafood, which products will be sold, and the reasons behind those two choices. With data from hotels and restaurants that have or don't have a sustainable seafood menu, the team can correlate this to their opinions of the sustainability market to find compatibilities that may assist or justify

the shift to a sustainable seafood menu. If the survey results show that sustainable seafood can improve or maintain a restaurant's income, then conservation organizations can emphasize these benefits to motivate prospective hotels and restaurants to change the seafood they serve.

Additionally, these results may show the variations in seafood purchases among different types of restaurants (i.e. large or small, Chinese or Western). Many of the larger restaurants provide catering which can be a significant part of their business, so it is necessary to analyze their banquet menus as well. The following are eight major points that the team wanted to research via the survey questionnaire:

1. Primary factors that seafood businesses are concerned with when selecting a seafood supplier;
2. Primary factors that seafood businesses are concerned with when selecting specific seafood products;
3. Percentage of seafood businesses that consider environmental effects and sustainability when selecting seafood;
4. Obstacles that respondents anticipate will occur or have already experienced when implementing sustainable seafood options;
5. Reasons or motivations for switching to sustainable seafood;
6. Education level of their staff concerning sustainable seafood;
7. Percentage of wedding banquets that request no shark fin and whether or not requests for sustainable banquet menus can be met by the participating restaurant;
8. Percentage of restaurants that provide a regular no shark fin wedding banquet menu.

3.2.2 Assess the Knowledge of Sustainable Seafood

Without a basic understanding of seafood sustainability, it will be nearly impossible to expect seafood businesses to easily start providing more sustainable products. The questionnaire contains three questions that address sustainable seafood and the respondents' personal knowledge on such subjects. From those three questions, the team derived two points from which their results will present information regarding:

- 1) Percentage of respondents who know the general criteria that make seafood sustainable;
- 2) Scaled self-evaluated opinion of the general knowledge each respondent has about sustainable seafood.

The answers provided by the respondents will help the team connect the two above points and show whether there are gaps or misunderstandings. The statistics can provide conservation organizations with insight on where they should focus their attention in developing education programs.

3.2.3 Determine Roles of NGO's

Lastly, the survey analyzes the importance of non-governmental organizations (NGO's) in influencing the seafood market, as viewed by hotel and restaurant managers, as well as the types of campaigns they should create to better promote sustainable seafood. NGO's are given ranks, as determined by the respondents, and these are compared to different stakeholders of the seafood trade system, such as the Hong Kong government and consumers. The survey also asks the respondent to rate a variety of educational programs that they might find the most useful and believe NGO's should develop. NGO's may consider this result when constructing future programs for business owners and consumers. This data can reveal which of the NGO's tools are the most effective in helping businesses build a sustainable menu. It is vital for NGO's to

maintain a supportive image in the eyes of the seafood businesses, otherwise working with restaurant administrators will be difficult.

3.3 Research Limitations

While conducting this research, the team experienced a few obstacles. These constraints were inevitable, but all members were able to adapt and re-set their expectations accordingly.

The first constraint was the length of investigation in Hong Kong. Since a large percentage of businesses are either closed or extremely busy during the Chinese New Year, it was crucial for the two survey groups to complete data collecting before the holiday. Many people in Hong Kong start preparing for the New Year the day before, which, in this case, was Wednesday, February 2. Consequently, that left approximately thirteen business days dedicated to field work (January 13-31). This became more problematic after the realization that hotels and restaurants were more available and willing to complete the questionnaire during non-peak hours. This left a very limited window of opportunity each day to gather responses.

Another constraint was hotel restaurant managers' compliance to complete the questionnaire. Many hotels were part of a chain and often hesitated to make a decision without the guidance of their corporate PR department. This resulted in a number of hotel restaurant managers providing only their PR's contact information. Although follow-up calls or emails were sent to these departments soon after the conversation with the managers, many of these hotels eventually chose not to complete the survey. This made it increasingly difficult to achieve the ideal number of completed hotel questionnaires that was initially planned. It also made the time commitment for the questionnaire longer than needed.

Lastly, many of the restaurant managers either only spoke Cantonese or knew very little English. Although the interview groups had two Cantonese-speaking interns from WWF-Hong Kong who were able to help with interpretation of the survey, they were only free on Mondays, Fridays, and during weekends. Since there was only one Cantonese speaker on the WPI project team on the days the interns were unavailable, only one group was able to visit the restaurants while the other WPI student pair continued to revisit the hotels. Therefore, visits to hotels and restaurants overlapped a few days.

3.4 Strategy for Results Analysis

Once the survey was completed, the team went through the individual questionnaires to take out the ones that were mostly incomplete and not useful to the analysis. The questionnaires were then separated by hotels and by restaurants, making it easier to evaluate the data separately by business type. All of the answers were entered and organized in a spreadsheet using Microsoft Excel (2007) and all of the results were produced with the help of Excel's PivotTable and PivotChart functions. These functions counted and calculated average scores of responses and provided bar graphs of the data. A few results (i.e. section 4.1.4) also incorporated one of Excel's statistical functions, F-test. It is used "to determine whether two samples have different variances" (Microsoft Office, 2011, *FTEST*) or discrepancies in values. In the context of our research, it is used to see if hotels and restaurants have "different levels of test score diversity." Two scoring systems were also developed to quantitatively total responses regarding sustainability in the survey. Explanations of the scoring systems are detailed in section 4.1.2 and 4.3.1.

3.5 Summary

The main approach used in this project was a survey that would be conducted with hotel and restaurant managers and head chefs. After the initial phone calls, the project team found it

better to visit the hotels and restaurants in person. Data collection for hotels and restaurants occurred for twelve business days in January prior to the week of Chinese New Year. In the results chapter which follows, the data collected is analyzed with the help of Excel PivotTables to identify the factors that influence seafood businesses when they make their seafood product selections, the amount of knowledge they possess pertaining to sustainable seafood, and their opinions on the roles of NGO's within the seafood trade industry.

Chapter 4: Results

The purpose of the survey was to assess the seafood businesses' purchasing and selling decisions of seafood products as well as to provide recommendations for promoting sustainable seafood. In total, 89 hotels and 133 restaurants were visited by convenience sampling and 100 businesses completed the survey (i.e. 30 hotels and 70 restaurants). However, three responses from the hotels were dropped from the results analysis; one was due to fax errors and two were treated as pilot tests. The response rates, which are the ratios of successfully completed responses over the total visited businesses, for hotels and restaurants were 30.3 percent and 52.6 percent, respectively. This chapter highlights the key answers and results provided by the 97 respondents. Hotel and restaurant data are analyzed separately and comparatively.

4.1 Identifying Factors that Influence Purchasing Decisions

One major part of the survey questionnaire aimed to determine the criteria most important to businesses when choosing seafood suppliers and seafood products, and identify the factors that influence seafood purchasing decisions of hotels and restaurants. One expected outcome from the survey is to determine whether or not businesses consider environmental effects in choosing suppliers and products and to identify the reasons that some businesses have already switched to sustainable menus.

4.1.1 Criteria for Choosing Seafood Suppliers and Specific Seafood Products

Questions 6 and 11 of the questionnaire (see Appendix G) asked each respondent to rank the criteria that they are most concerned with in regards to selecting their seafood suppliers and selecting specific seafood products, respectively. The respondents scored the criteria on scale of 1 to 5 (1 being very unimportant and 5 being very important).

For question 6, each respondent assigned a value of importance for eight common components that are usually involved in selecting a seafood supplier. The purpose of this question was to determine which factors are of most importance and to see how the sustainability of seafood compares to the other criteria. Shown below in Figure 11 are the average ranks of each criterion for the surveyed hotels and restaurants.

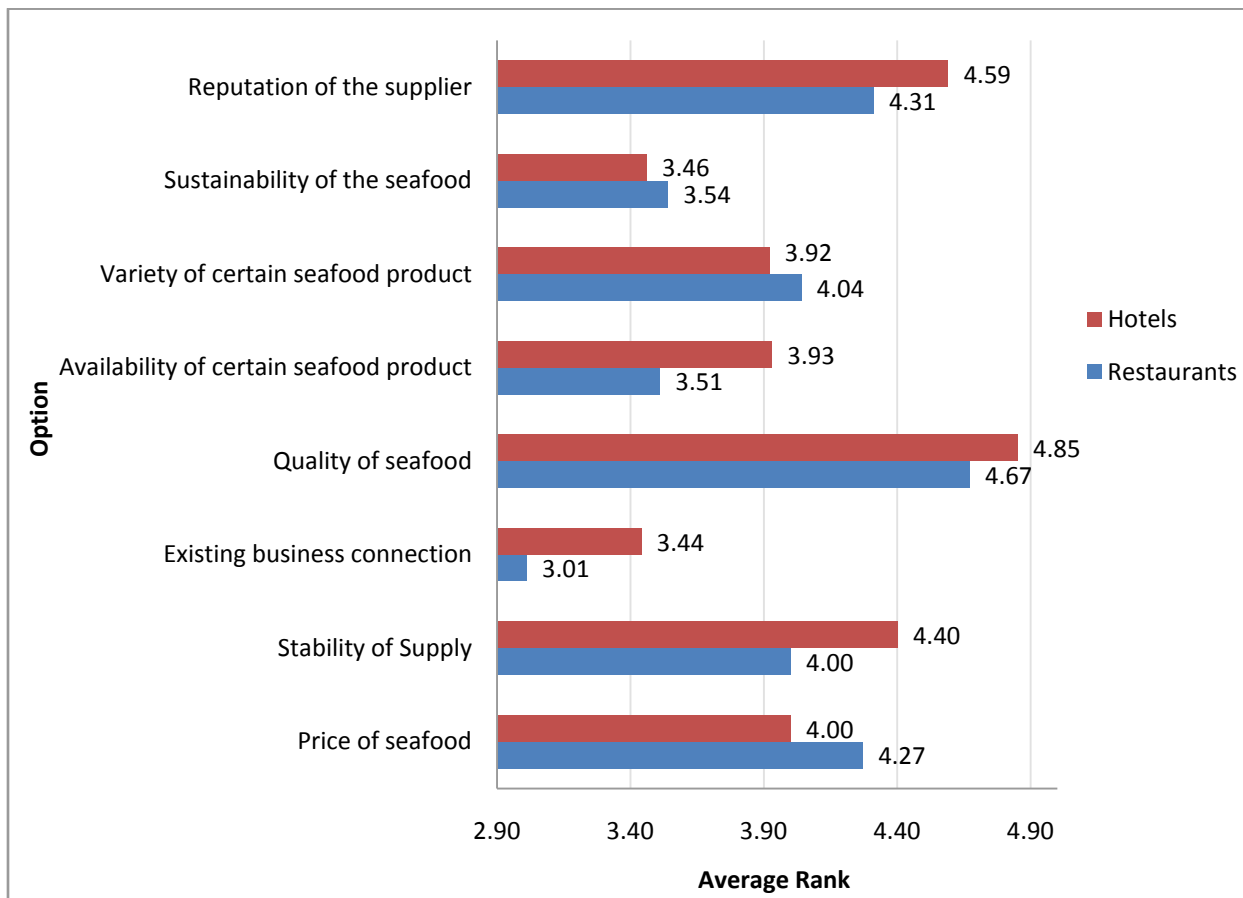


Figure 11: Criteria for Selecting Seafood Suppliers (Question 6, N=97)

Of the 27 hotels that answered the question, the quality of the seafood and the reputation of the supplier were considered the two most important criteria with mean scores of 4.85 and 4.59, respectively. Meanwhile, “sustainability of the seafood” came in 7th out of 8 in terms of

importance with an average score of 3.46, ranking slightly higher than “existing business connection”.

An in-depth look reveals that hotels that purchase their seafood from wholesale suppliers in Hong Kong rated sustainability lower than the hotels that buy it directly from overseas exporters. The 18 hotels which reported that they purchase their seafood stock from wholesalers rated sustainability an average of 3.25, while the 7 hotels that get it directly from overseas produced 3.86 for a mean score. Concurrently, hotels that buy less than 25 kilograms of seafood each day rated sustainability as 4, an average rank determined by 8 responses. In comparison, the 15 hotels that stated they buy more than 25 kilograms of seafood per day averaged 3.60 in sustainability importance.

Similarly, the averages for the 70 restaurants showed that quality of the seafood and reputation of the supplier are the most important factors, as quality received a mean score of 4.67 and reputation registered a mean of 4.31. The sustainability factor received an average score of 3.54 and was one of the least important factors. However, results were slightly different when it came to further analyzing the sustainability rankings. Unlike the hotels, the restaurants that purchase their seafood stock from wholesalers produced a mean score of 3.70. Restaurants that order directly from overseas exporters averaged sustainability lower with 3.47 on the scale. Lastly, restaurants that buy more than 25 kilograms of seafood per day gave sustainability a noticeably higher ranking of 3.87, compared to a 3.06 average for restaurants that buy less than 25 kilograms of seafood per day.

When looking at both hotels and restaurants, 48 percent of respondents rated sustainability a 4 or 5, while 19 percent scored it either a 1 or 2. Figure 12, pictured below, displays the count of the respondents' rankings in regards to scoring the sustainability criterion.

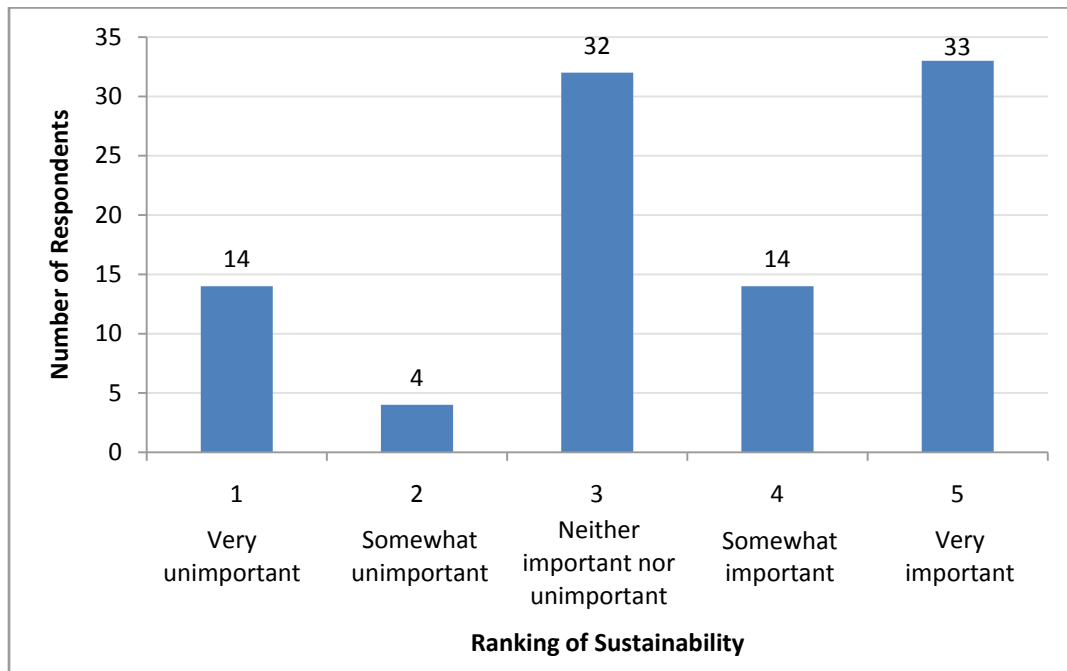


Figure 12: Number of Respondents for Each Sustainability Rank (Question 6)

Noted from the graph, thirty-three respondents rated sustainability a 5, while fourteen participants thought the importance was a 1. Thirty-two of the respondents also had a neutral opinion and thought sustainability was neither important nor unimportant. The graph is skewed to the right and appears to have three peaks, with a relatively low amount of respondents ranking sustainability a 2 or a 4. This shows that not many respondents perceive sustainability as somewhat important or somewhat unimportant.

Next, the questionnaire inquires about the hotels' or restaurants' seating capacity, which essentially indicates their size, to see if it played any factor in how they ranked the importance of sustainability when selecting a seafood supplier. In order to simplify the results, the hotels and

restaurants were categorized as small, medium, or large businesses depending on their seating capacity. Table 1 depicts how the different sized hotels and restaurants were separated and how each corresponding business size ranked sustainability.

Table 1: Sustainability Ranking for Suppliers According to Business Size (Question 6)

Business Size Category	Seating Capacity	Avg. Ranking of Sustainability
Small	<75	3.68 (N=20)
Medium	75-250	3.43 (N=50)
Large	>250	3.62 (N=22)

As indicated by the table, the 20 small hotels and restaurants reported the highest average ranking of 3.68, while those that seat between 75 and 250 experienced the lowest average ranking of 3.43. More specifically, medium-sized hotels and restaurants with a seating capacity between 151 and 250 reported a mean of 3.22. This in-turn dropped the average score of the medium-sized businesses significantly.

The low average for medium-sized businesses may be caused by having a more limited ability to choose from a large selection of suppliers and as a result, sustainability is only an added incentive and not necessarily an influencing factor for those businesses. Small restaurants may have more leeway to change suppliers because many of them are not under large corporations and can make their own decisions. A lot of the smaller restaurants that were surveyed were also located in well-known seafood hotspots (e.g. Sai Kung) where multiple suppliers are readily available. Large businesses can also choose any supplier they desire as they may be less concerned about their profit margin and more concerned about their public image. Medium businesses however, have to heavily consider the chance of losing profit. Therefore,

they must stay with their current suppliers to continuously maintain the highest revenue possible. It should also be noted that, of these medium-sized businesses, 76 percent of them purchase their seafood through wholesalers in Hong Kong. But with all this said, there appears to be no definitive correlation between seating capacity and sustainability ranking according to the data.

Finally, the average ranking of sustainability was calculated from hotels and restaurants within each of the three major regions of Hong Kong: Kowloon, Hong Kong Island, and the New Territories and Outlying Islands. Each region was represented by at least 20 businesses. The ones located in Hong Kong Island favored sustainability the most and produced an average score of 3.69, compared to Kowloon that only averaged 3.39. The New Territories' results were close to Hong Kong Island at 3.63. Within these regions, respondents in Tsim Sha Tsui ranked sustainability the most important with an average score of 4.5 according to 22 responses. This can be caused by the high tourist population in this region, and businesses may value sustainability to boost their image to the visiting population.

In a similar set-up to question 6, question 11 asked the respondent to rank the criteria on a scale of 1 to 5 (5 being very important) for selecting specific seafood products. Its intent was to find which factors are most influential when seafood businesses select their products and to note where sustainability ranked amongst those factors. The five different criteria were: popularity of the seafood species, profit margin, stability of the supply, availability of the species from certain suppliers, and the sustainability of the seafood species. The average rankings of the criteria for both hotels and restaurants can be seen in Figure 13.

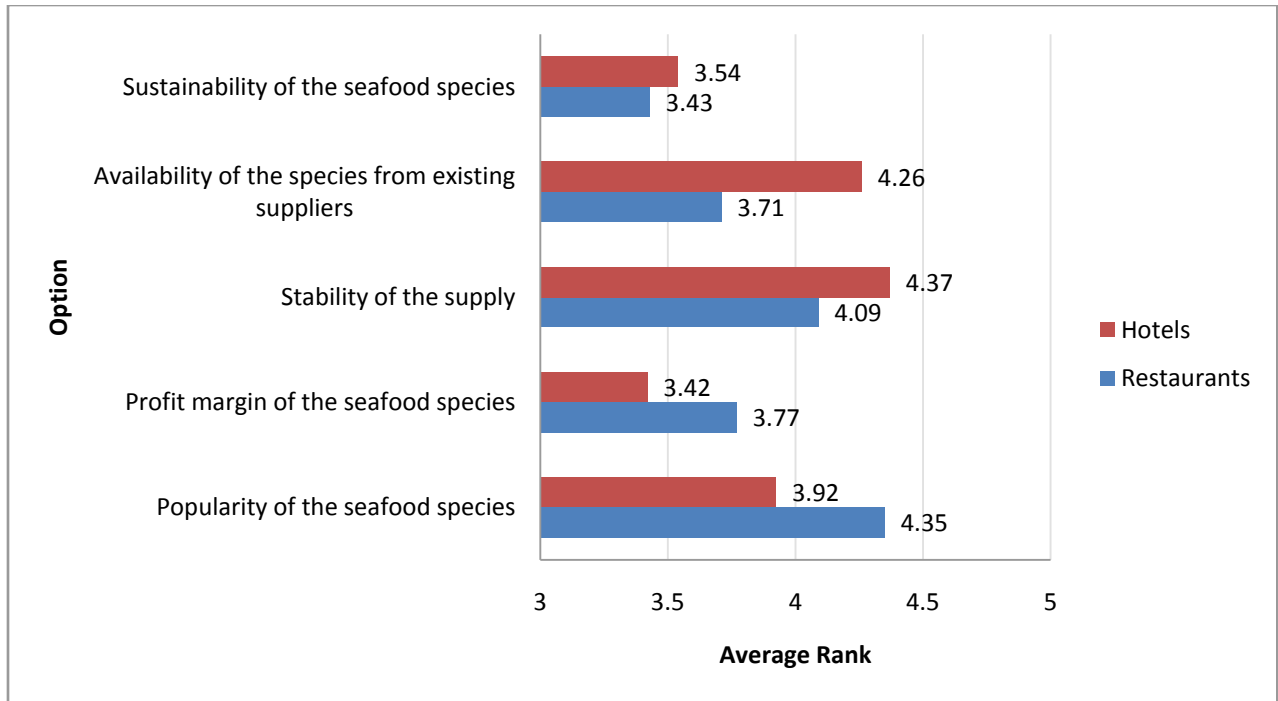


Figure 13: Criteria for Selecting Specific Seafood Products (Question 11, N=93)

Hotels ranked the stability of the supply as having the greatest importance with an average rating of 4.37, while the availability of the species from existing suppliers came in second at 4.26. In comparison, restaurants ranked the popularity of the seafood species the highest, followed by the stability of the supply with mean ratings of 4.35 and 4.09, respectively.

For both hotels and restaurants, sustainability was ranked very poorly compared to the rest of the factors. Hotels ranked sustainability second to last with an average of 3.54 while the restaurants ranked it the lowest among all criteria with an average of 3.43. Out of all 93 responses (4 respondents left this question blank), 48 percent ranked sustainability either a 4 or 5, while 21 percent ranked it a 1 or 2. Shown in Figure 14 is the total distribution of the selected rankings among hotels and restaurants.

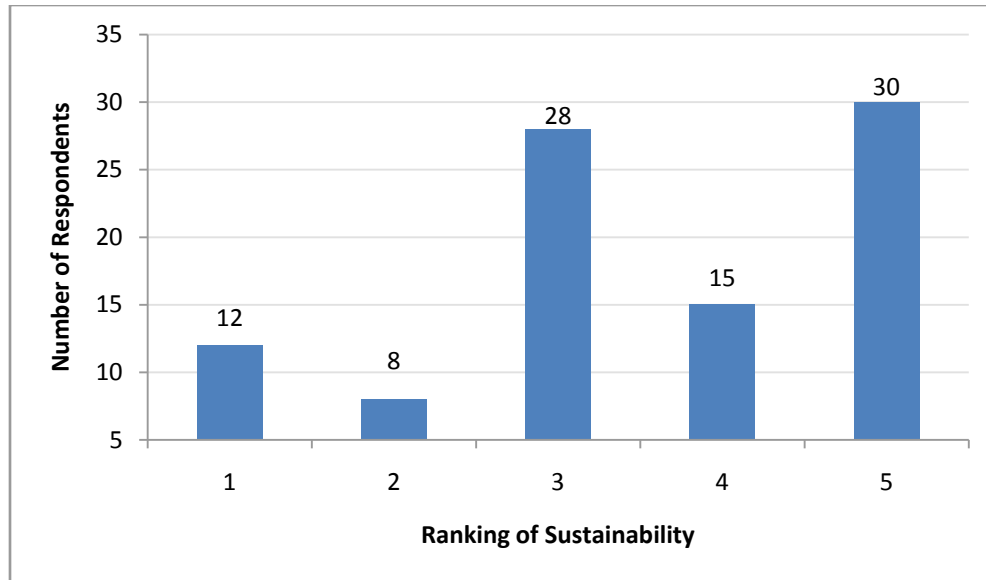


Figure 14: Number of Respondents for Each Sustainability Rank (Question 11)

This graph closely resembles the count in Figure 12 as the graph is right-heavy with rankings 3 and 5 receiving the most responses. Additionally, there are low points in the graph for the rankings of 2 and 4 which show that respondents generally do not find sustainability as somewhat important or somewhat unimportant.

Those results were then separated by seat capacity to see how the rankings were influenced by business size and can be seen in Table 2.

Table 2: Sustainability Ranking for Products According to Business Size (Question 11)

Business Size Category	Seating Capacity	Avg. Ranking of Sustainability
Small	<75	3.47 (N=20)
Medium	75-250	3.41 (N=50)
Large	>250	3.50 (N=22)

The statistics provided in the table indicate that there is an insignificant difference between the three sizes of hotels and restaurants. However, when separating the businesses into four seating

capacity groups (e.g. 75-250 seats changed to 75-150 and 151-250), the 48 larger-sized hotels and restaurants that had a capacity over 150 seats ranked sustainability a 3.54, on average. This was greater than the 44 others with a capacity under 150 seats that only produced an average of 3.34. The remaining five respondents did not fill out this portion of the questionnaire.

Looking at the three major regions, Hong Kong Island ranked sustainability the highest at 3.81. However, the New Territories' average dropped 0.45 points to 3.18 from their average in question 6 concerning the suppliers. This could imply that hotels and restaurants in this region consider sustainability an important factor when choosing their supplier, but less than when choosing the specific seafood product. Inversely, Kowloon's average rose to 3.61 and is higher than its average in question 6.

4.1.2 Environmental Considerations when Purchasing Seafood

To establish the set of Hong Kong hotels and restaurants that truly consider environmental effects when selecting seafood products, they must not only prioritize sustainability in their product and supplier selections but should also be knowledgeable about the matter. To address both criteria equally and fairly, a scoring system was designed that involves the scores on the knowledge-based test and the self-assessed scores on question 6 (option 7), 8, 11 (option 5), 14, and 17. By multiplying each score with the question's weight it ensured that all criteria were considered equally. The total score was then normalized to a range from 0 to 100. If a hotel or restaurant scored higher than a passing grade, which in this case is 65 points, it is assumed that a business generally considers environmental effects and sustainability when selecting seafood. The passing grade was modeled after WPI's grading policy. Figure 15 shows the percentage of hotels and restaurants in the survey sample that consider environmental effects when selecting seafood products and suppliers.

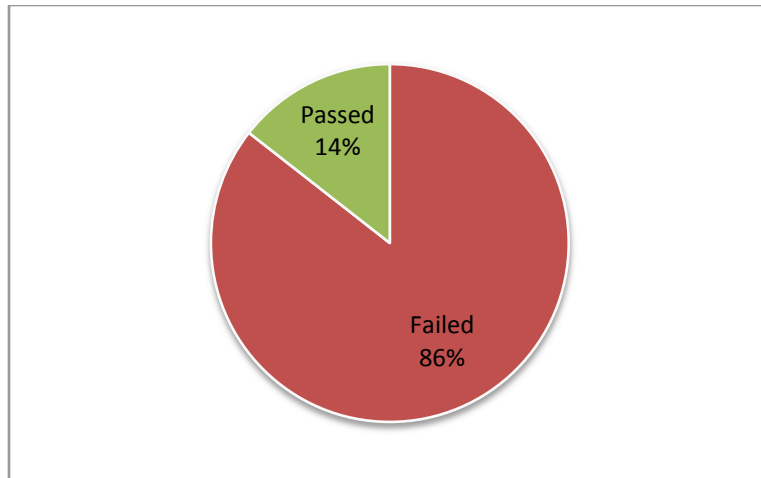


Figure 15: Pass/Fail Percentages of Hotels and Restaurants (N=97)

Only 14 percent of businesses were able to achieve scores over 65 points. There were 16 out of 97 hotels and restaurants that scored lower than 36 points which indicates a complete lack of awareness about sustainability. The distribution of scores can be seen in Figure 16.

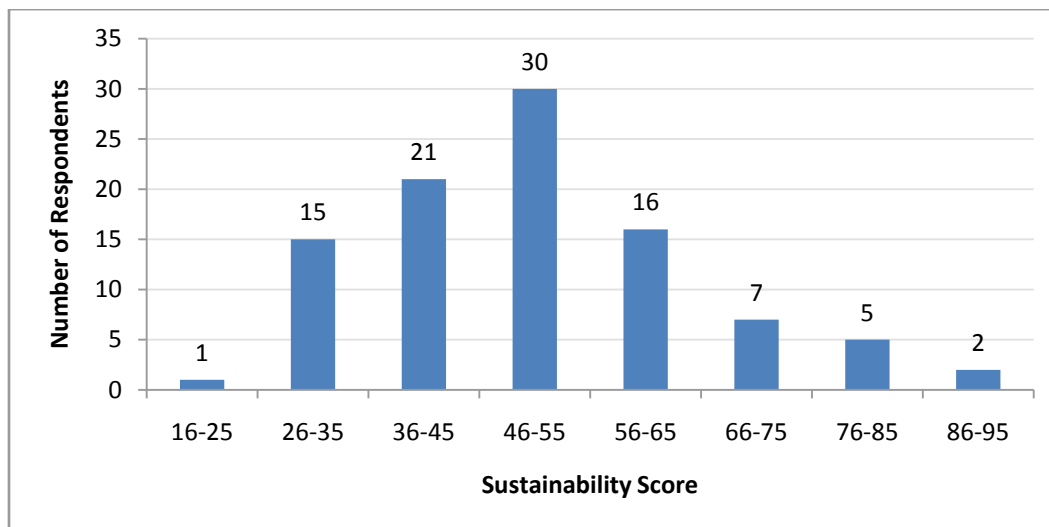


Figure 16: Normalized Sustainability Scores for Hotels and Restaurants (N=97)

4.1.3 Factors that Have Caused Businesses to Offer Sustainable Seafood

Question 14 asked the seafood decision makers in the hotels and restaurants if they offered sustainable seafood in their regular menus. Only 14 and 13 percent of hotels and

restaurants, respectively, claimed to offer sustainable seafood in their menus, and only 7 percent of the total respondents claimed to have an interest to promote sustainable seafood. The respondents who answered “yes” to question 14 were required to complete question 15, which ask for the reasons they provide sustainable seafood. About 37 percent noted they provide sustainable menus as decided by corporate. Other responses include: better the environment (34 percent), consumer requests (24 percent), and increasing company’s reputations. No respondents thought that providing sustainable seafood would increase their revenue, as some stated (during the team’s field work) that the limited seafood selections would prevent new revenue sources.

Question 17 asks if businesses educate their staff about sustainable seafood. Only 28 percent of hotels and 15 percent of restaurants claimed to provide education through weekly workshops, trainings, or normal everyday conversations. On the other hand, less than 30 percent of this group stated that lack of sustainability awareness among staff would not be the most significant obstacle when publicizing sustainable seafood. Figure 17a and Figure 17b shows the percentages of hotels and restaurants that said they educated their staff on sustainable seafood and indicates whether or not the respondent thought that education was their biggest concern.

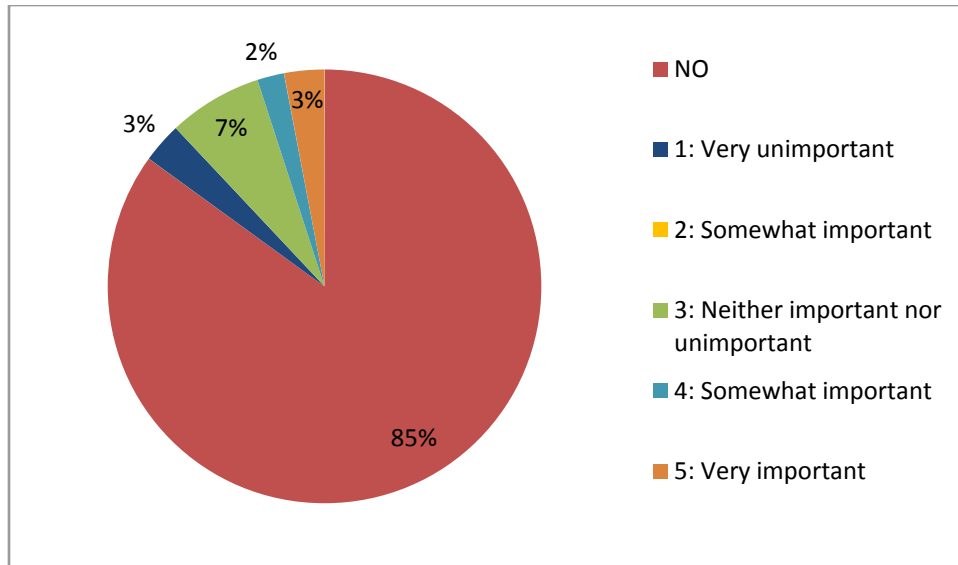


Figure 17a: Percentage of Hotels that Educate Their Staff (N=27)

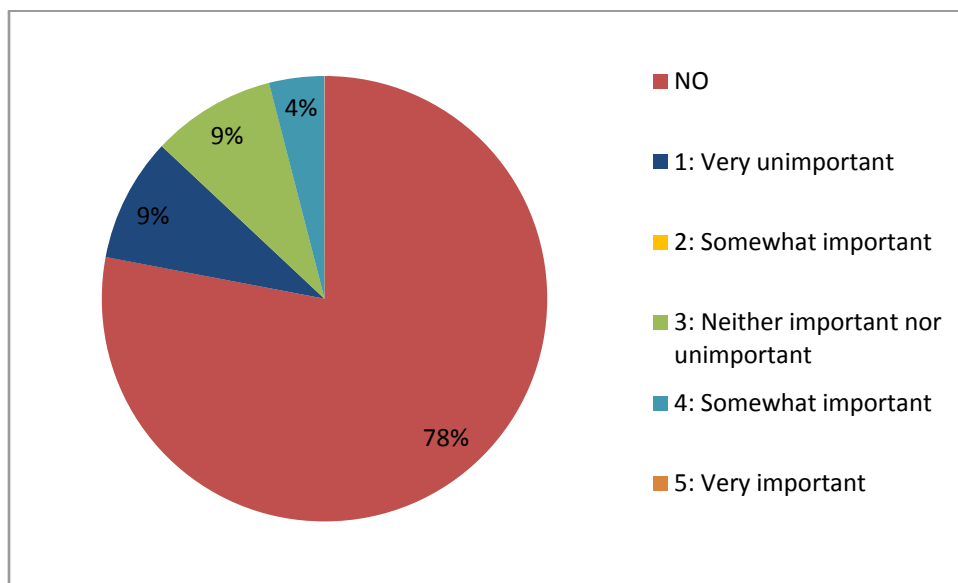


Figure 17b: Percentage of Restaurants that Educate Their Staff (N=27)

4.1.4 Obstacles When Implementing Sustainable Seafood Options

To determine the obstacles that are most concerning to hotels and restaurants when switching to a more sustainable menu, the results from question 16 of the survey were analyzed. It asks the participants to rank the concerns that he or she encountered or anticipates regarding the provision of sustainable seafood in the business. The participants ranked each option with a

score from 1 to 5. The average score for each option was then calculated and is illustrated in Figure 18.

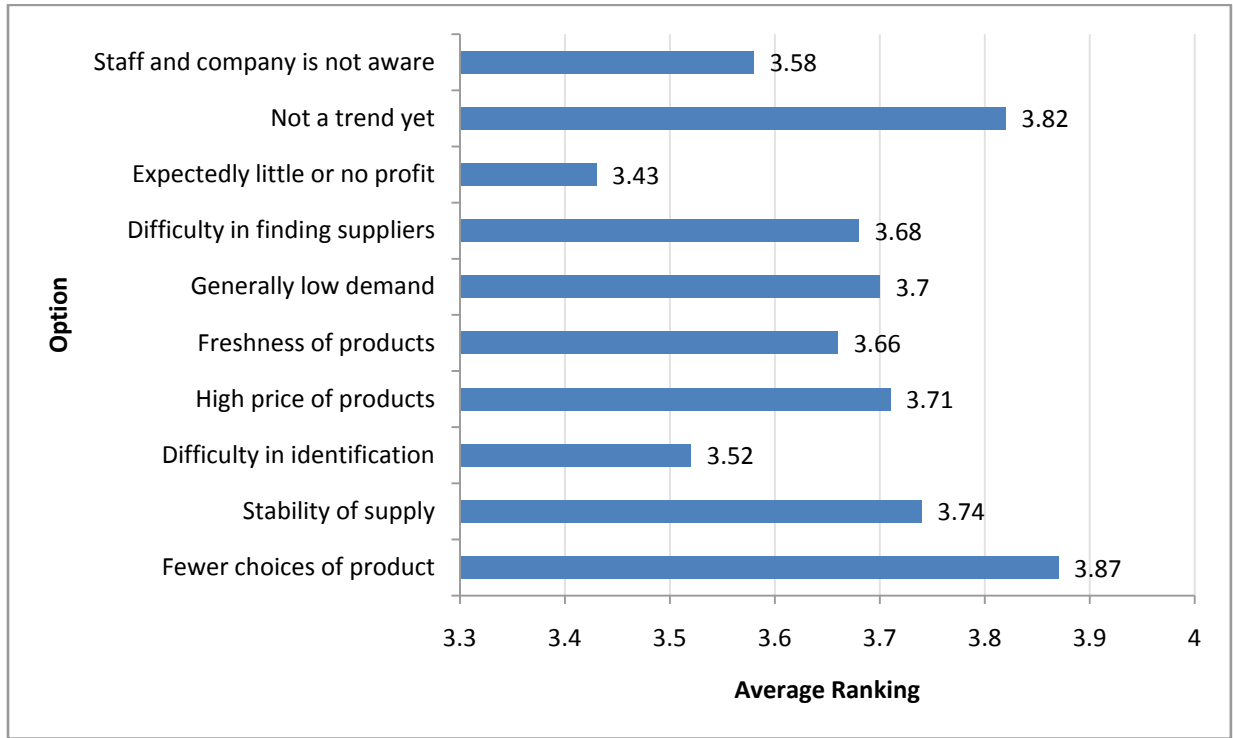


Figure 18: Average Scores for Question 16 (N=97)

The average ranking for all 10 options is 3.7 with a standard error of 0.1. The individual average scores suggest that hotels and restaurants are most concerned with the “fewer choices of products” and that “sustainable seafood is not a trend yet”. Meanwhile, businesses are least concerned with the “difficulty in identifying sustainable seafood products” and “expectedly little or no profit or even a loss”. All of the other options are within standard error range of the average value.

The next step in the analysis of question 16 is to separate responses between hotels and restaurants, seat capacities, and cuisine types. For each criterion, an F-test was conducted using Excel to calculate the p-value of each option (refer to section 3.4). If an option had a p-value of less than five percent, one can say with statistical significance that there is a difference in

responses between two samples. Figure 19 provides the average scores across hotels and restaurants.

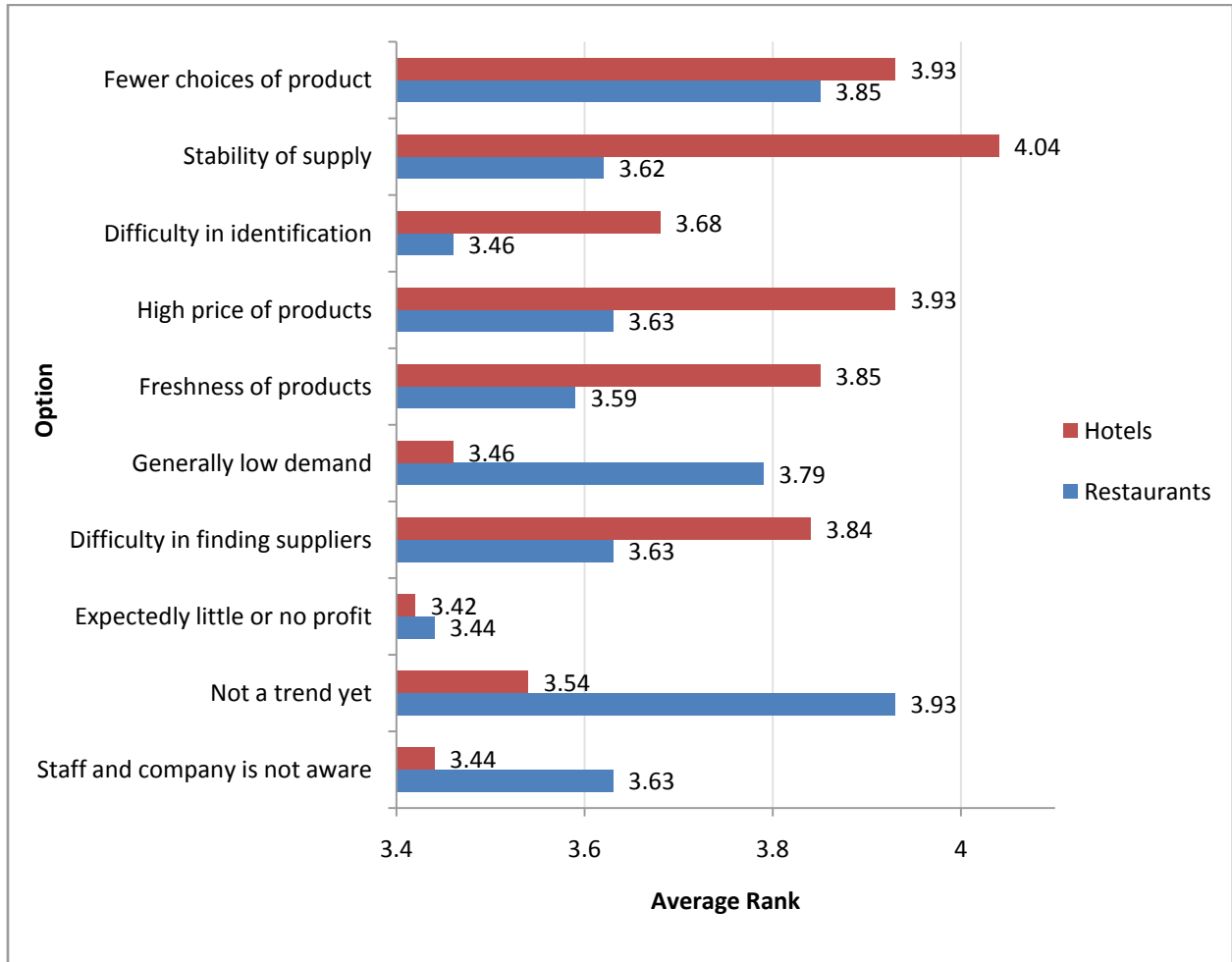


Figure 19: Comparisons between Hotels and Restaurants (Question 16, N=97)

The chart indicates that the hotels are most concerned about the stability of sustainable seafood supply while restaurants are more concerned about sustainable seafood not being a trend yet.

Figure 20 indicates that there are also some noticeable trends between businesses of different sizes. The size categories are the same as described in Table 1.

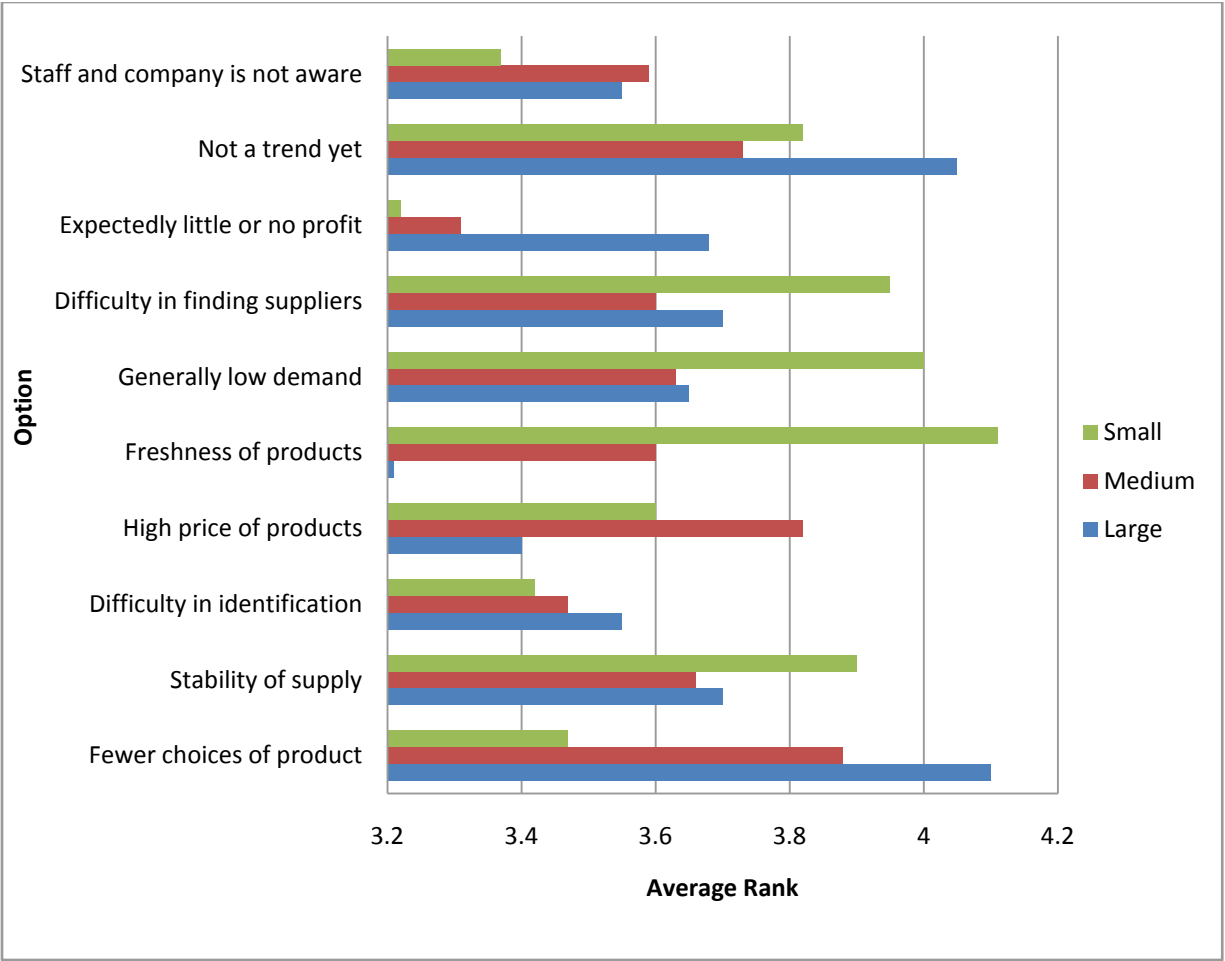


Figure 20: Comparison between Business Sizes (Question 16, N=92)

The analysis reveals that larger businesses tend to be more concerned with the fewer choices of sustainable seafood products than the smaller-sized ones. This difference might come from the fact that smaller businesses usually serve a low variety of seafood species while larger businesses provide a much wider selection in their menus. On the other hand, “freshness of product” is more of a concern to the smaller hotels and restaurants than the larger ones.

4.2 Wedding Catering & Banquet Menus

The following section analyzes the percentages of wedding banquets that request no shark fin to be served in the banquet menu as well as whether or not a requests for a sustainable

seafood banquet menu will be fulfilled by hotels and restaurants to satisfy their customers. The businesses that provide a regular no shark fin banquet menu are also shown in detail. The analysis involves separating the hotels and restaurants into three groups as determined by their seat capacity (refer to Table 1 for size criteria), and by location. Of the 97 businesses that completed the survey, 43 hotels and restaurants stated that they provided wedding catering. However, this sample was reduced to 37 because a number of businesses did not specify answers for some of the relative questions that will be discussed in this section and were therefore excluded.

4.2.1 Hotels and Restaurants that Provide Catering

In this sample, there are 15 hotels and 22 restaurants that provide wedding catering.

Figure 21 and Figure 22 show the counts of hotels and restaurants by size and location.

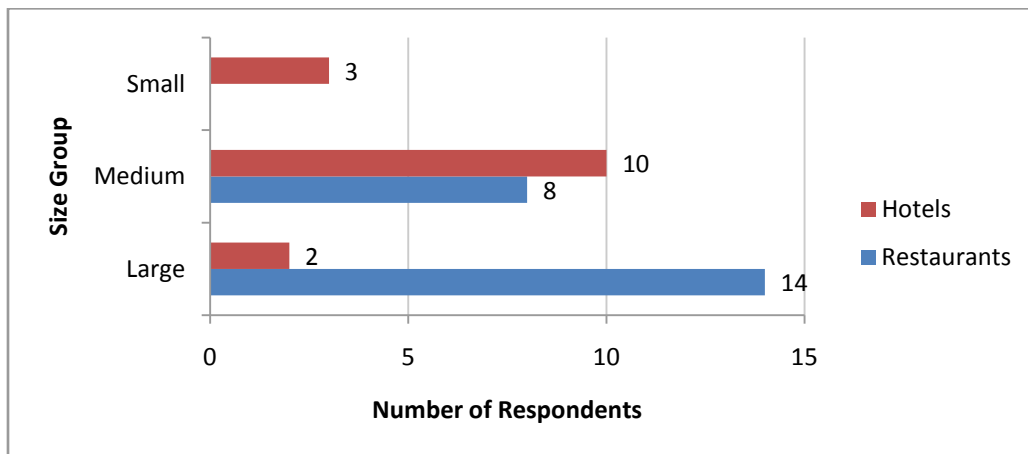


Figure 21: Hotels and Restaurants that Provide Catering by Size (N=37)

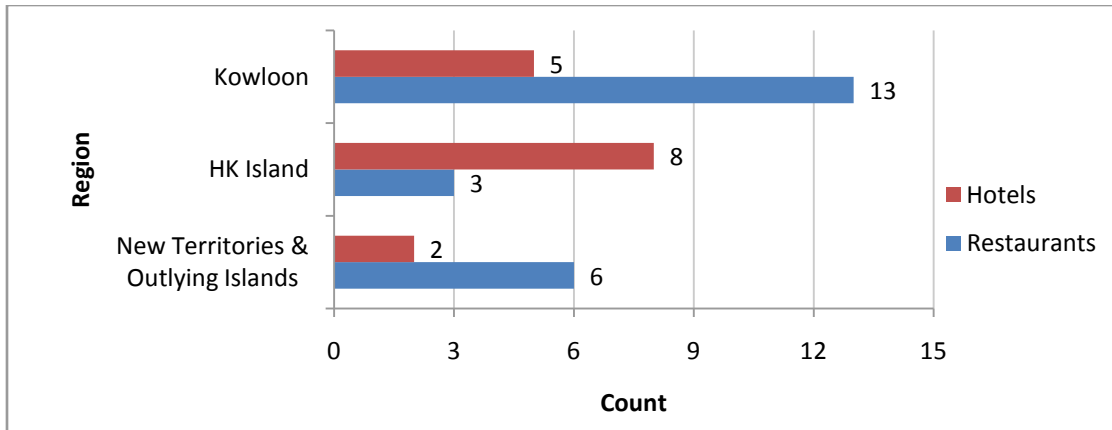


Figure 22: Hotels and Restaurants that Provide Catering by Region (N=37)

Most of the businesses that cater fall under the medium or large groups as most banquets need a large number of seats to serve a greater number of tables. In addition, there are significantly more large restaurants than hotels that provide catering services. There are only three hotels in the small group that provide catering. More than half of the hotels in this sample are located in Hong Kong Island while most of the restaurants are based in Kowloon.

4.2.2 Requests for No Shark Fin

Question 25 asked participants to identify a specific percent range for the number of wedding banquets in 2010 that had requested a no shark fin banquet menu. Figure 23 shows a distribution graph for both hotels and restaurants.

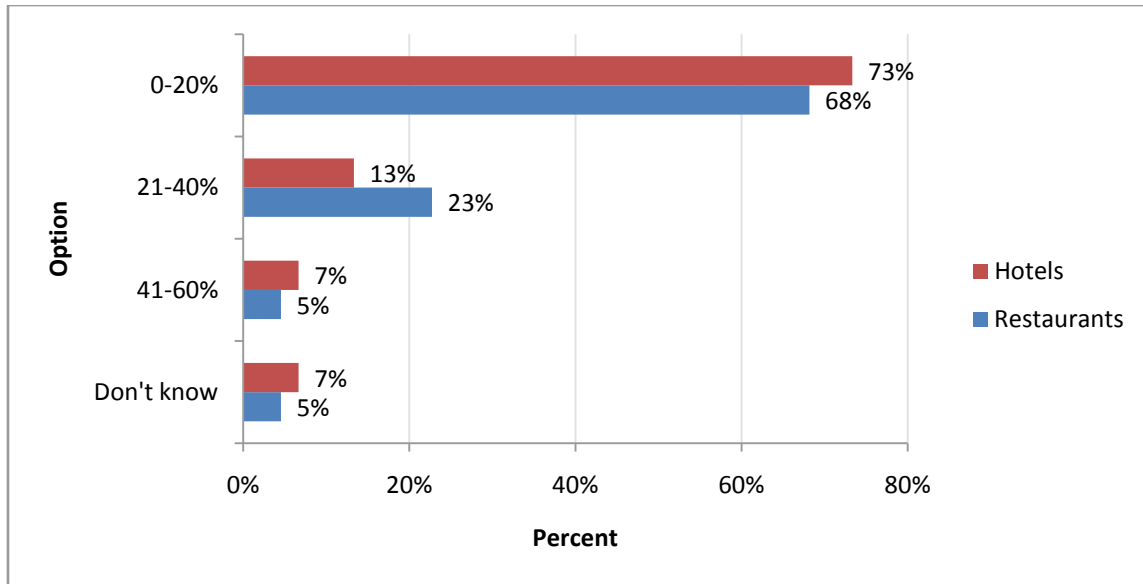


Figure 23: Wedding Banquets that Requested a No Shark Fin Banquet Menu (N=37)

Looking at only hotels, about three-quarters of them claimed that less than 20 percent of their customers opted out of shark fin for their banquet menus. In comparison to the restaurants, the hotel responses show a significant difference between options 0-20% and 21-40%, with more hotels choosing the former range. This means that the consumption of shark fins in wedding banquets was more common in hotels than restaurants.

The data was again separated by seat capacity, but there was no significant difference from the results shown in Figure 23. The hotel and restaurant results were then separated by region (e.g. Kowloon, Hong Kong Island, and the New Territories and Outlying Islands) and can be seen in Figure 24. For analyses by region, hotel and restaurant responses were used collectively.

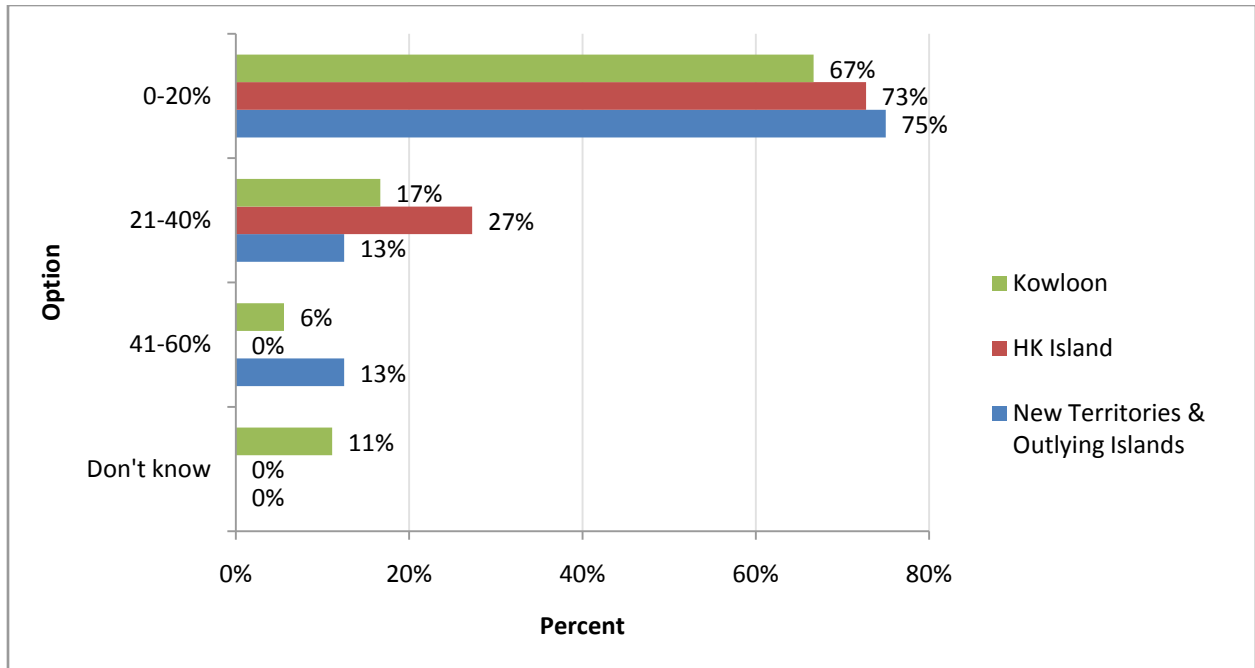


Figure 24: Wedding Banquets that Request No Shark Fin by Location (N=37)

Over 65 percent of businesses in all three regions had less than 20 percent of their customers request no shark fin on the banquet menu. The distribution graph shown in Figure 24 is not very different from the one in Figure 23. However, note that the hotels and restaurants that are located in Hong Kong Island were the only businesses that did not choose an answer option above 40 percent. This implies that the consumption of shark fin is especially common in wedding banquets in this particular area. Additionally, Kowloon was the only region that reported any “don’t know” answers.

4.2.3 Shark-Free Banquet Menus

Question 26 asks respondents whether or not their establishment provides a shark-free banquet menu, either as a regular menu or upon request. A distribution chart of answers for hotels and restaurants can be seen in Figure 25 below.

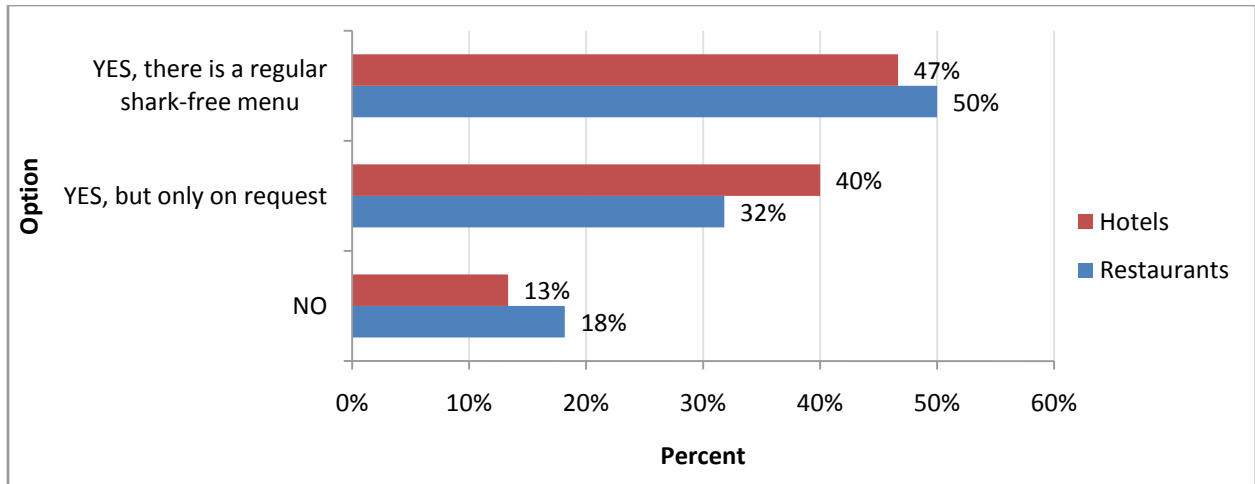


Figure 25: Hotels and Restaurants that Provide Shark-free Banquet Menus (N=37)

There is a similar trend between hotels and restaurants, and it reveals that most of them already provide a regular shark-free banquet menu or will cater one upon request if there isn't one already available. Half of the hotels and about half of the restaurants that provide catering said they have a shark-free banquet menu.

The hotel and restaurant results were then separated into the three seating capacity groups to see if the businesses that provide a shark-free banquet menu were dependent on the size of their business. A graph of the results can be seen in Figure 26.

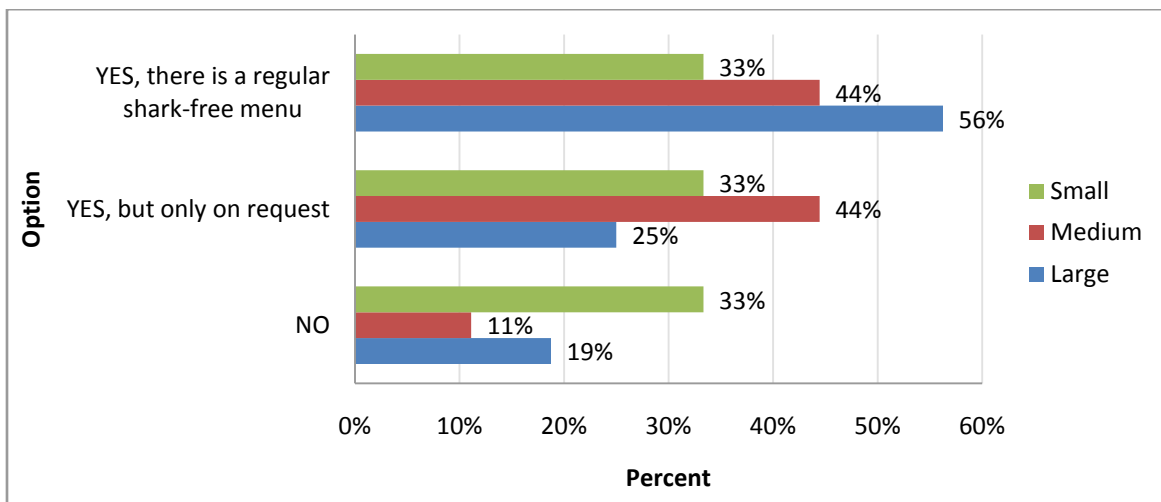


Figure 26: Hotels and Restaurants that Provide Shark-free Banquet Menus by Size (N=37)

Results imply that large hotels and restaurants are more likely to already have a shark-free banquet menu available. However, medium-sized businesses are more likely to have one if the customer chooses to request one. Interestingly, all of the hotels and restaurants that reported they do not provide a shark-free menu are well-known specialty chains (i.e. seafood and/or wedding specialists). This hints towards the possibility of those hotels and restaurants following strict corporate guidelines which prevents the individual businesses from making their own decisions. The results were then separated by region and can be seen in Figure 27.

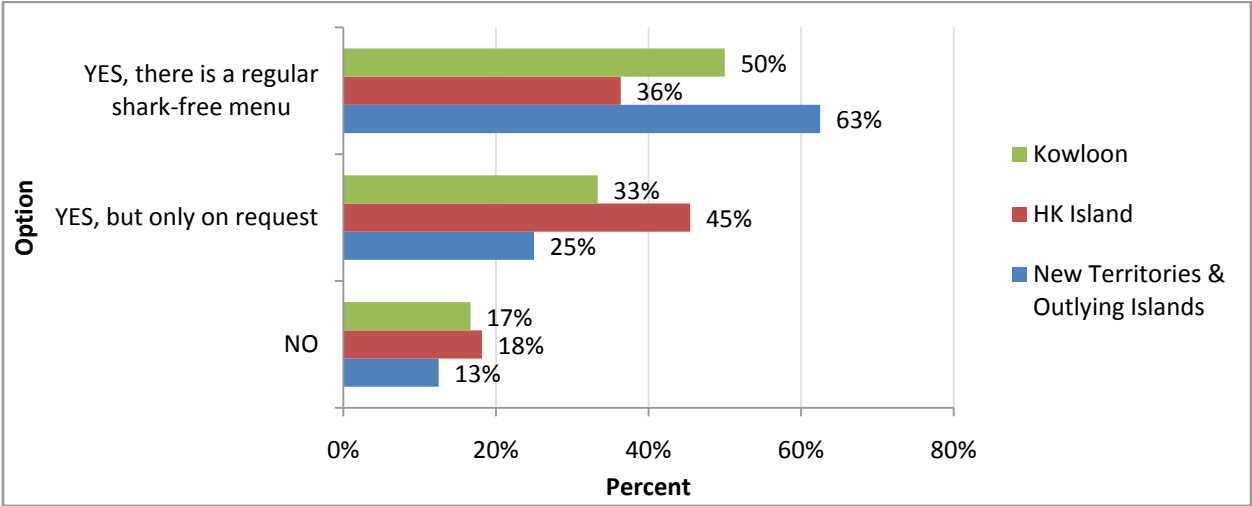


Figure 27: Hotels and Restaurants that Provide Shark-free Banquet Menus by Region (N=37)

A higher percentage of hotels and restaurants in the New Territories and Outlying Islands have a regular shark-free banquet menu available. But on the other hand, businesses in that region that do not have a normal shark-free menu may be less inclined to adjust the courses for customers that request for one. Businesses in Hong Kong Island follow a different trend, where fewer businesses have a regular shark-free menu, but many are willing to offer one upon request.

4.2.4 Fulfilling Requests for a Sustainable Seafood Menu

In addition to no shark fin, customers may ask for all of the seafood dishes in their wedding banquet menu to be sustainable, and hotels and restaurants have the option to refuse. There are many obstacles that can be encountered here, as providing a menu that includes only sustainable seafood can be a challenge. Depending on the types of fish served at these businesses, they may have to process completely different orders for a small amount of sustainable fish that is enough to feed the number of tables for each banquet. In addition, if businesses are unsure how and where to get sustainable seafood, they may fail to get the correct fish species and/or to complete the customers' requests. This results in a loss of time, money, and potential customers. These issues, however, may pose less of a problem if the restaurant already serves a significant amount of sustainable seafood in their regular menu.

Based on observations during the field canvassing, many hotels and restaurants overlook the planning and time it would take to rework their banquet menu to serve just sustainable seafood. A distribution graph can be seen in Figure 28.

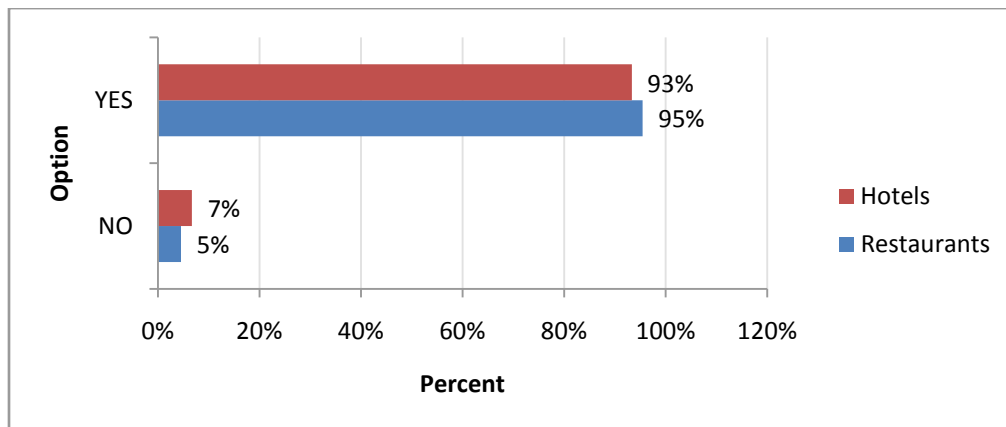


Figure 28: Businesses that will Provide a Sustainable Banquet Menu upon Request (N=37)

Almost all of the hotels and restaurants declared they would be able to provide a sustainable seafood banquet menu if a customer had asked. Only one hotel and one restaurant said they would not and they are not very different demographically from the other 37 hotels and restaurants that cater. It appears that the ratio of “yes” to “no” answers are fabricated and implausible with over 90 percent of the hotels and restaurants that cater saying they would provide sustainable seafood menus upon request.

4.3 Assessing Businesses’ Knowledge of Sustainable Seafood

The questionnaire utilizes two different strategies to assess the businesses’ knowledge of sustainable seafood. The first strategy, employed in questions 9 and 10, uses knowledge-based, factual questions in which there are correct and incorrect answers. Question 8 on the other hand, uses the second strategy, which allows the respondents to self-rank their knowledge level about the subject.

4.3.1 Knowledge-Based Questions

In order to address the respondents’ general knowledge about the criteria that makes seafood sustainable, questions 9 and 10 in our questionnaire were analyzed. Question 9 listed five specific seafood products and conditions (wild caught Pacific Salmon, wild caught Swordfish, farmed Bluefin tuna, wild caught Shark, and farmed Scallop) and the respondent was asked to select which options he or she thought are sustainable. Similar in format, question 10 listed eight different criteria and respondents were asked to check the ones that apply to sustainable seafood. Since questions 9 and 10 have correct and incorrect answers, each answer option within the two questions were assigned a value from which the scores were summed and then normalized to a range from 0 to 5. The scores for both questions were then added together

to rate the knowledge of hotels and restaurants. Figure 29 below displays the distribution of grades for all of these businesses.

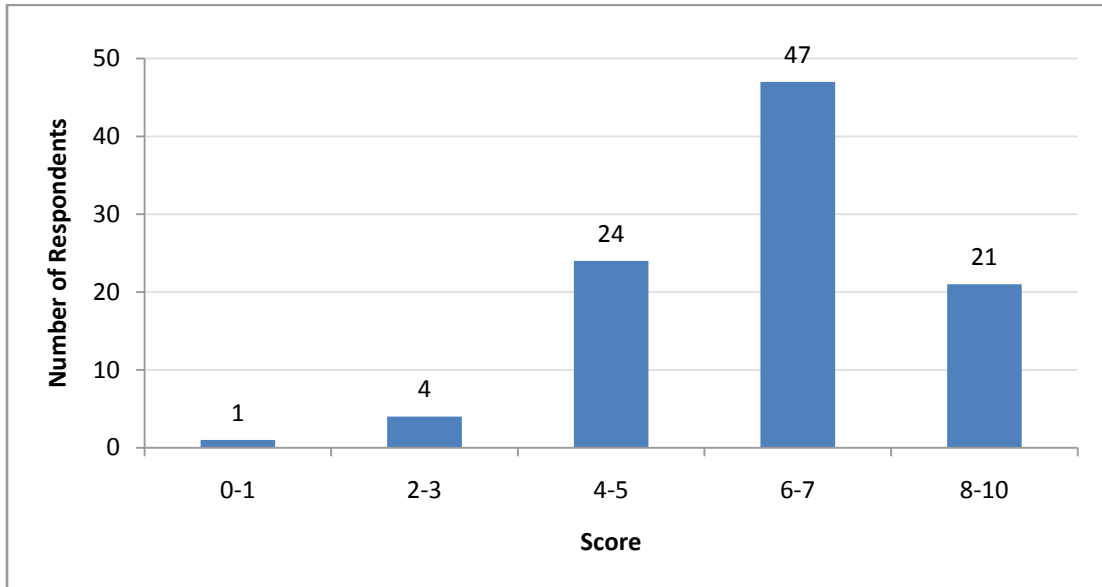


Figure 29: Hotels' and Restaurants' Scores on the Knowledge-Based Test (N=97)

Out of 97 responses, the mean score is 6.22 and the median score is a 6, which indicates some general knowledge about sustainable seafood. However, only businesses that scored an 8 and above will be considered to be knowledgeable about the subject. This means 21 out of 97 businesses (22 percent) know the general conditions that make seafood sustainable. There were no correlations found between the score and other demographic information such as size, type (i.e. hotel or restaurant), or cuisine.

Question 9 was further analyzed for any apparent misconceptions regarding the sustainability of the specified products. Figure 30 shows the number of participants from both hotels and restaurants that perceived each seafood product as sustainable.

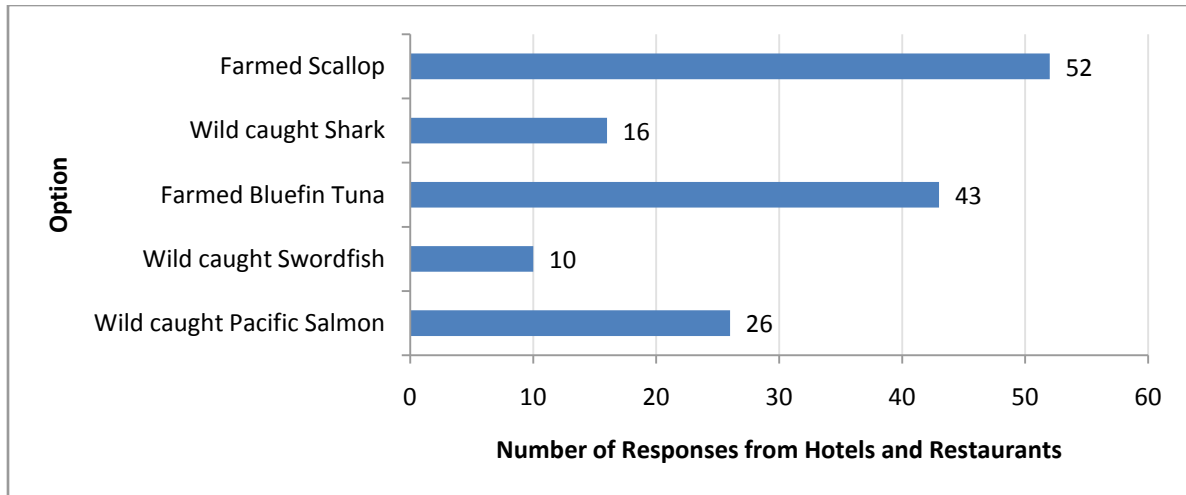


Figure 30: Individual Options for Question 9 (N=97)

While the correct options (farmed Scallop and wild caught Pacific Salmon) received a relatively high number of responses, the results indicate that the option “farmed Bluefin tuna” also received a similarly high score. In fact, both of the farmed seafood product options got the highest numbers of responses. This means that there might be a misconception that farmed seafood is always sustainable.

To support this conjecture, all the possible sustainability criteria presented in question 10 were reviewed individually. Figure 31 shows that “must be farmed” is selected most frequently by the participants. This supports the theory that it is a generally-held misconception that seafood is always sustainable if it is farmed.

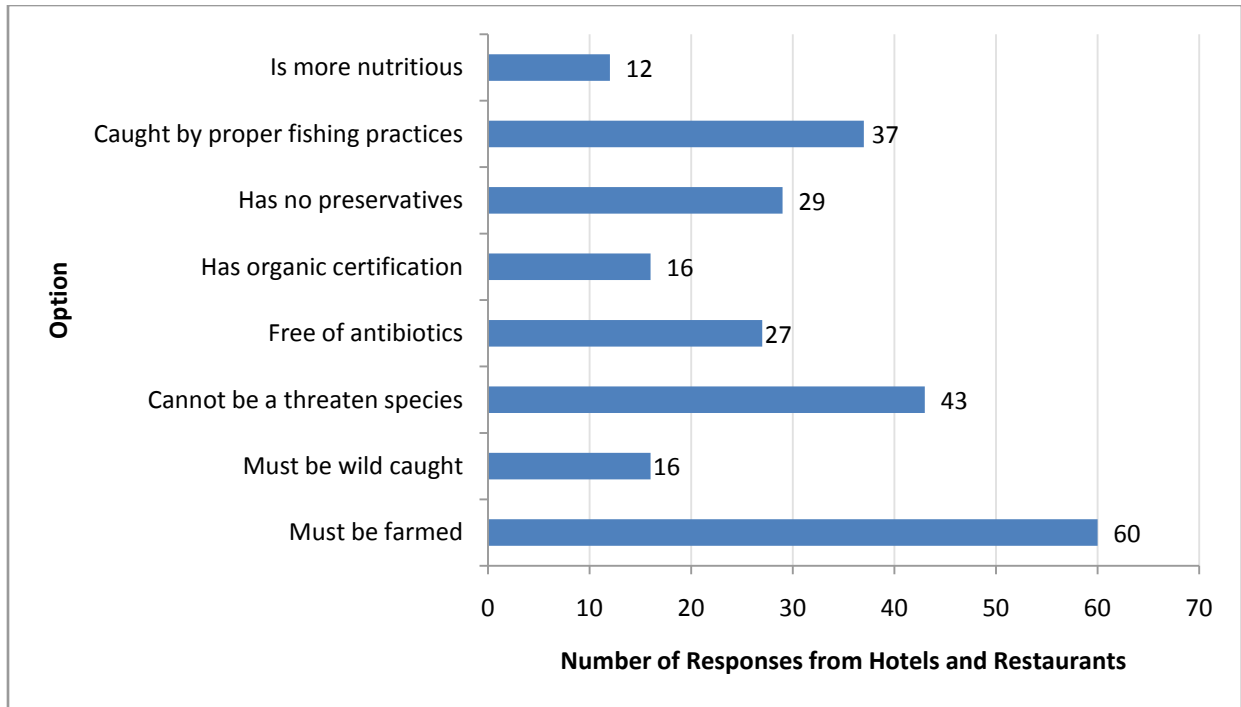


Figure 31: Individual Options for Question 10 (N=97)

4.3.2 Self-Ranked Knowledge of Sustainable Seafood

Question 8 is one of the opinion-based inquiries regarding sustainable seafood. It asked respondents about their perception on their own knowledge of sustainable seafood by ranking themselves using a 5-point Likert scale (Siegle, 2010, *Likert Scale*). Possible rankings are between 1 and 5 where each number represents “very unknowledgeable”, “somewhat unknowledgeable”, “neither knowledgeable nor unknowledgeable”, “somewhat knowledgeable”, and “very knowledgeable”, respectively. The sample population of this self-ranked knowledge analysis is 95, with 27 hotels and 68 restaurants. There were two restaurants that did not provide answers for question 8 and were excluded from this part of the investigation. Figure 32 below shows the answer distribution of hotels and restaurants.

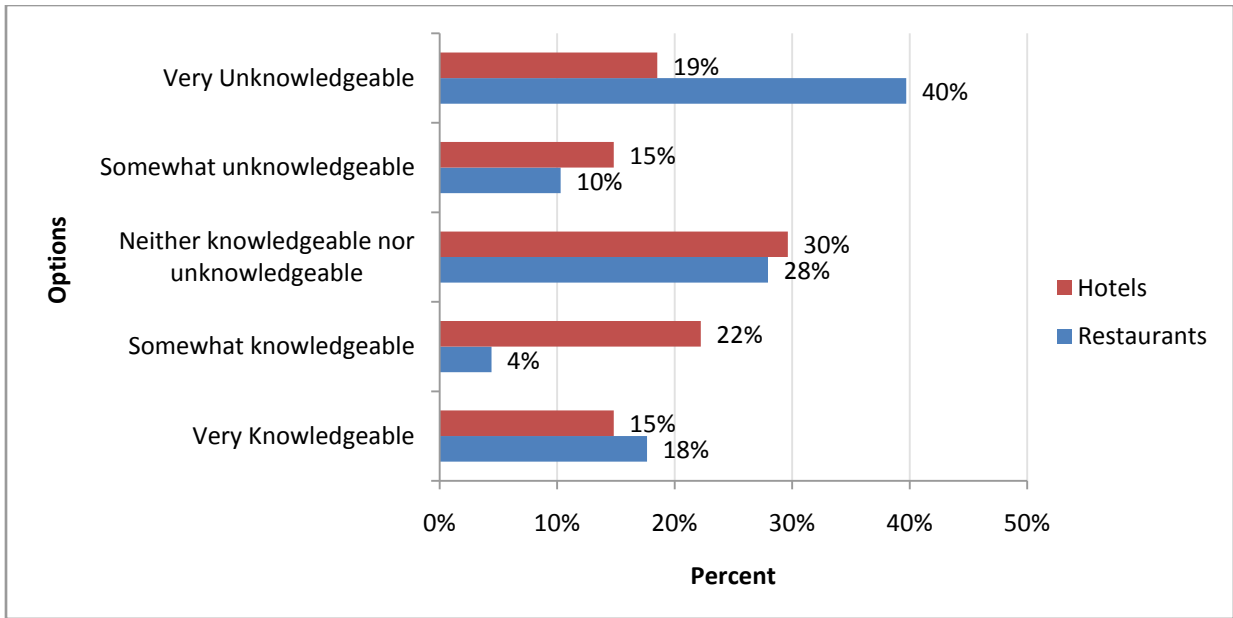


Figure 32: Self-ranked Knowledge of Hotels and Restaurants (N=95)

Looking first at only the restaurants, half of them admitted to being less knowledgeable about sustainable seafood. Note the majority of restaurants chose extremes, meaning they ranked themselves either very knowledgeable, very unknowledgeable, or neither. They seem to perceive that you either know about sustainable seafood or you do not. In contrast, hotels are almost evenly split on both sides of the knowledge spectrum. There is only a 3 percent difference between the hotels that stated they are knowledgeable (option 1 or 2) and the hotels that said they are unknowledgeable (option 4 or 5), with slightly more of them choosing the former.

The data from question 8 was also separated by size and cuisine groups (e.g. Chinese, Western), but there were no apparent differences in answers from the distribution chart illustrated in Figure 32. The data was then separated by region and can be seen in Figure 33. Hotel and restaurant responses were used collectively.

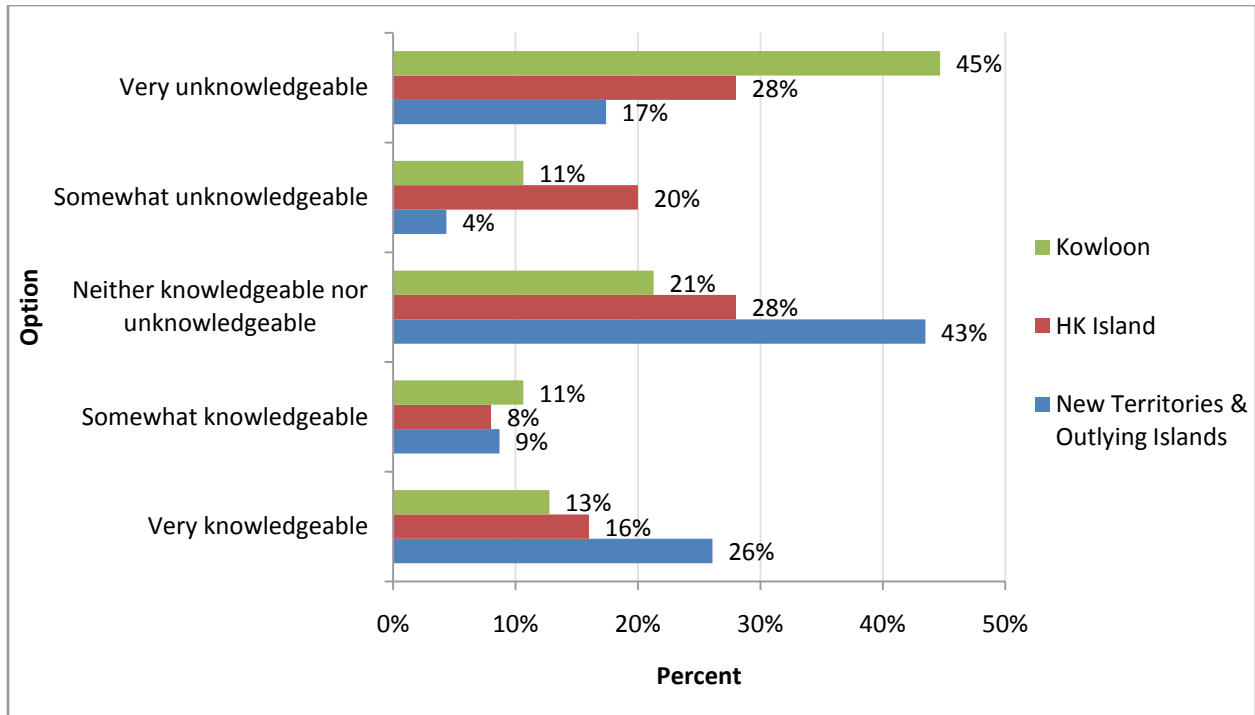


Figure 33: Self-ranked Knowledge of Hotels and Restaurants by Region (N=97)

More than half of the hotels and restaurants in Kowloon admitted to being unknowledgeable to some extent about sustainable seafood, just surpassing businesses in Hong Kong Island by 8 percent. Although many respondents from the New Territories and Outlying Islands were neutral (ranking number 3), this region has the greatest percentage of hotels and restaurants that claimed they were knowledgeable (option 4 or 5). The businesses surveyed in these areas are located in more seafood-orientated areas and may therefore be more concerned about their seafood products.

4.3.3 Correlation between Self-Ranked Scores and Knowledge-Based Scores

In order to see if there is any correlation between self-ranked and knowledge-based results, the average test scores described in section 4.3.1 and the self-ranked scores from section 4.3.2 were compared. The respondents who rank themselves as knowledgeable ideally should

show higher test scores, and vice versa. Figure 34 shows a graph of self-ranked scores versus actual test scores.

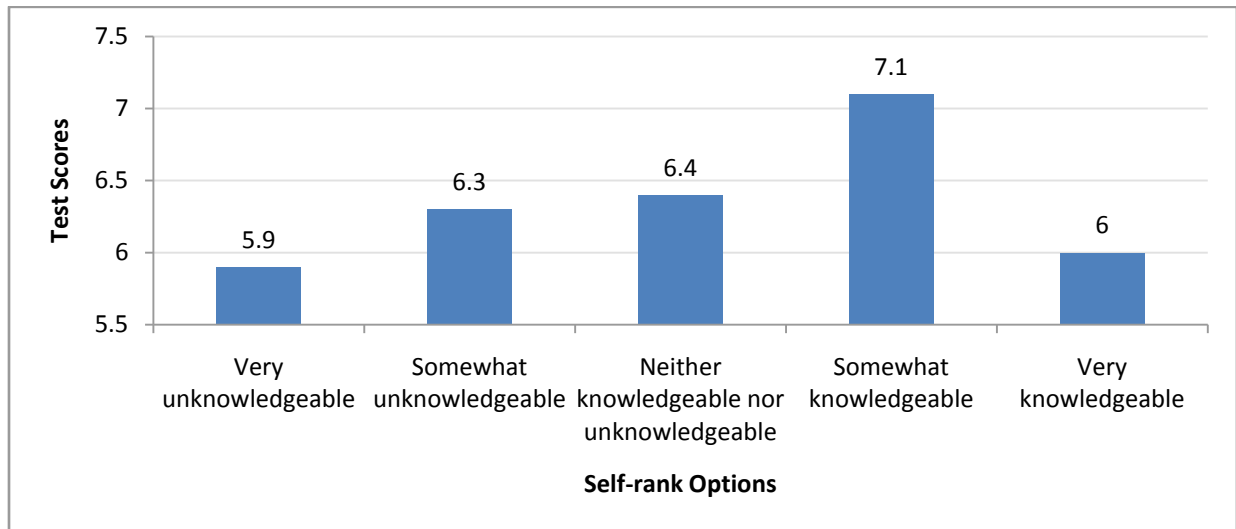


Figure 34: Correlation between Self-ranked and Knowledge-based Test Scores

Surprisingly, the respondents who ranked themselves as very knowledgeable and very unknowledgeable share close to identical test scores, showing that many respondents have misconceptions regarding their own knowledge. This could also be due to the fact that many businesses simply rank themselves as very knowledgeable to protect their image. However, when comparing the average test scores of the hotels and restaurants that answered unknowledgeable (option 1 or 2) to those that said knowledgeable (option 4 or 5), the ones that thought they were knowledgeable had a slightly higher test score.

4.4 Roles of Non-Governmental Organizations

Another goal of the survey was to provide conservation organizations with recommendations regarding strategies that should be employed to help businesses implement a more sustainable menu. However, for this to be practical, hotels and restaurants must be supportive of NGO's involvement in sustainable seafood initiatives. Question 12 asked the

respondent to rank the importance of the five main stakeholders that could influence the sustainable seafood movements: Hong Kong Government, seafood suppliers, caterers, consumers, and non-governmental organizations (see Figure 35).

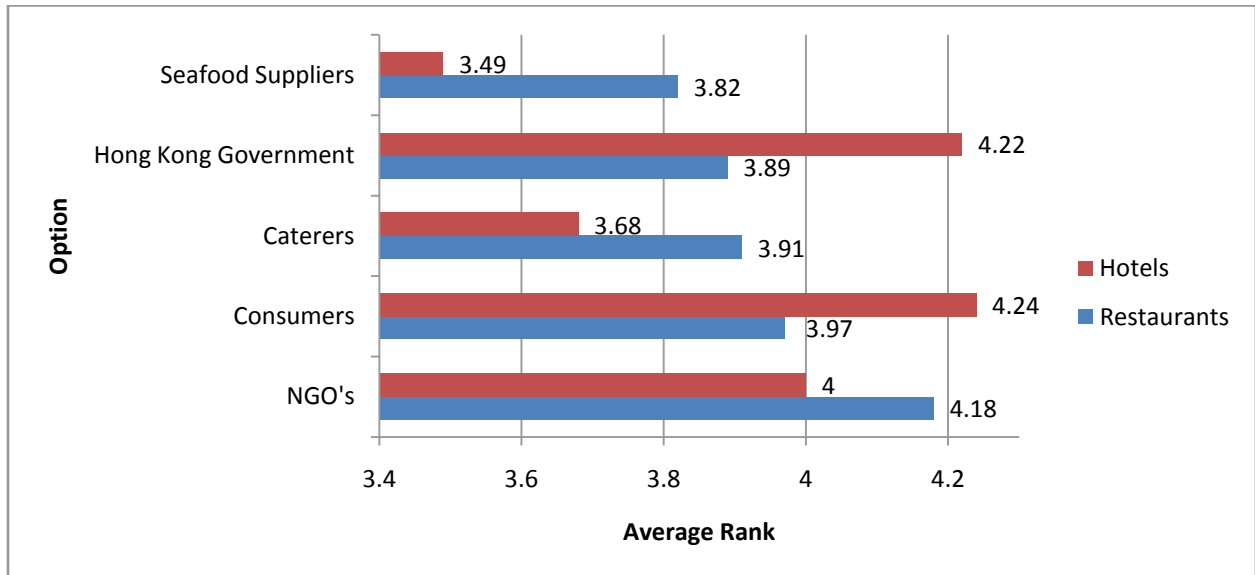


Figure 35: Rankings of the Main Stakeholders from Hotels and Restaurants (N=97)

Restaurants reported NGO’s as the more dominant stakeholders in influencing the sustainable seafood movement, followed by consumers. On the other hand, hotels acknowledged that consumers and the Hong Kong government should take almost equal roles in promoting sustainable seafood. Although NGO’s were not considered the most important for hotels, they still recorded a relatively high mean score of 4 (e.g. somewhat important). When looking at both hotels and restaurants combined, NGO’s were ranked second behind consumers, but with an assumed 5 percent variance there is no conclusive difference. Both restaurants and hotels ranked seafood suppliers last in terms of influencing their sustainable seafood choices.

The information gathered from question 13 asked respondents to rank the particular roles of NGO’s, where 1 means very unimportant and 5 means very important (see Figure 36). This

question intended to identify which resources would be most useful to businesses if NGO's were to offer them.



Figure 36: NGO's Roles among Hotels and Restaurants (N=97)

Both restaurants and hotels indicate that educating consumers and providing databases were the two most important roles that NGO's should assume. Among all responses, hotels and restaurants agree that giving access to professional personnel would be the least important resource. However, it should be noted that all responses still scored over a 3.4, so although the different roles are placed in ranking, all resources are still important to some extent.

Chapter 5: Discussion of Results & Recommendations

The survey was designed to accomplish the four main objectives of the project: identify factors that influence businesses' purchasing decisions and determine if sustainability is considered; understand concerns businesses have if they were to switch to a more sustainable seafood menu; discover the percentage of wedding banquets that request no shark fin menus, and assess the knowledge regarding sustainable seafood among Hong Kong's hotels and restaurants. Finally, the survey results revealed the roles that businesses believe NGO's should assume. This evaluation will help the project team develop recommendations for programs and campaigns that can be created by WWF-Hong Kong to help businesses provide more sustainable seafood menus. This chapter highlights the key conclusions that the team has derived from the results.

5.1 Purchasing Decisions & Sustainability

When looking at businesses purchasing decisions, the survey sought the criteria considered important when choosing seafood suppliers and selecting specific products. It also looked to determine the importance of sustainability among the ranked responses. For hotels and restaurants, the results demonstrate that the most important factors in choosing a supplier are its reputation and the quality of seafood provided. Sustainability was ranked as one of the lowest criteria for both hotels and restaurants. Even though it scored considerably lower than the reputation criterion, sustainability is still considered moderately important when selecting a seafood supplier. Furthermore, the team noticed that hotels and restaurants located in the regions that are considered to be tourism hot spots, such as Hong Kong Island and Tsim Sha Tsui, reported the highest sustainability importance ratings. Heavy tourist regions force hotels and restaurants to consider sustainability in order to appeal to a wider demographic of customers.

When looking at the factors associated with selecting specific products, hotels find the stability of the supply to be most important, while restaurants think that the popularity of the species exceeds all other criteria. Sustainability was ranked moderately important to all respondents, but was still located in the lower end of the spectrum. Overall, restaurants with a higher seating capacity (above 150) generally consider sustainability more important when selecting specific products. Areas that experience the most tourism also expressed higher regards for sustainability.

The next component of the survey concerning the businesses' purchasing decisions indicates how many hotels and restaurants truly considered environmental effects. Hotels and restaurants that were thought to prioritize environmental effects are the ones that not only think sustainability is important in supplier and specific product selections, but are also knowledgeable about sustainable seafood. After reviewing the data, it was discovered that a small portion of these businesses value environmental effects. Only 14 percent of the total sample population was found to adequately take the environment into account within their establishment's purchasing operations. The actual percentage is assumed to be even less, as a few hotels and restaurants that sold large amounts of unsustainable seafood products refused to take the survey.

5.2 Concerns with Sustainable Seafood Menus

The team analyzed the data from businesses that already offer sustainable seafood to learn the reasons for this decision, and to find out any obstacles they may have encountered in this transition. For businesses that do not offer a sustainable menu, it was necessary to investigate the concerns that prevent a transition. The businesses that offer sustainable seafood in their menus expressed that they had done so primarily due to corporate decisions. Although many respondents offer sustainable seafood to help the environment, it was still shown to be less

important than their corporate offices' requests. This implies that sustainable seafood should be stressed particularly to corporate offices which can impose sustainable menus among their respective hotels and restaurants. Hotels that do not offer sustainable seafood menus are most concerned with the stability of the sustainable seafood supply. Meanwhile, restaurants expressed the greatest concern with higher prices and fewer choices of sustainable products.

5.3 Catering

Thirty-five hotels and restaurants that provide catering were analyzed and presented in section 4.2. A majority of the responses reported that less than 20 percent of the wedding banquets that took place within their business during 2010 asked for a no shark fin banquet menu. Further analysis revealed that requests for no shark fin are more likely to be met within businesses that are not part of large specialty chains (i.e. wedding specialists). The team believes that this trend occurs because specialty chains have such a high volume of weddings that they see no reason to alter their menus based on requests. In addition, approximately 87 percent of hotels and 82 percent of restaurants provide some sort of shark-free menu, either as a regular menu or upon request. Although many businesses offer these shark-free menus, it remains up to the consumers to choose which menu they prefer.

5.4 Knowledge on Sustainable Seafood

The survey included both knowledge-based and opinion-based questions to assess the knowledge of hotels and restaurants regarding sustainable seafood. Based on the results, the majority of the respondents considered themselves to be unknowledgeable to some extent about sustainable seafood. However, hotels and restaurants in the New Territories and the Outlying Islands identified themselves as being more knowledgeable compared to the other regions. This may be due to the fact that the areas surveyed in those regions are more seafood-orientated than

the areas in Kowloon and Hong Kong Island, and they are therefore more concerned about the characteristics of their seafood products. Overall, hotels considered themselves to be slightly more knowledgeable in comparison to restaurants and this was expected because hotels generally exhibit a greater concern for their public image.

Supplementing the results of the opinion-based questions, only 22 percent of the participants demonstrated adequate knowledge about sustainable seafood species and the general conditions that make seafood sustainable. Among all the responses, the most common misconception regarding sustainable seafood was that it must be farm-raised. In fact, 62 percent of the respondents falsely supported this thought. As expected, when comparing the results from these knowledge-based questions to the self-rankings discussed above, there was a noticeable correlation between self-ranked scores of 1 to 4 and the average score that the respondents received; as the self-ranked score increased, so did the knowledge-based score. However, this was not the case with participants who considered themselves very knowledgeable (5 on the ranking scale), as they produced the second-lowest average test score. The businesses that thought of themselves as somewhat knowledgeable actually did much better. One argument in support of this finding is that some businesses that ranked themselves as “very knowledgeable” were simply doing it to protect their image.

5.5 Roles of NGO's

This study revealed that non-governmental organizations need to play a vital role in the implementation of the sustainable seafood movement. Results from the survey indicated that NGO's and consumers are the most influential stakeholders, with both of them being considered moderately important by the survey participants. Concerning the particular resources that NGO's should provide, respondents considered sustainable seafood product databases to be the most

useful in helping businesses create a more sustainable menu. The study also shows that participants would like to see NGO's put more effort into educating the consumers.

5.6 Feasibility for Providing a More Sustainable Seafood Menu

Taking into account all of the findings that this study has presented, the research team believes that it is, in-fact, feasible for seafood businesses in Hong Kong to provide a more sustainable seafood menu. Hotels and restaurants do consider sustainability to be moderately important in their purchasing decisions and this at least provides a basis for future improvement and growth. However, in order for improvement to occur, the team believes that numerous things must be done beforehand by the Hong Kong government and NGO's, such as WWF, to help businesses progress.

Primarily, hotels and restaurants must be adequately educated to make informed decisions regarding sustainable seafood. It is clear that the majority of businesses have misconceptions about the criteria that make seafood sustainable. Without a proper education on sustainability, NGO's cannot expect progress to naturally occur. This comprehension must also extend to consumers as they have a significant impact on a business's economic and social standing. If consumers are more aware of sustainable seafood, the popularity and demand for it may increase. Businesses may then begin to disregard doubts they have with sustainable products and allow themselves to comfortably make the transition to sustainable seafood which, in turn, may cause suppliers to provide an increased amount of sustainable products. With all this said, there are still many challenges that lie ahead, but with a continuous effort from organizations, businesses, and consumers, it is most certainly feasible for businesses to offer more sustainable seafood.

5.7 Recommendations for WWF

Based on the results of this study, the team recommends WWF take multiple steps to ensure that businesses will progress towards providing a more sustainable seafood menu. These recommendations include working with businesses as well as re-visiting consumer programs that the WWF has already developed.

Educational programs are ideal for hotels and restaurants so that they can become more aware of sustainable seafood and can take a proactive role in the sustainability movement. The survey notes that hotels and restaurants believe educating their businesses through online tutorials and in-person trainings are the most useful resources. If either of these methods were implemented and considered free-of-charge, then businesses may have more of an interest in the programs and, in turn, the sustainability of the products they sell.

WWF should also provide businesses with a sustainable seafood product database that they can reference when considering increases in their available fish menu options. This will allow businesses to advertise a wider array of products and species. Essentially, an increase in variability is a simple step that can be made to make sustainable seafood a popular trend, as it will be much more pleasing to consumers.

In addition, WWF should improve strategies for educating consumers on sustainable seafood. Previous studies have shown that the WWF seafood guide is still not well-known by the general public. One possible approach for increasing exposure to consumers is to create a more technological application that consumers can readily access, either through phone or computer. In addition to its current format of providing a list of sustainable and unsustainable fish species, this application should inform users about the need for sustainable seafood and the effects on the

environment as well as list possible locations where they can purchase sustainable seafood products. Consumers will then have an easier time locating sustainable retailers and products.

With the additions of these programs, the popularity of sustainable seafood should rise among businesses and consumers. More importantly, it may create a competitive environment among businesses to provide sustainable seafood if the demand for it increases. Once a hotel or restaurant notices that other businesses are being positively recognized for sustainable seafood and thus drawing in more consumers (which in turn will boost revenue), then it is extremely likely that they will want to incorporate more sustainable seafood as well. This will create a chain reaction where more businesses will end up providing sustainable seafood. If there are a dominant number of businesses in the sustainability market, then product prices will decrease because they will now be equally competing for potential customers. Although this is just speculation at this point, the theory behind such databases and online programs is certainly reasonable and well-worth considering. In an era where technology plays such a huge impact, the team highly recommends using the high profile capabilities of technology to its full advantage. WWF-Hong Kong should also work in collaboration with the Hong Kong government to create television commercials that would inform viewers about sustainable seafood issues and direct them to the WWF website. This added exposure would attract a wider demographic of people and increase the interest in WWF's programs.

Chapter 6: Conclusion

Hong Kong is famous for its rich and exquisite seafood dining, but with an increasing consumer demand, fishermen resort to improper fishing practices that deplete the aquatic ecosystems. In order to prevent the degradation of fish species, it is important for retailers such as hotels and restaurants to offer more sustainable seafood choices to consumers. The past IQP reports with WWF-Hong Kong studied consumer awareness on sustainable seafood, but further research was needed to examine the businesses that sell seafood products.

The research conducted for the background provided insight regarding the components that are involved with the purchasing and selling of seafood within businesses. During this portion of the research, it was also necessary that the team learn exactly what makes seafood sustainable or unsustainable. Since the study required approaching these businesses in-person, it was important that team became more knowledgeable on sustainable seafood in order to answer questions that businesses may ask.

In order to receive input from hotels and restaurants concerning their purchasing decisions and knowledge on sustainable seafood, our team conducted a survey where these businesses were visited in-person by the team members. However, during field canvassing, multiple adjustments needed to be made in order to accommodate the seafood businesses that were surveyed to increase the response rate. For instance, the team's methods first consisted of scheduling appointments with the hotel restaurant managers by phone, but after realizing that only a limited number of businesses were willing to arrange an appointment time, the team re-evaluated this approach and decided to make visits to all of the hotels instead. Additionally, after the first few days of visiting hotels, the research team created businesses cards for each member

in order to seem more professional to these businesses and increase the credibility of the project. Concurrently, we extended the time frame of conducting surveys with restaurants because most of them only spoke Cantonese, and therefore limited the number of group members that could collect questionnaires on any given day. Luckily, WWF arranged for interns to assist us as interpreters during the survey collecting process with restaurants. The team is grateful for their assistance and without their help, the response rate would have been much lower.

The results and analysis of the survey data demonstrated some correlations and helped develop recommendations for the WWF-Hong Kong seafood programs. Although some of the results seemed biased due to a lack of adequate sample sizes and information, this study revealed that it is feasible for Hong Kong businesses to provide a more sustainable seafood menu. Even though businesses do not value sustainability as much as other criteria in their purchasing decisions, they still believe it is moderately important to consider, which allows for future improvements to be made. However, a majority of respondents were unaware or had misconceptions about sustainable seafood. Therefore, continued efforts must be made to further educate these businesses in order for a more sustainable menu to be feasible. Survey data and in-person observations also reveal that both hotels and restaurants believe that non-governmental organizations and consumers play the most influential roles in the sustainable seafood movement and it is likely that businesses will be more willing to participate in the movement if they are under the pressure of corporate and government decisions. The ultimate goal of the sustainability movement will be most easily achieved if the Hong Kong government provides assistance in promoting sustainable seafood and directs viewers to non-governmental organizations, such as WWF, where sustainable seafood resources can be utilized within their web pages.

Upon completion of the project, the team realized that this experience of working abroad has further solidified their skills and knowledge in solving a real problem in a professional manner. Even though the results of the study is not representative of the entire population of restaurants and hotels in Hong Kong, they still provide a clear picture of the seafood businesses and their opinions about sustainability. We hope WWF-Hong Kong will be able to narrow their focus and implement the most efficient strategies to help these businesses provide a more sustainable seafood menu.

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Appendix A: World Wide Fund (WWF) for Nature

The World Wide Fund for Nature (WWF) (2010), also known as the World Wildlife Fund in the United States, is an independent, non-profit organization dedicated to the protection and conservation of the natural environment. With over one thousand projects in their name, spanning from whale shark research in the Philippines to forest restoration in the Southern Caucasus, WWF has made it their goal to “build a future where people live in harmony with nature” (*Home Page*). The WWF-Hong Kong (2010) office was established in 1981 and has focused mainly on improving and developing Hong Kong’s sustainable biodiversity, especially its marine life, and on reducing air pollution. WWF-Hong Kong “delivers solutions for a living planet through conservation, footprint, and education programs” (*Support WWF*) by collaborating with other organizations and businesses.

WWF-Hong Kong (2010) receives a great amount of support from individuals and business partners to pursue its conservation initiatives. Including corporate and personal donations, along with proceeds from fundraising events, the annual income of WWF- Hong Kong (2009, *Financials*) is approximately HK\$50.5 million. In 2009, they reported having over 80 corporate members and more than 33,000 individual financial supporters, along with 90 full-time staff members in the five WWF offices that are located within Hong Kong (see Figure 38). These offices, situated in Wan Chai, Central, Tai Po, Mai Po, and Hoi Ha Wan, provide WWF-Hong Kong with administrative and educational facilities for members, students, and staff. Over the five offices, there is a voluntary committee that consists of over fifty individuals who have expertise in numerous fields. These individuals provide professional advice on the strategies and programs that can be implemented in WWF-Hong Kong’s quest for conservation. Our project

group worked closely with the Marine team of the WWF-Hong Kong Conservation Department in Central, Hong Kong under the guidance of Conservation Officer Dr. Allen To.

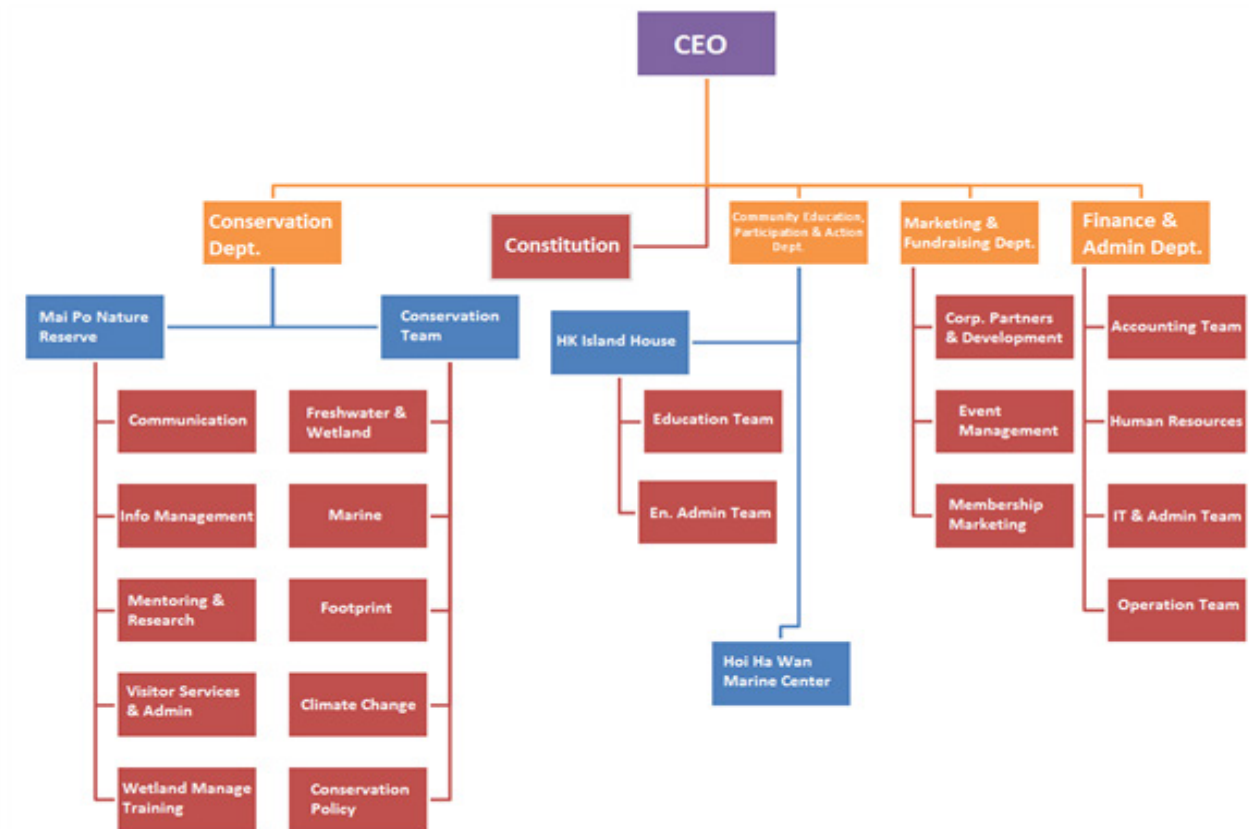


Figure 37: Structure of WWF-Hong Kong (Boulanger, DeMott, Nikitas, & Patchel, 2008)

In the last few years, WWF-Hong Kong (2010) has initiated many programs to help address the seafood sustainability problem that Hong Kong faces. In 2007, WWF-Hong Kong partnered with the Marine Stewardship Council (MSC) and MF Jebsen International Ltd. to promote their Seafood Choice Initiative. These sponsorships have allowed WWF-Hong Kong to continue its sustainable seafood program for ten years.

In addition to WWF-Hong Kong, other local organizations work towards the same goal, including Civic Exchange and Living Seas Hong Kong. The former organization, Civic

Exchange, recently conducted research on Hong Kong's mariculture system and provided a platform for the local policymakers to sustain marine life (Chan, 2005). The latter organization is a group of enthusiastic Hong Kong residents who work with seafood supply companies and legislative groups to develop programs and policies to protect Hong Kong's marine ecosystem (Living Seas Hong Kong, 2010).

Appendix B: What is an IQP?

The Interactive Qualifying Project (IQP) is an academic requirement of Worcester Polytechnic Institute (WPI) students that “challenges students to address a problem that lies at the intersection of science or technology with social issues and human needs” (Worcester Polytechnic Institute, 2010, *The Interactive Qualifying Project*). IQPs have multiple topic divisions which include, but are not limited to, energy and resources, technology and environment, and education in a technological society. WPI students work in teams, under the guidance of one or more faculty advisors, and have the opportunity to work either on-campus or off-campus at residential or abroad project centers. The IQP helps develop a student’s ability to “analyze and synthesize results from social, ethical, humanistic, and technical perspectives” (*IQP Learning Outcomes*).

Hong Kong is notable for providing the best and most expensive seafood dining throughout the world. With a large demand for seafood, most of the fish produced are harvested by unsustainable means or are considered a threatened species. Many organizations have developed programs to educate consumers about the sustainability of the seafood they regularly eat. The previous IQP reports sponsored by the WWF-Hong Kong involved surveying consumers and assessing their knowledge of sustainable seafood or utilization of resource guides like the Seafood Choice Initiative (Boulanger, DeMott, Nikitas, & Patchel, 2008; Burns, Dahlmann, Dickson, & Zeb, 2009). This year, the WWF-Hong Kong has proposed a similar study, but with businesses.

Our IQP, also sponsored by the WWF-Hong Kong, involves a research study of seafood retailers in Hong Kong. The project falls under energy and resources as it focuses on resource

conservation and the “economic and policy choices made or proposed to govern this industry” (WPI, 2010, *The IQP*). We surveyed Hong Kong’s hotels and restaurants to collect data regarding their purchasing decisions, their awareness on sustainable seafood, and the importance of sustainability within their respective businesses. The results from the survey assisted the team in providing recommendations that WWF-Hong Kong could use in their quest for increasing the amount of sustainable seafood in related markets.

Appendix C: Glossary

Aquatic Ecosystem: an ecosystem in a body of water, includes freshwater and salt

By-catch: the fish or portions of a fish that are discarded after capture; can be a non-targeted species, damaged, have spoiled, or just cannot fit due to the lack of space in the boat's storage unit

Dynamite Fishing: use of explosives to stun fish for harvesting

Endangered: a species in danger of extinction

Eco-Labels: food product labels that show that the product is being sold with environmental sustainability in mind (Jacquet & Pauly, 2010).

Fish: an aquatic animal; used in this report mainly as reference to freshwater fish; can broadly include sea-bound fish

Fishing with Poisons: use of poisons (e.g. cyanide) to harvest fish

Health Certificate: certificates issued by the Food and Environmental Hygiene Department in Hong Kong to foods containing ingredients from animal, poultry, or fish; includes description of a product (e.g. ingredients, weight, country of destination, country of origin of the ingredients in the product, names and addresses of the consignee and consignor, and name and address of the food establishment in Hong Kong) (Center for Food Safety-Hong Kong, 2010, *Import Control/Export Certification*)

Marine Ecosystem: refers to salt bodies of water in the world e.g. oceans, lagoons, salt marshes

Overfishing: fishing practice where fish are overexploited and are caught faster than they can reproduce

Processed aquatic products: aquatic foodstuff resulting from unprocessed products; these products may contain ingredients that are necessary for their manufacture or to give them specific characteristics. (Agriculture, Fisheries and Conservation Department, 2010, *Permit and License*)

Red-category species: refers to fish and other marine species that are “over-exploited, caught or farmed in an ecologically unfriendly way, or come from fisheries that are not well managed” (WWF, 2007, p.1)

Retailer: a merchant who sells goods directly to the consumer; in our report, this refers to the hotels, restaurants, and supermarkets that sell seafood

Seafood: any sea animal or plant that is consumed by humans; can broadly include freshwater fish, but mainly references species from the ocean

Sustainable: refers to “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (UN, 1987). In regards to fish and seafood, this includes proper fishing practices and harvesting methods that don’t compromise the natural marine ecosystem (*refer to “unsustainable”*)

Threatened: a species likely to be endangered in the near future

Unprocessed aquatic products: aquatic foodstuff that have not undergone any processing; includes products that have been divided, parted, severed, sliced, boned, minced, skinned, ground, cut, cleaned, trimmed, chilled, frozen, deep frozen or thawed (Agriculture, Fisheries and Conservation Department, 2010, *Permit and License*)

Unsustainable: in regards to fish and seafood, refers to fishing and harvesting practices that compromise the natural marine ecosystem e.g. overfishing, by-catch, dynamite fishing, fishing with poisons, and fishing for threatened or endangered species

Appendix D: Seafood Guide Species

(WWF-Hong Kong, 2010, Seafood Species)

Recommended		Think Twice		Avoid	
Pacific salmon	Alaska, US	<i>Atlantic salmon</i>	Norway	Bombay duck	S China Sea
Sardine	Portugal	Big eye	S China Sea	Hairtail	S China Sea
Leopard coral trout	Australia	Silver pomfret	S China Sea	Flathead	S China Sea
Sea urchin	S China Sea	Rockfish	S China Sea	Unicorn leatherjacket	S China Sea
<i>Scallop</i>	<i>China</i>	<i>Star snapper</i>	<i>Hong Kong</i>	High-finned grouper	SE Asia
Scallop	Australia	<i>Turbot</i>	<i>China</i>	Squaretail coral trout	SE Asia
Chilean sea bass	UK	<i>Tiger grouper</i>	<i>SE Asia</i>	Camouflage grouper	SE Asia
<i>Geoduck</i>	<i>N America</i>	Sardine	Thailand	Leopard coral trout	SE Asia
<i>Clam</i>	<i>China</i>	Fan-bellied leatherjacket	S China Sea	Orange roughy	Global
		White spotted rabbitfish	S China Sea	<i>Hong Kong grouper</i>	<i>China</i>
		<i>Areolate grouper</i>	<i>Hong Kong</i>	Red crab	S China Sea
Black Cod	N America	<i>Duskytail grouper</i>	<i>Hong Kong</i>	<i>Shrimp</i>	<i>S China Sea</i>
Squid	Global	<i>Giant grouper</i>	<i>Hong Kong</i>	Horseshoe crab	S China Sea
Abalone	Australia	<i>Three-banded sweetlip</i>	<i>Hong Kong</i>	Chilean sea bass	Global
<i>Abalone</i>	<i>China</i>	<i>Orange-spotted grouper</i>	<i>Thailand</i>	Swordfish	Global
Rock lobster	W Australia	<i>Mud crab</i>	<i>China</i>	Cuttlefish	S China Sea
Rock lobster	E Australia	Golden threadfin bream	S China Sea	Abalone	S Africa
<i>Oyster</i>	<i>China</i>	<i>Mangrove snapper</i>	<i>Hong Kong</i>	King mackerel	S China Sea
		Ling	New Zealand	Bluefin Tuna	Global
		Horsehead	S China Sea	Mantis shrimp	S China Sea
		<i>Pompano</i>	<i>Hong Kong</i>	Humphead wrasse	SE Asia
		<i>Yellow croaker</i>	<i>China</i>	Caviar	Global
		<i>Yellowfin seabream</i>	<i>Hong Kong</i>		
		Yellowfin tuna	Global		
		Squid	S China Sea		
		Sole	New Zealand		

Appendix E: Organizations in Hong Kong That Have Said No To Shark-Fin Soup

(WWF-Hong Kong, 2010, Seafood Species)

ADM Capital
ADM Capital Foundation
Allan International Holdings Ltd.
Allen & Overy LLP
Asiatic Marine Ltd
Atkins China Limited
B.P. (Building & Engineering) Co. Ltd.
BCI Asia Construction Information Ltd.
Bowen Capital Management
Branded Limited
Branscombe Marine Consultants Ltd.
BUDA E&C Limited
BUDA Pipe Rehabilitation & Engineering
Company Limited
BUDA Surveying Limited
Canon Hongkong Co. Ltd
Citi Hong Kong
Collyer Logistics South China Ltd
Construction Professionals' Development
Centre
Craft Projects International Co. Ltd
Diving Express Ltd
DTZ
Eight Custom Media Limited
Gide Loyrette Nouel
Hallmark Cards (HK) Limited
Hang Seng Bank Limited
Hong Kong and China Gas Company Limited
Hong Kong Cancer Fund
Hong Kong Institute of Utility Specialists
Hong Kong Utility Research Centre
HSBC
i.Dex Development Ltd
Internet Professional Association
Jenston Technology Corporation Ltd.
Jenston Works Co., Ltd.
Johnson Matthey Hong Kong Limited
Jones Lang LaSalle
Lloyd Northover
Magnum Offset Printing Co. Ltd
Mandarin Orange Clothing
Manulife (International) Limited
MF Jebsen International Ltd
Mitsubishi Electric Hong Kong Group Limited
Mitsubishi Elevator Hong Kong Company
Limited
MSOI Limited
Nearly Friday Ltd
Ocean Park Hong Kong
Oceanway Corporation Limited
PPP Company Ltd
ProJOB21.com Ltd
Pure Fitness
Pure Yoga
Robot Design Ltd
Ronald Lu & Partners (Hong Kong) Ltd
SB Consulting
Shaw & Sons Limited
Simpson Marine Limited Hong Kong
Sovereign Trust (Hong Kong) Limited
Sterling Enterprises Ltd
Swire Beverages Limited
Swire Coca- Cola HK
Swire Properties Limited
Swiss Re
The Hong Kong Institute of Education
The Samaritans
The Society for the Prevention of Cruelty to
Animals (Hong Kong)
The University of Hong Kong
ThreeSixty
United Services Recreation Club
Unleash Limited
US & Associates Consulting Co. Ltd.
UTI (International) Limited
Utility INFO (1Call) Limited
Utility INFO (HK) Limited
Utility INFO (Macau) Limited

Appendix F: Shark-Free Catering Organizations

(WWF-Hong Kong, 2010, Shark Initiative)

City Garden Hotel, Hong Kong
Choi Fook Royal Banquet, 5 restaurants
Hong Kong Gold Coast Hotel
Island Pacific Hotel, Hong Kong
Jumbo Kingdom
JW Marriott Hotel, Hong Kong
King of the King Chinese Restaurant
King Palace Chinese Restaurant, 9 restaurants
Noah's Ark Resort
Royal Palace Chinese Restaurant, 6 restaurants
Royal Wedding, 2 restaurants
Super Star Seafood Restaurant, 14 restaurants
The Banqueting House, 2 restaurants
The Cityview
The China House, 2 restaurants
The Excelsior, Hong Kong
The Hong Kong Jockey Club
The Langham, Hong Kong
The Royal Pacific Hotel, Hong Kong



Appendix G: Survey for Hotels and Restaurants

We are students from Worcester Polytechnic Institute and we are conducting a study on sustainable seafood. This survey will help us gather your insights and identify the influencing factors of purchasing decisions of seafood businesses in Hong Kong. Your response is anonymous and will remain confidential. Thank you for your time!

我們是來自美國伍斯特工業大學的學生,現在我們進行有關可持續海鮮的研究。您的見解將有助於我們確定影響餐飲服務商對海鮮的採購決策。您的回答是匿名的,並且將會嚴格保密。謝謝您的寶貴時間!

Trade Perspective 交易視覺

1. Where do you get your seafood stock? (Check all that apply)

貴公司如何購得海鮮?

Directly from overseas exporters

由外國出口商

Through wholesalers in Hong Kong

由本地供應商

From own company fishing vessel or fish farm

由本公司船隊或漁場

Other _____

其他

2. On average, how much seafood does your business buy each day (in kilograms)?

於 2010 年, 貴公司共購入多少海鮮 (以公斤計)?

<25 25-50 51-75 76-100 >100

Don't know 不知道

3. What percentage of your revenue comes from seafood?

在您餐廳收入中看, 有多少百分比是關於海鮮的菜單?

0-20% 21-40% 41-60% 61-80%

81-100% Don't know 不知道

4. In terms of weight, please specify the percentages of live, frozen, and fresh seafood being sold in your business in 2010.

以重量計算, 請注明新鮮, 冷藏, 冰鮮海鮮在你企業所占百分比。

Live 活新鮮	Frozen 冷藏	Fresh 冰鮮

5. Approximately how many seafood suppliers were in business with you in 2010?

於 2010 年, 貴公司曾由多少間海鮮供應商購入海鮮?

<5 5-10 11-15 16-20 >20

Don't know 不知道

6. How would you rank the criteria that you are most concerned with when selecting seafood suppliers?

(Not important 1 – 5 Very important)

在選擇海鮮供應商時, 以下各項因素的重要性為何?

(1-不重要, 5 為最重要)

	1	2	3	4	5
Price of seafood 海鮮價格	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stability of supply 海鮮供應是否穩定	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Existing business connection 現時有否海鮮生意往來	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of the seafood 海鮮的質素	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of certain seafood species 是否有特定的海鮮品種	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Variety of certain seafood product 整體上可提供的海鮮選擇	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental stability of the seafood 海鮮的環境穩定性	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reputation of supplier 供應商的聲譽	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. What are the top three seafood products your business is selling? (Check only three)

以下哪項為 貴公司最主要的購入的海鮮 (請選出三種)

- Grouper 斑
- Wrasse 蘇眉
- Shrimp 蝦
- Scallop 扇貝
- Abalone 鮑魚
- Squid 魷魚
- Crab 蟹
- Lobster 龍蝦
- Freshwater fish 淡水魚
- Other 其他 _____

Seafood Perspective 海鮮供應調查

8. How would you describe your knowledge of sustainable seafood?

您會如何描述您對可持續海鮮的認識?

○	○	○	○	○
1	2	3	4	5
Don't know 完全不認識			Completely knowledgeable 完全熟悉	

9. Which of the following seafood products do you think are sustainable?

您認為下列哪些海鮮是可持續海鮮產品?

- Wild caught Pacific Salmon
野生太平洋鮭魚 (三文魚)
- Wild caught Swordfish
野生劍魚
- Farmed Bluefin tuna
養殖藍鰭金槍魚 (吞拿魚)
- Wild caught Shark
野生鯊魚
- Farmed Scallop
養殖扇貝

10. In your opinion, what criteria apply to sustainable seafood? (Check all that apply)

在您看來, 什麼標準適合應用於可持續海鮮的定義? (可多選)

- Must be farmed
必須為養殖海鮮
- Must be wild caught
必須為野生物種
- Cannot be a threatened species
未被列為瀕危物種
- Free of antibiotics
不含抗生素
- Has organic certification
包括有機證書
- Has no preservatives
無添加防腐劑
- Caught by proper fishing methods
使用適當的捕獲方式
- Is more nutritious
富含營養

11. How would you rank the criteria that you are most concerned with when selecting specific seafood products?
(Not important 1 – 5 Very important)

在選擇海鮮品種時, 以下各項因素的重要性為何?
(1-不重要, 5-最重要)

	1	2	3	4	5
Popularity of the seafood species 市場對該海鮮品種的需求	○	○	○	○	○
Profit margin of the seafood Species 售賣該海鮮的利潤	○	○	○	○	○
Stability of the supply 海鮮供應的穩定性	○	○	○	○	○
Availability of the species from existing suppliers 現有的供應商有否供應該海鮮	○	○	○	○	○
Sustainability of the seafood species 是否環保海鮮	○	○	○	○	○

12. How would you rank the roles of the following stakeholders in influencing the sustainable seafood movement?

(Not important 1 – 5 Very important)

請您評估一下以下利益相關者對這項行動所起的重要性。
(1-不重要, 5-很重要)

	1	2	3	4	5
Hong Kong Government 香港政府	○	○	○	○	○
Seafood suppliers 海鮮產品供應商	○	○	○	○	○
Caterers (e.g. restaurants/ hotels/supermarkets) 餐飲服務行業 (如餐館, 酒店, 超市)	○	○	○	○	○
Consumers 消費者	○	○	○	○	○
Non-governmental Organizations (e.g. green groups) 非政府組織 (如綠色環保組織)	○	○	○	○	○

13. Rank the importance of roles that NGOs should play regarding sustainable seafood. (Check all that applies)

(Not important 1 – 5 Very important)

請評估環保組織在推行環保海鮮的所起的重要性。

(1-不重要, 5-重要)

	1	2	3	4	5
Provide online tutorial to Seafood business 提供網上教育平台	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educate consumers 教育消費者	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide sustainable seafood product database 提供環保海鮮產品資料庫	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offer in-person training courses 提供培訓教程	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Give access to professional staff personnel with sustainability expertise 提供專業人員作支援	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work with fishermen to improve fishing practices 與捕魚國家合作, 提升漁業資源及其管理	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educate seafood suppliers 教育海鮮供應商	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop marketing techniques for caterers to promote sustainable seafood 提供商業合作項目, 協助餐飲業界宣傳環保海鮮	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change governmental regulations 改善政府法例	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connect buyers with sustainable seafood suppliers 密切聯繫消費者與環保海鮮供應商	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Does your business have a sustainable seafood menu?

貴公司有否提供環保海鮮餐單?

Yes No 沒有 Not sure 不肯定

No, but interested 否, 但有興趣

If you answered NO or NOT SURE above, skip Question 15 若以上之答案為否或不肯定, 請跳至問題十五

15. Why do you offer sustainable seafood? (Check all that applies)

貴公司為何提供環保海鮮? (可多選)

- Consumer requests 消費者訴求
- Corporate decisions 公司決定
- Increase company's reputation 提升公司聲譽
- Increase revenue 增加收入
- Better the environment 為環境出一分力

16. Rank the concerns you encountered or perceived (if any) regarding the provision of sustainable seafood in your business? (Not important 1 – 5 Very important)

請評估下列因素對推行環保海鮮行動所起的作用。

(1-不重要, 5-重要)

	1	2	3	4	5
Low diversity of product 可持續海鮮品種少	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stability of sustainable seafood supply 環保海鮮供應的穩定性	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty in identifying sustainable seafood products 未能找到環保海鮮的供應商	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High price of sustainable seafood products 環保海鮮價格較高	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Freshness of sustainable seafood products 環保海鮮的新鮮程度	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generally low demand for sustainable seafood products 消費者對環保海鮮需求量低	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty in finding sustainable seafood suppliers 難以尋找可持續海鮮供應商	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expectedly little or no profit or even a loss 利潤不過甚至虧損	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainable seafood is not a trend yet 環保海鮮在市場上未成氣候	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff and the company is not aware of sustainable seafood 公司不認識環保海鮮	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Do you educate staff on sustainable seafood?

你有否向員工提供環保海鮮的教育,

Yes 是 No 否

If yes, please explain 如有, 請舉例說明。

Demographic Information 背景資料

18. What position are you at your business?

您在貴公司職位為何?

- Sales Personnel 推銷人員
 Procurement 收購人員
 Senior Management 高級管理人員
 Head Chef 主廚師
 Other: _____ 其他

19. What type of cuisine do you offer to your customers?

您為顧客提供什麼樣的菜式?

- Chinese Western Both Other

中國菜 西方菜式 兩種都有 其他

20. What is your business' seat capacity?

您的企業規模有多大?

- <25 25-75 76-150 151-250
 251-500 501-1000 >1000

21. Does your business do wedding catering?

您的餐館提供婚宴嗎?

- Yes 是 No 否

If you answered NO above, skip next section.

如上述答否, 請忽略以下部份。

Catering Questions 飲食問題

22. How many years have you been in the catering business?

你有多少年從事餐飲業的年資?

- <1 1-3 3-5 5-7 7-10 >10

23. What was the total number of tables catered for wedding banquets in your business in 2010?

於2010年, 貴公司共有多少桌的婚宴?

- <200 200-2,000 2,001-4,000
 4,001-6,000 6,001-8,000 8,001-10,000
 >10,000

24. What was the percentage of seafood (by weight) served in those wedding banquets?

婚宴中提供的海鮮, 佔貴公司總海鮮消耗量的百分比為何?

- 0-20% 21-40% 41-60% 61-80%
 81-100% Don't know 不知道

25. What percentage of wedding banquets request for no shark fins?

要求剔除魚翅的婚宴, 佔整體婚宴的百分比為何?

- 0-20% 21-40% 41-60% 61-80%
 81-100% Don't know 不知道

26. Does your establishment provide a no shark fin wedding banquet menu?

貴公司有否提供無魚翅的菜單?

- Yes, there is a regular shark-free menu
有, 本公司亦有無翅宴會菜單以供選擇
 Yes, but only on request
有, 但只會因個別客人要求而作出調整
 No
沒有提供無翅宴會菜單

27. Will your business provide a sustainable seafood menu in wedding banquets upon request?

貴公司有否提供環保海鮮婚宴的菜單?

- Yes 是 No 否

28. What was the percentage of wedding banquet that has leopard coral trout?

在婚宴中食用東星斑, 佔整體婚宴的百分比為何?

- 0-20% 21-40% 41-60% 61-80%
 81-100% Don't know 不知道

29. Which area do you import leopard coral trout from? (If possible, please specify the percentage)

貴公司由以下哪地方入口東星斑的百分比為何?

- Australia 澳洲
 Southeast Asia 東南亞
 Other countries 其他國家 _____

30. What percentage of leopard coral trout was sold in each of the following categories

婚宴, 一般宴會, 及非宴會中進食東星斑, 佔總體東星斑的使用量的百分比為何?

Wedding banquet 婚宴	Other banquet 一般婚宴	Non banquet 非婚宴

Thank you for taking the survey!

謝謝您接受這份問卷調查!

Appendix H: List of Hotels Completing Surveys by Region

Mongkok

紅茶館酒店(大角咀晏架街)	Bridal Tea House Hotel (Anchor Street)	27806113	36-38 Li Tak Street	Tai Kok Tsui	Kln
九龍麗悅酒店	Cosmo Kowloon Hotel	39872288	88 Tai Kok Tsui Rd	Tai Kok Tsui	Kln
帝豪九龍酒店	Dorsett Kowloon Hotel	23802223	48 Anchor Street	Tai Kok Tsui	Kln
香港豪畔酒店	Harbour Hotel	27713300	No.968 Canton Rd.	Mong Kok	Kln
香港旺角朗豪酒店	Langham Place Hotel, Mongkok, Hong Kong	35523388	555 Shanghai Street	Mongkok	Kln
旺角維景酒店	Metropark Hotel Mongkok	23976683	22 Lai Chi Kok Road	Mongkok	Kln
九龍麗東酒店	Newton Hotel Kowloon	27872338	66 Boundary Street	Mongkok	Kln
東方泛達酒店	Oriental Lander Hotel	23912911	206 Tong Mi Road	Mongkok	Kln
帝京酒店	Royal Plaza Hotel	29288822	193 Prince Edward Road West	Prince Edward	Kln
仕德福酒店	Stanford Hotel	27811881	118 Soy Street	Mongkok	Kln
柏顏露斯賓館	The Anne Black - YWCA	27139211	5 Man FuK Rd	Mongkok	Kln

Yaumatei

紅茶館酒店(油麻地鴉打街)	Bridal Tea House Hotel (Arthur Street)	27806113	No.6 Arthur Street	Yaumatei	Kln
明愛白英奇賓館	Caritas Bianchi Lodge	27102502	6/F, Caritas Bianchi Lodge, 4 Cliff Rd	Yaumatei	Kln
太極軒 279	CHI Residences 279	34436888	1/F, 391-393 Shanghai Street	Yaumatei	Kln
帝豪海景酒店	Dorsett Seaview Hotel	27820882	268 Shanghai Street	Yaumatei	Kln
九龍維景酒店	Metropark Hotel Kowloon	27611711	75 Waterloo Road	Yau Ma Tei	Kln
新高雅酒店	New Kings Hotel	27801281	473-473A Nathan Road	Yau Ma Tei	Kln
城景國際	The Cityview	27833888	23 Waterloo Rd	Yau Ma Tei	Kln

Jordon

香港逸東酒店	Eaton Hotel Hong Kong	27821818	380 Nathan Road No.92-94 Woo Sung Street	Jordan	Kln
豪境酒店	Goodrich Hotel	23322020		Jordan	Kln
朗逸酒店	Largos Hotel	27838233	30 Nanking Street	Jordan	Kln
新聖地牙哥酒店	New San Diego Hotel	27104888	1-5 Chi Wo Street	Jordan	Kln
香港九龍諾富特酒店	Novotel Nathan Road Kowloon Hong Kong	39658888	348 Nathan Road 169-189 Woosung Street	Jordan	Kln
聖地牙哥酒店	San Diego Hotel	27371111		Jordan	Kln
新樂酒店	Shamrock Hotel	27352271	223 Nathan Rd	Jordan	Kln

Central and Admiralty

中環麗栢酒店	Central Park Hotel	28508899	263 Hollywood Road Pacific Place 88	Central	HK
港麗酒店	Conrad Hong Kong	25213838	Queensway	Admiralty	HK
港島香格里拉大酒店	Island Shangri-La Hong Kong	28773838	Pacific Place, Supreme Court Road	Admiralty	HK
香港 JW 萬豪酒店	JW Marriott	28108366	Pacific Place 88 Queensway	Admiralty	HK
蘭桂坊酒店	Lan Kwai Fong Hotel	36500000	No. 3 Kau U Fong	Central	HK
香港文華東方酒店	Mandarin Oriental, Hong Kong	25220111	5 Connaught Road	Central	HK
置地文華東方酒店	The Landmark Mandarin Oriental, Hong Kong	28811288	5 Connaught Road	Central	HK
香港四季酒店	Four Seasons Hotel Hong Kong	31968888	8 Finance St, Central	Central	HK

Tsim Sha Tsui

港青酒店	YMCA of Hong Kong	22687000	41 Salisbury Rd	Tsim Sha Tsui	Kln
龍堡國際	B P International	23761111	8 Austin Rd	Tsim Sha Tsui	Kln
香港蝴蝶酒店	Butterfly On Prat	3962 8888	21 Prat Ave	Tsim Sha Tsui	Kln
尖沙咀皇悅酒店	Empire Hotel Kowloon · Tsim Sha TSui	36922222	62 Kimberley Road	Tsim Sha Tsui	Kln
港威酒店	Gateway Marco Polo	21130888	Harbour City	Tsim Sha Tsui	Kln
粵海酒店	Guangdong Hotel Hong Kong	34108888	No. 18 Prat Avenue	Tsim Sha Tsui	HK
香港金域假日酒店	Holiday Inn Golden Mile Hong Kong	23693111	50 Nathan Road	Tsim Sha Tsui	Kln
華國酒店	Hotel Benito	36530388	7-7B Cameron Road	Tsim Sha Tsui	Kln

香港日航酒店	Hotel Nikko Hongkong	27391111	72 Mody Road Hotel Panorama by Rhombus8A Hart Avenue, Tsimshatsui, Kowloon	Tsim Sha Tsui East	Kln
麗景酒店	Hotel Panorama	35500333		Tsim Sha Tsui	Kln
香港凱悅酒店 - 尖沙咀	Hyatt Regency Hong Kong, Tsim Sha Tsui	23111234	18 Hanoi Road	Tsim Sha Tsui	Kln
帝國酒店	Imperial Hotel	23662201	32-34 Nathan Road	Tsim Sha Tsui	Kln
海景嘉福酒店	Stanford Hong Kong	27215161	70 Mody Road	Tsim Sha Tsui East	Kln
香港洲際酒店	InterContinental Hong Kong	27211211	18 Salisbury Road	Tsim Sha Tsui	Kln
九龍香格里拉 大酒店	Kowloon Shangri-La	27212111	64 Mody Road	Tsim Sha Tsui East	Kln
彌敦酒店	Nathan Hotel	23885141	378 Nathan Road 61-65 Chatham Road South	Tsim Sha Tsui	Kln
百樂酒店	Park Hotel	27312100		Tsim Sha Tsui	Kln
太子酒店	Prince, Hong Kong	21131888	Harbour City	Tsim Sha Tsui	Kln
馬可孛羅香港 酒店	Marco Polo Hong Kong	21130088	Harbour City	Tsim Sha Tsui	Kln
恆豐酒店	Prudential Hotel	23118222	222 Nathan Road	Tsim Sha Tsui	Kln
九龍華美達酒 店	Ramada Hotel Kowloon	23111100	73-75 Chatham Road South	Tsim Sha Tsui	Kln
富豪九龍酒店	Regal Kowloon Hotel	27221818	71 Mody Road	Tsim Sha Tsui	Kln
香港喜來登酒 店	Sheraton Hong Kong Hotels & Tower	23691111	20 Nathan Rd	Tsim Sha Tsui	Kln
仕德福山景酒 店	Stanford Hillview Hotel	27227822	Observatory Road on Knutsford Terrace	Tsim Sha Tsui	Kln
港景滙	The HarbourView Place	37188000	Kowloon Station	Tsim Sha Tsui	Kln
君怡酒店	The Kimberley Hotel	27233888	28 Kimberley Road	Tsim Sha Tsui	Kln
九龍酒店	The Kowloon Hotel	29292888	19-21 Nathan Road	Tsim Sha Tsui	Kln
香港朗廷酒店	The Langham, Hong Kong	23751133	8 Peking Road	Tsim Sha Tsui	Kln
帝樂文娜公館	The Luxe Manor	37638888	39 Kimberley Road	Tsim Sha Tsui	Kln
棉登酒店	The Minden	27397777	7 Minden Avenue	Tsim Sha Tsui	Kln
美麗華酒店	The Mira Hong Kong	23681111	118 Nathan Road	Tsim Sha Tsui Tsim Sha Tsui East	Kln
帝苑酒店	The Royal Garden	27215215	69 Mody Road		Kln
皇家太平洋酒 店	The Royal Pacific Hotel & Towers	27361188	China Hong Kong City, Canton Road, 1 Austin Road West, Kowloon Station	Tsim Sha Tsui	Kln
香港 W 酒店	W Hong Kong	37172222		Tsim Sha Tsui	Kln
香港半島酒店	The Peninsula Hong Kong	29202888	Salisbury Road	Tsim Sha Tsui	Kln

Hung Hom

紅茶館酒店(紅磡 燕湖街)	North Wing of Bridal Tea House Hotel (WuHu St)	27806113	No. 84-86 Wuhu Street, Hung Hom, Kowloon	Hung Hom	Kln
紅茶館酒店(差館里)	South Wing of Bridal Tea House Hotel (Station Lane)	27806113	No. 51 Station Lane	Hung Hom	Kln
紅茶館酒店(紅磡 溫思勞街)	Bridal Tea House Hotel (Winslow Street)	27806113	57-61 Winslow St	Hung Hom	Kln
九龍海逸君綽酒店	Harbour Grand Kowloon	26213188	20 Tak Fung St. Whampoa Garden	Hung Hom	Kln
都會海逸酒店	Harbour Plaza Metropolis	31606888	7 Metropolis Drive	Hung Hom	Kln

Wan Chai

香港蝴蝶酒店	Butterfly On Morrison	39628333	39 Morrison Hill Road 375-377 Queen's Road East	Wan Chai	HK
香港麗悅酒店	Cosmo Hotel Hong Kong	35528388	387-397 Queen's Road East	Wan Chai	HK
香港麗都酒店	Cosmopolitan Hotel Hong Kong	35521111	East	Wan Chai	HK
灣仔皇悅酒店	Empire Hotel Hong Kong · Wan Chai	36922111	33 Hennessy Road	Wan Chai	HK
香港君悅酒店 - 香港	Grand Hyatt Hong Kong	25881234	1 Harbour Rd	Wan Chai	HK
雅逸酒店	Hotel Bonaparte by Rhombus	35186688	11 Morrison Hill Road	Wan Chai	HK
六國酒店	Luk Kwok Hotel	28662166	72 Gloucester Road	Wan Chai	HK
香港灣仔維景酒店	Metropark Hotel Wanchai Hong Kong	28611166	41-49, Henessy Road	Wan Chai	HK
世紀香港酒店	Novotel Century Hong Kong Renaissance Harbour View Hotel	25988888	238 Jaffe Road	Wanchai	HK
萬麗海景酒店	Hotel	28028888	1 Harbour Rd	Wanchai	HK
南洋酒店	South Pacific Hotel	25723838	23 Morrison Hill Road	Wanchai	HK
香港銅鑼灣利景酒店	The Charterhouse Causeway Bay Hotel	28335566	209 – 219 Wanchai Road	Wanchai	HK
芬名酒店	The Fleming	36072288	41 Fleming Rd	Wanchai	HK
灣景國際酒店	The Harbourview	28020111	4 Harbour Road	Wanchai	HK
香港華美粵海酒店	The Wharney Guang Dong Hotel Hong Kong	2861 1000	57- 73 Lockhart Road	Wanchai	HK

Causeway Bay

銅鑼灣皇悅酒店	Empire Hotel Hong Kong · Causeway Bay	36922333	8 Wing Hing Street	Causeway Bay	HK
銅鑼灣快捷假日酒店	Express by Holiday Inn Causeway Bay Hotel	35586688	33 Sharp Street East	Causeway Bay	HK
N/A	JIA Boutique Hotel	31969000	1-5 Irving St.	Causeway Bay	HK
香港銅鑼灣海景酒店	L'hotel Causeway Bay Harbour View Hong Kong	35532898	18-24 King's Road	Causeway Bay	HK
香港逸蘭精品酒店	Lanson Place Hotel	34776888	133 Leighton Road	Causeway Bay	HK
香港銅鑼灣維景酒店	Metropark Hotel Causeway Bay Hong Kong	26001000	148 Tung Lo Wan Road	Causeway Bay	HK
富豪香港酒店	Regal Hongkong Hotel	28906633	88 Yee Wo Street	Causeway Bay	HK
珀麗酒店	Rosedale on the Park	21278888	8 Shelter Street	Causeway Bay	HK
香港怡東酒店	The Excelsior, Hong Kong	28948888	281 Gloucester Road	Causeway Bay	HK
柏寧酒店	The Park Lane Hong Kong	22938888	310 Gloucester Road	Causeway Bay	HK

Appendix I: Calling Script

The following script was used as a guideline to arrange appointments with selected restaurant managers in order to administer the survey.

Front desk:

Hi, my name is (group member's name) from Worcester Polytechnic Institute out of Worcester, MA, United States. I was wondering if I could talk to your restaurant manager.

Restaurant Manager:

Hi, my name is (group member's name) from Worcester Polytechnic Institute out of Worcester, MA, United States. Myself, along with 3 others, are doing a research project here in Hong Kong for the next 8 weeks that focuses seafood products being offered by Hong Kong hotels and restaurants. Would it be possible for me to come by (preferred date of appointment) so that you could take a brief 10 minute survey regarding your seafood product selections? Your responses would be very valuable for our research project and would be greatly appreciated if you could take the time to do this for us.

Appendix J: List of Restaurants Completing Surveys by Region

1	Victoria City Seafood Restaurant	5th fl. Citic Tower, 1 Tim Mei Ave	Admiralty
2	Tai Woo Seafood Restaurant	27 Percival St	Causeway Bay
3	Harvest Festival Shanghai Zhejiang Restaurant	10/F The Oak Hill Plaza	Causeway Bay
4	Ling Kee Hot Pot Restaurant	8/F The Oak Hill Plaza	Causeway Bay
5	Sun Hat Seafood Restaurant	467-473 Hennessey Rd	Causeway Bay
6	Satay King	9/F Causeway Bay Plaza I	Causeway Bay
7	Lee Woo Yuen Korean & Japanese	2/F Lockhart Rd	Causeway Bay
8	Little Sheep Hot Pot Restaurant	2/F The Oak Hill Plaza	Causeway Bay
9	Tack Hsin Restaurant	6/F The Oak Hill Plaza	Causeway Bay
10	Joy Cuisine	9/F The Oak Hill Plaza	Causeway Bay
11	Wedding Banquet Specialist/Palace Restaurant	4/F Causeway Bay Plaza I	Causeway Bay
12	Hanareum Korean Restaurant	6B/F Causeway Bay Plaza I	Causeway Bay
13	Uohachi Suisan	6A/F Causeway Bay Plaza I	Causeway Bay
14	Super Star Seafood Restaurant	19-27 Wyndham Street	Central
15	New Baccarat Seafood Restaurant	G/F, 9A Pak She Praya Rd	Cheung Chau
16	Star of Canton Restaurant	11C Pak She Praya Road	Cheung Chau
17	Delicious Seafood Restaurant	San Hing Praya Rd	Cheung Chau
18	Sea King Restaurant	Shop 16, Cooked food stall	Cheung Chau
19	Hing Lok Restaurant	Shop D, 11 Pok She Praya Rd	Cheung Chau
20	Bay-View Chinese Restaurant	The Warwick Hotel, East Bay	Cheung Chau
21	Golden Lake Restaurant	G/F, 9C Pak She Praya Rd	Cheung Chau
22	Kiang Kee Dai Pai Dong	Cooked Food Stall, Hoi Pong Rd	Cheung Chau
23	Sea King	Shop 16, Cooked Food Stall	Cheung Chau
24	So Bor Kee	G/F, 11C Pak She Praya Rd	Cheung Chau
25	真味海鮮菜館	G/F., 9C Pak She Praya Rd	Cheung Chau
26	Hong Kee Restaurant	11B Pok She Praya Rd	Cheung Chau
27	Continental Restaurant	8-10 Tai Hing Tai Rd	Cheung Chau
28	Hung Lok Seafood Restaurant	13B Pak She Praya Rd	Cheung Chau
29	San Choi Yuen Restaurant	1-2 Kin Sun Lane	Cheung Chau
30	阿信小廚	Tai Sun Street G/F 47	Cheung Chau

31	Hoi Yat Heen	2/F, Harbour Grand Kowloon, 20 Tak Fung St	Hung Hom
32	New Star Seafood Restaurant	G/F, Whampoa Estate, 61-69 Man Tai St	Hung Hom
33	文記海鮮飯店	2/F Hung Hom Complex, 11Ma Tau Wai Rd	Hung Hom
34	Crystal Harbour Restaurant	3/F, Harbourview Horizon, 12 Hung Lok Rd	Hung Hom
35	Pier 88	2/F, Hunghom Commerical Centre, 37-39 Ma Tau Wai Rd	Hung Hom
36	Super Star Seafood Restaurant	1/F, Jonh's Hung Hom Plaza, 83 Mo Wu St	Hung Hom
37	BaShe Peasts the Entire Fish	G/F, 89 Barker St	Hung Hom
38	永發海鮮飯店	2/F, 16A, Hung Hom Complex, 11Ma Tau Wai Rd	Hung Hom
39	食得好私房菜	23 Bailey St	Hung Hom
40	翠苑海鮮酒家	G/F & 2/F, Lung Kei Bldg, 23-35 Ma Tau Wai Rd	Hung Hom
41	文記海鮮大排檔	G/F, 19 Walker Rd	Hung Hom
42	好之味館	Shop K1, Whampoa Estate, 29 Tak Man Bldg	Hung Hom
43	Choi Fook Royal Banquet	Shop 858, The Metropolis Arcade, 6 Metropolis Ave	Hung Hom
44	Ryo-Zan Paku Japanese Restaurant	Shop 767-771, The Metropolis Arcade	Hung Hom
45	Palace Restaurant	Shop 771-781, The Metropolis Arcade	Hung Hom
46	Harbour View Cuisine	Shop 859, The Metropolis Arcade	Hung Hom
47	Kam Shan Seafood Restaurant	66 Woosung St	Jordan
48	Kam Shan Seafood Restaurant	7/F, Chuang's London Plaza, 129 Nathan Rd	Jordan
49	Kwan Kee Seafood Restaurant	1A Parkes Rd	Jordan
50	Kum Tao Heen	8/F, Hong Kong Scout Centre, 8 Austin Rd	Jordan
51	Shun De Kung Seafood Restaurant	G/F, 24-26 Wai Ching St	Jordan
52	Lok Sau Restaurant	G/F, No. 1-5 Tak Shing St	Jordan
53	順德公漁村河鮮酒家	8 Wylie Road	Jordan
54	生蝦皇食坊	15 Saigon St	Jordan
55	Tack Hsin Restaurant	3 Tak Hing St	Jordan
56	海洋超級漁港 (深海龍躉專門店)	3/F, Sino Cheer Plaza, 23-29 Jordan Rd	Jordan
57	Welcome Marine Products Co. Ltd	G/F, 10 Man Wai St	Jordan
58	華興行	G/F, 148B Woosung St	Jordan
59	Tong Tai Restaurant	G/F, 184A Temple St	Jordan
60	Star Seafood Restaurant	Nathan Rd	Jordan
61	Federal Palace Restaurant	Nathan Rd	Jordan
62	Lue Fat Restaurant	Woosung St	Jordan
63	Ocean Super Seafood Restaurant	3/F Parkes Rd	Jordan
64	Budaoweng Hot Pot Cuisine	2/F Parkes Rd	Jordan

65	(blank)	7/F Parkes Rd	Jordan
66	Foo Lum's Fisherman's Wharf	2/F Parkes Rd	Jordan
67	Aberdeen Seafood	G/F, 139 Tung Choi Street	Jordan
68	Golden Mountain Restaurant	66-68 Woosung St	Jordan
69	Tuk Him Hot Pot Restaurant	60 Woosung St	Jordan
70	Lei Yue Mun Seafood	26-30 Hoi Pong Rd West	Lei Yue Mun
71	Pier 88	Shop B, 3/F, Grand Tower, 639 Nathan Rd	Mong Kok
72	福來居(牛記)海鮮飯店	4-6 Kei Lung St	Mong Kok
73	New Star Seafood Restaurant	G/F-2/F Mainway Court, 15-33 Kwong Wa St	Mong Kok
74	新水記火鍋	31-33 Kam Lam St	Mong Kok
75	China Land Restaurant	Shop 709-712, 7/F, Grand Century Place, 193 Prince Edward Rd West	Mong Kok
76	Winter Steam Pot Restaurant	G/F, 396-398 Portland St	Mong Kok
77	Victoria Harbour Roasted Goose Seafood Restaurant	1/F, 39-55 Sai Yee Street, Golden Era Plaza,	Mong Kok
78	Mr. Beef Seafood Restaurant	G-3/F, 32C Shantung St	Mong Kok
79	Sun Yummy Seafood & HotPot Cuisine	G/F, Tat Ming Building, 20 Tung Choi St	Mong Kok
80	Cheerful Seafood Restaurant	B/F Summit Insurance Bldg, 789 Nathan Rd	Mong Kok
81	金多寶海鮮酒家	G/F 1100-1102 Canton Street	Mong Kok
82	King of the King	1-2/F, Paradise Square, 3 Kwong Wa St	Mong Kok
83	The Mandarin Restaurant	240 Portland St	Mong Kok
84	Ho Choi Seafood Restaurant	3/F, Ka Wing Building, 532-538 Nathan Rd	Mong Kok
85	Palace Chinese Restaurant	Shop 716-723, 7/F, Grand Century Place, 193 Prince Edward Rd West	Mong Kok
86	花園金閣 (Garden...)	8/F, Chong Hing Square, 593-601 Nathan Rd	Mong Kok
87	Shark Fin Dai Pai Dong	Chong Hing Square, 601 Nathan Rd	Mong Kok
88	Foo Lum Restaurant	7/F, Chong Hing Square, 601 Nathan Rd	Mong Kok
89	Chung Nan Hoi Harbor	G/F, 4A Mongkok Rd	Mong Kok
90	Tack Hsin Restaurant	4-5/F, Chong Hing Square, 601 Nathan Rd	Mong Kok
91	Hane Sushi	18 Fa Yuen Street	Mong Kok
92	Fuk Yuen Hot Pot Seafood Restaurant	2/F, Yau Shing Commercial Centre, 51 Sai Yeung Choi St	Mong Kok
93	Kim Mi Korea Restaurant	5/F, Yau Shing Commercial Centre, 51 Sai Yeung Choi St	Mong Kok
94	Kichi Jyu Japanese Restaurant	5/F, 655 Nathan Road	Mong Kok
95	Tetsujin Chinese Cuisine	6/F, One Grand Tower, 639 Nathan Road	Mong Kok
96	Wada Japanese Restaurant	5/F, Chong Hing Square, 593-601 Nathan Road	Mong Kok
97	Nam Hoi Harbour	Dynasty Plaza, 2 Mongkok Rd	Mong Kok
98	Majesty Chinese Restaurant	Dynasty Plaza, 2 Mongkok Rd	Mong Kok

99	Genki Sushi	742 Nathan Rd	Mong Kok
100	Shunde Special Cuisine	Fee Tat Commercial Centre	Mong Kok
101	Wedding Banquet Specialist	Dynasty Plaza, 2 Mongkok Rd	Mong Kok
102	Majesty Chinese Restaurant (by Langham Place)	3/F Wu Sang House, 655 Nathan Road	Mong Kok
103	Satay King	1/F, 24 Tung Choi Street	Mong Kok
104	Tanyoto	5/F, Grand Tower, 639 Nathan Road	Mong Kok
105	Beppu Ekimae	Shop A, 6/F, Grand Tower, 639 Nathan Road	Mong Kok
106	Noucman Vietnamese	Shop C, 6/F, Grand Tower, 639 Nathan Road	Mong Kok
107	Sushi & Teppen Buffet	Fee Tat Commercial Centre	Mong Kok
108	Hokkaido Katsu	Shop 7, G/F, Chong Hing Square, 601 Nathan Road	Mong Kok
109	Han Yang Won Korean & Thai Restaurant	1/F, Chong Hing Square, 601 Nathan Road	Mong Kok
110	Pleasant Palace	1-3/F, Hip Shing Hong Factory, 794-802 Nathan Road	Mong Kok
111	New Tung Kong Restaurant	15/F-16/F, King Wah Centre, 620-628 Nathan Road	Mong Kok
112	Super Star Seafood Restaurant	Shop 801, 8/F, Grand Century Place, 193 Prince Edward Road West	Mong Kok
113	Jade Garden	Shop 803, Grand Century Place, 193 Prince Edward Road	Mong Kok
114	Jinya	Shop 802, 8/F, Grand Century Place, 193 Prince Edward Road West	Mong Kok
115	Fai Kee Seafood Restaurant	7A Po Toi O Ferry	Sai Kung
116	Fu Ah Seafood Restaurant	G/F, 27 Sai Kung Hoi Pong Street	Sai Kung
117	Kam Kee Seafood Restaurant	G/F., 106 Man Nin Street, Sai Kung	Sai Kung
118	Kam Ma Kui Snack Shop	38 See Cheung Street	Sai Kung
119	Seafood Island Seafood Restaurant	Shop B, 7 Po Toi O	Sai Kung
120	好景海鮮飯店	G/F, 120 Man Nin Street	Sai Kung
121	糧船灣有利海鮮漁村	Lot 359, Sha Kiu Tsuen, Leung Shuen Wan	Sai Kung
122	金九記海鮮火鍋酒家	G/F, No.145 Pak Sha Wan	Sai Kung
123	何二魚排	Yung Shue O North Raft	Sai Kung
124	塔門新漢記海鮮酒家	4 Tap Mun Hoi Pong Main Street	Sai Kung
125	Chuen Kee Seafood Restaurant	87-89 Man Nin Street	Sai Kung
126	Loaf On	49 Market Street	Sai Kung
127	Man Kee Seafood Restaurant	G/F, 65-67 Man Nin St.	Sai Kung
128	Wing Wo Seafood Restaurant	G/F, 14A Po Tung Rd	Sai Kung
129	All The Best Seafood Restaurant	G/F, 41 See Cheung Street	Sai Kung
130	Chuen Kee Seafood Restaurant	G/F, 53 Hoi Pong Street	Sai Kung
131	Hung Kee Seafood Restaurant	Shop 6 & 9-10, G/F, Siu Yat Building, Sai Kung Hoi Pong Square	Sai Kung

132	Kam Fai Seafood Restaurant	35-39, Hoi Pong Street	Sai Kung
133	Sai Hing Seafood Restaurant	Shop 1-4, G/F, Siu Yat Building, Sai Kung Hui Pong Square	Sai Kung
134	Sing Kee Seafood Restaurant	G/F, 33-39 Sai Kung Tai Street	Sai Kung
135	Tung Kee Seafood & Restaurant	Shop 11-15, G/F, Siu Yat Hse, Hoi Pong Square	Sai Kung
136	Tung Kee Min Nan Seafood & Restaurant	G/F, 96-102 Man Nin Street	Sai Kung
137	AJ's Sri Lankan Cuisine	G/F, 14 Sai Kung Hoi Pong Street	Sai Kung
138	Freezer	G/F, 13 Sha Tsui Path	Sai Kung
139	力奇四季火鍋	G/F, 53 Kok Cheung Street	Tai Kok Tsui
140	金燕火鍋小炒	52 Kok Cheung St	Tai Kok Tsui
141	Tao Heung	Shop 127-160, 1/F, New Kowloon Plaza, 38 Tai Kok Tsui Rd	Tai Kok Tsui
142	Man Shing Kee	G/F, 41 Kok Cheung St	Tai Kok Tsui
143	East Ocean Restaurant	Shop 101, 1/F, Olympian City 1, 11 Hoi Fai Rd	Tai Kok Tsui
144	名苑	Shop 168-176, 1/F, New Kowloon Plaza, 38 Tai Kok Tsui Rd	Tai Kok Tsui
145	楓樹圍	2/F, Tai Kok Tsui Municipal Services Bldg, 63 Fuk Tsun St	Tai Kok Tsui
146	肥強海鮮火鍋酒家	72-74 Ivy St	Tai Kok Tsui
147	Ho Choi Seafood Restaurant	73 Ivy St	Tai Kok Tsui
148	Golden Swallow Hot Pot & Seafood Restaurant	G/F, 100-106 Ivy St	Tai Kok Tsui
149	Perfect Roasted Goose Seafood Restaurant	Shop 126, 1/F, Metro Harbour Plaza	Tai Kok Tsui
150	New Star Seafood Restaurant	1/F., Tsim Sha Tsui Mansion	Tsim Sha Tsui
151	Fuk Lam Moon	San Pei Square	Tsim Sha Tsui
152	Neptune	San Pei Square	Tsim Sha Tsui
153	Hong Lok Restaurant	14 Science Muscum Rd	Tsim Sha Tsui
154	Mask of "Si Chien & Beijing"	No 33 Tsim Sha Tsui East Station	Tsim Sha Tsui
155	高流灣海鮮火鍋酒家	1/F, 21-23 Hillwood Road	Tsim Sha Tsui
156	East Ocean Seafood Restaurant	Shop 504, 5/F, Miramar Shopping Centre, 132 Nathan Road	Tsim Sha Tsui
157	Tao Heung	3/F, Carnarvon Plaza, 20-20C Carnavon Road	Tsim Sha Tsui
158	Loong Yuen Cantonese Restaurant	Basement 1, Holiday Inn Golden Mile, 50 Nathan Road	Tsim Sha Tsui
159	Jiang Shun Fresh Water Seafood	Shop 2502, 25/F, iSquare, 63 Nathan Road	Tsim Sha Tsui
160	Yu Joy Chinese Restaurant	Shop 1028C, 1/F, Elements, 1 Austin Road West	Tsim Sha Tsui
161	Super Star Seafood Restaurant	1/F., Tsimshatsui Mansion, 83-97 Nathan Road	Tsim Sha Tsui
162	Yan Toh Heen	G/F, InterContinental Hong Kong, 18 Salisbury Road	Tsim Sha Tsui
163	Hot Pot Restaurant	1/F, Diamond Court, 10-12 Hillwood Road	Tsim Sha Tsui

164	Ho Choi Seafood Restaurant	UG1, Empire Centre, 68 Mody Road	Tsim Sha Tsui
165	The Banqueting House	Shop 148, 1/F Empire Centre, 68 Mody Road	Tsim Sha Tsui
166	Super Star Seafood Restaurant	Shop 4101, 4/F, Gateway Arcade, Harbour City, 17 Canton Road	Tsim Sha Tsui
167	Jade Terrace Restaurant	2/F, Peninsula Centre, 67 Mody Road	Tsim Sha Tsui
168	Golden Court Fook Yuen Seafood Restaurant	G/F, Houston Centre, 63 Mody Road	Tsim Sha Tsui
169	Chuk Yuen Seafood Chinese Restaurant	G/F, HK Pacific Centre(South Wing), 28 Hankow Road	Tsim Sha Tsui
170	East Ocean Seafood Restaurant	B1, Basement, East Ocean Centre	Tsim Sha Tsui
171	Hu Tong	28/F, 1 Peking Road	Tsim Sha Tsui
172	Hon Po Group of Restaurants	8 Austin Road	Tsim Sha Tsui
173	京寶海鮮酒家	20 Carnarvon Rd	Tsim Sha Tsui
174	Private Kitchen	Room B4, 13/F & Room B1, 15/F, Tsim Sha Tsui Mansion, 83-97 Nathan Road	Tsim Sha Tsui
175	Tai Woo Restaurant	14 Hillwood Rd	Tsim Sha Tsui
176	Chuk Yuen Seafood Restaurant	35 Kimberley Rd	Tsim Sha Tsui
177	Foo Lum Fisherman's Wharf Restaurant	Level 2, Auto Plaza, 65 Mody Rd	Tsim Sha Tsui
178	星級私房菜	5/F, 10 Humphrey's Ave	Tsim Sha Tsui
179	Royal Place Hot Pot	B/F, Empress Plaza, 17-19 Chatham Rd South	Tsim Sha Tsui
180	Hang Fook Seafood Restaurant (Banquet Hall)	1/F, Energy Plaza, 92 Granville Rd	Tsim Sha Tsui
181	Lung Mun Seafood Dining	Shop C, G/F, Chevalier Bldg, 45-51 Chatham Road South	Tsim Sha Tsui
182	Gateway Restaurant	1/F, Harbour Crystal Centre, 100 Granville Road	Tsim Sha Tsui
183	Palace Wedding Banquet	Shop 202, 2/F, Victoria Mall, 188 Canton Road	Tsim Sha Tsui
184	海馬小炒大排檔	Temporary Market Cum Cooked Food Hawker Bazaar, 30 Haiphong Road	Tsim Sha Tsui
185	Fu Yiu Seafood Restaurant	18B Austin Ave	Tsim Sha Tsui
186	Super Star Seafood Restaurant	3/F, Grand Centre, 8 Humphrey's Ave	Tsim Sha Tsui
187	Winter Steam Pot Restaurant	79-81 Kimberley Rd	Tsim Sha Tsui
188	Hee Kee Crab General	Shop 602, iSquare, 63 Nathan Rd	Tsim Sha Tsui
189	翡翠金閣海鮮酒家	26-36 Prat Ave	Tsim Sha Tsui
190	Super Star Seafood Restaurant	Tsim Sha Tsui Mansion, 83-97 Nathan Rd	Tsim Sha Tsui
191	Sushi One	23 Ashley Rd	Tsim Sha Tsui
192	Very Good Seafood Restaurant	90-94 Nathan Rd	Tsim Sha Tsui
193	Chuk Yeun Seafood Restaurant	G/F, HK Pacific Centre(South Wing), 28 Hankow Road	Tsim Sha Tsui
194	Itacho Sushi	G/F Shun Fung Bldg, 9-11 Ashley Rd	Tsim Sha Tsui
195	Hing Fat	8 Ashley Rd	Tsim Sha Tsui
196	Hachiouji	22 Ashley Rd	Tsim Sha Tsui

197	Wu Kong Shanghai Restaurant	G/F, 27-33 Nathan Rd	Tsim Sha Tsui
198	Hsin Kuang Hot Pot Restaurant	3-4/F, BCC Building, 25-31 Carnarvon Road	Tsim Sha Tsui
199	Sorabol Restaurant	4/F, Miramar Shopping Centre 132-134T Nathan Rd	Tsim Sha Tsui
200	Thai Restaurant	G/F, 75 Mody Road, South Sea Centre	Tsim Sha Tsui
201	Hau Mon	63 Nathan Rd	Tsim Sha Tsui
202	[Check] Cuisine	Concession KOW 57 In-Town Check-In Hall MTR Kowloon Station 1 Austin Road	Tsim Sha Tsui
203	Wing Lok Restaurant	G/F, 24B Tai Ho Road	Tsuen Wan
204	Hoi Sing Kitchen	San Pei Square	Tsuen Wan
205	Chan Choi Kee	28 Sam Pei Sq	Tsuen Wan
206	Lucky House Seafood Restaurant	8 Floor, Entertainment Plaza, Chung On St	Tsuen Wan
207	New Siu Choi Wang	San Pei Square	Tsuen Wan
208	Hoi Jan Club	1/F, On Fu Building, 36 Lo Tak Court	Tsuen Wan
209	New Star Seafood Restaurant	G/F, (Phase 3) Belvedere Garden, 625 Castle Peak Road	Tsuen Wan
210	298 Restaurant	298 Hennessy Road	Wan Chai
211	American Restaurant	G/F, 20 Lockhart Road	Wan Chai
212	Banyan Garden	1/F, the Wesley, 22 Hennessy	Wan Chai
213	Choi Fook Royal Banquet	3/F, Emperor Group Centre, 288 Hennessy Road	Wan Chai
214	East Ocean Seafood Restaurant	3/F, Harbour Centre, 25 Harbour Road	Wan Chai
215	Eighteen Brook Cantonese Cuisine	8/F, Renaissance Harbour View Hotel Hong Kong, 1 Harbour Road	Wan Chai
216	Foo Lum Restaurant	GF/ & 2/F, 72 Lockhart Road, Hay Wah Building	Wan Chai
217	Liu Yuan Pavilion	3/F The Broadway, 54-62 Lockhart Road	Wan Chai
218	Ming Kee Jumbo Seafood Restaurant	G/F, 3-7 Luen Fat Street, Bauhinia Garden	Wan Chai
219	Ming Kei Seafood Restaurant	G/F, 35-45 Johnston Rd	Wan Chai
220	New Star Seafood Restaurant	1/F, Allied Kajima Building, 138 Gloucester Road	Wan Chai
221	Qiao Tei Chili Crab	Shop 6-10, 429 Lockhart Road	Wan Chai
222	San Hing Restaurant	Shop CF7, 1/F, Bowrington Road Market	Wan Chai
223	Super Star Seafood Restaurant	1/F., Shui On Centre, 8 Harbour Road	Wan Chai
224	The Grand Hall	3/F, Causeway Centre, 28 Harbour Road	Wan Chai
225	Victoria City	2/F, Sun Hung Kai Centre, 30 Harbour Rd	Wan Chai
226	Yu Restaurant	3/F, One Capital Place, 18 Luard Road	Wan Chai
227	Yuen Hang Restaurant	188 Johnston Road	Wan Chai
228	名門私房菜 Guangdong Seafood Private Kitchen	2/F, 83 Wan Chai Road	Wan Chai
229	榮記海鮮飯店	2/F Cooked Food Center, 21 Bowrington Road	Wan Chai
230	祥正飯店	G/F, Win Tack Bldg, 15 Canal Road	Wan Chai

231	Chinatown Seafood Hot Pot Restaurant	3/F, Kwan Chart Tower, 6 Tonnochy Rd)	Wan Chai
232	Choi Kee Chili Crab	G/F, Fook Gay Mansion, 10 Marsh Road	Wan Chai
233	Fu Sing Shark Fin Seafood Restaurant	1/F, Sunshine Plaza, No. 353 Lockhart Road	Wan Chai
234	Hee Kee Fried Crab Expert Ltd	Shop 1-4, G/F, 379 Jaffe Road	Wan Chai
235	Qiao Tei Chili Crab	Shop C, Wah Fat Mansion, 405-419 Lockhart Road	Wan Chai
236	Sang Kee Restaurant	2-3/F, 107-115, Hennessy Road	Wan Chai
237	Tao Heung	2/F, CNT Tower, 338 Hennessy Rd	Wan Chai
238	Tung Yuen Seafood Restaurant	1/F, 191 Lockhart Road	Wan Chai
239	Wing Wah Restaurant	254-268 Lockhart Rd, 1 Stewart Rd	Wan Chai
240	Ying Lam Restaurant	3/F, 314-318 Lockhart Rd	Wan Chai
241	Yuet Wah Hui Seafood Restaurant	Shop B, G/F, 405-419 Lockhart Road	Wan Chai
242	Lei Garden	1/F 338 Hennessey Rd	Wan Chai
243	Ming Garden Restaurant	2/F 288 Hennessey Rd	Wan Chai
244	Banquet Palace	3/F 228 Hennessey Rd	Wan Chai
245	Asiana Restaurant	1/F, Asian House, 1 Hennessy	Wan Chai
246	Kam Dau Kee Seafood Restaurant	Shop A2 & 1/F, Tower 2 & 3, The Zenith, 3 Wanchai Road	Wan Chai
247	Louie & Lui Seafood Restaurant	4/F, Kwan Chart Tower, 6 Tonnochy Road	Wan Chai
248	Winter Steam Pot Restourant	G/F, 9-13 Heart Street	Wan Chai
249	U-Banquet	4/F 228 Hennessey Rd	Wan Chai
250	香辣蟹	210 Temple St.	Yau Ma Tai
251	廟街雞粥	G/F, 61 Temple St	Yau Ma Tai
252	榮發店海鮮菜館	170 Temple St.	Yau Ma Tai
253	Hung Fat Restaurant	105 Woosung St	Yau Ma Tai
254	Garden Restaurant	469 Nathan Rd	Yau Ma Tai
255	Booth Lodge	7/F, 11 Wing Sing Lane	Yau Ma Tai

Appendix K: Sample Email Letter

First Email:

Ricky,

My name is Samantha Do and I am a part of a team of students from Worcester Polytechnic Institute, located in Worcester, MA in the United States. We are conducting a research study of Hong Kong's hotels and restaurants that provide seafood on their restaurant and banquet menus. The study involves a survey to help our team understand the seafood perspective of the restaurant business, such as fish trading and purchasing decisions of seafood products, and the awareness of sustainable seafood among hotels and restaurants. We hope to gather many responses from which we can provide conclusive data about retailers' stances within Hong Kong's seafood industry.

We would like to set up a meeting with you at your place of business, Regal Palace, some time next week (17-21 January) where the survey can be completed. The meeting and survey will take no more than 20 minutes and your answers will be very valuable to our study. We have also attached a PDF version of the survey for your reference. The survey can also be faxed to (852) 8338-6467 or printed and filled out and would be picked up by two of our team members if that is more convenient for you. Please let us know if you will be available to take the survey and the times at which two of the team members can come in to meet or pick up the survey.

On behalf of the team, thank you for your time and we hope to hear from you soon.

Sincerely,

Samantha

Samantha Do

WPI Class of 2012

Chemical Engineering

samantha.do@wpi.edu

Mobile: (852) 6147-3937

Fax: (852) 8338-6467

Follow-up Email:

Ricky,

Hello. My name is Samantha Do. I was wondering if you have received my previous email regarding our seafood survey for Worcester Polytechnic Institute. I have forwarded a copy for your convenience.

Sincerely,

Samantha

Samantha Do

WPI Class of 2012

Chemical Engineering

samantha.do@wpi.edu