

Merging Paradigms: A Framework for Meeting the
Goals of Sustainable Development and Corporate Sustainability for
Cruise Industry Firms

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Abstract

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The sustainable development paradigm has emerged in response to the impact of human activities on nature and society. Governments seek to balance economic development, environmental protection, and social concerns in their decision making process. Industry has also taken paradigmatic steps to achieve corporate sustainability through consideration for people, planet, and profits. These two initiatives are notable in cruise industry firms who are adjusting to demands for accountability and transparency of their business operations.

A literature review provides the underpinning theory for sustainable development and corporate sustainability. The Capital Values Sustainability Framework is proposed as a conceptual model for use by individual firms engaged with sustainability initiatives. Focusing on the cruise industry, this thesis provides an assessment of sustainability reporting of 22 firms. In order to test the application of the proposed framework, a qualitative analysis of Carnival Corporation & PLC's sustainability efforts is provided. Results indicate inconsistency in cruise industry firms reporting on sustainability performance. Two market segments are identified with considerably different reporting mechanisms. The proposed conceptual framework is useful for analyzing corporate sustainability initiatives relative to desired sustainable development outcomes. This framework provides a model for assessment and may prove valuable for firms

developing sustainability initiatives that achieve both the business goals for corporate sustainability and the long-term intergenerational equity goals of sustainable development.

Merging Paradigms: A Framework for Meeting the Sustainable Development & Corporate Sustainability Goals of Cruise Industry Firms

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Introduction

The field of marine and environmental affairs is concerned with the intersection of nature and society. Academics in the field apply interdisciplinary research combining the natural and social sciences to help resolve the most pressing environmental and societal questions faced today. Practitioners in the field utilize systems thinking and interdisciplinary skills to guide decision making in natural resource management, public policy, law, economic development, planning, and industry. The unifying theme of *sustainable development* permeates the field and guides academics and practitioners in their professional contributions.

Marine affairs has emerged in response to the idea that valuable ecosystem services of our coastal and marine environments are threatened by anthropogenic influences. The loss of natural, social, and economic capital is attributed to unsustainable fishing practices, increased carbon dioxide in the atmosphere and oceans, coastline development, pollutants, and increased human population (MEA, 2005). Addressing these issues at the confluence of humans and nature is complex, and must consider dynamic interactions across environmental, social, and economic dimensions while accounting for influences of global change processes.

Tourism is of special concern for those in the field of marine and environmental affairs, and as an industry has profound impacts on natural and cultural resources. The United Nations World Tourism Organization defines tourism as a phenomenon that includes the movement of people to places outside their usual environment (UNWTO, 2015). This definition of tourism includes multiple economic sectors and crosses social, political, and environmental boundaries. The study of tourism may be approached from a variety of disciplines including: resource management, policy, economics, and business management. Impacts of tourism on environment, social, and economic systems can be positive and negative. Deciphering the outcomes requires

careful analysis throughout the socioeconomic-environmental landscape. Approaching the study of tourism from the multi-disciplinary lens of sustainability provides an analytical approach through which complex tourism systems may be understood.

Sustainability has emerged in multiple disciplines nested within scientific, government, and industry dimensions. Sustainable development is one form of sustainability that is most often utilized by individuals and governmental actors. Brought to global attention in 1987 with the publication of *Our Common Future*, sustainable development refers to the development paradigm that emphasizes intergenerational equity with concern for environmental protection, social equity, and economic security (WCED, 1987). As a result of efforts led by the United Nations and other intergovernmental organizations, and guided by the moral argument of intergenerational equity, society has made progress in protecting environmental resources, enhancing social equity, and developing economic security.

At the same time, there has been a similar shift in industry, where firms are showing a willingness to incorporate sustainability into their business strategies, and promises made to stakeholders and shareholders. In the context of industry, corporate sustainability applies to an integrated triple bottom line that accounts for the planet, people, and profits. Corporate sustainability employs a systems thinking framework to understand shareholder and stakeholder values regarding the firm's impact on environmental and social conditions. Under increasing pressure from government regulations, non-governmental organizations, and demands by society, companies are integrating social and environmental responsibility into their decision making processes, and proving such actions also grow business capital and shareholder profits.

Tourism is an industry where fulfilling the business goals of corporate sustainability may also support the intergenerational equity goals of sustainable development. Although interest in

corporate sustainability has existed in other industries such as manufacturing and retail, there remains a lack of information regarding tourism sustainability from the firm's perspective.

Tourism is an industry where the sustainable development paradigm of environment, social and economic development may in fact align with the corporate sustainability paradigm of planet, people, and profits.

Plan for this Thesis

This thesis explores the merging of two paradigms; the sustainable development paradigm and corporate sustainability paradigm, and examines how the complementary goals align in the tourism industry. The overarching research goal of this thesis is to develop a framework for meeting the sustainability goals of cruise industry firms. There are two parts of this thesis.

Part I introduces the sustainable development paradigm and corporate sustainability paradigm. Chapter 1 describes sustainable development with special consideration for marine and coastal tourism, and introduces three conceptual frameworks used for analyzing tourism systems. Chapter 2 explores corporate sustainability and describes the related concepts of stakeholder theory, corporate social responsibility, and triple bottom line accounting. Part I introduces the Capital Values Sustainability Framework as a new conceptual framework for merging the sustainable development and corporate sustainability paradigms.

Part II of this thesis focuses on cruise industry sustainability and explores the utility of the Capital Values Sustainability Framework. Chapter 4 describes the cruise industry and assesses industry impacts on sustainable development. Chapter 5 describes the methods and results of an exploratory study of cruise industry firm's sustainability activities. To conduct this study, a content analysis of 22 cruise industry firm's sustainability publications, reports, and

websites, explores the specific initiatives, activities, and programs that cruise firms engage.

Three noteworthy initiatives by Carnival Corporation & PLC have been analyzed relative to the proposed Capital Values Sustainability Framework. Chapter 6 discusses the primary findings of this exploratory study and identifies opportunities for the application of the proposed sustainability framework.

This thesis highlights a sample of firms engaged in corporate sustainability activities. The firms represent those that are exploring, and in some ways pioneering, new strategies to integrate corporate sustainability into their decision making process. The primary contribution of this thesis is a proposed conceptual framework to address the merging of paradigms in cruise industry firms: The Capital Values Sustainability Framework.

Part I: Supporting Information & Literature Review

“Thinking means connecting things, and stops if they cannot be connected”
- J.K. Chesterton

At the end of the 20th century, sustained economic growth in the face of diminishing natural and social capital was called to question by scientific evidence and economic valuation of ecosystem services (Costanza, D’Arge, De Groot, Faber, Grasso, Hannon, Van Den Belt, 1997; Vitousek, Mooney, Lubchenco, Melillo 1997). Ecosystem services are the benefits humans receive from ecosystems in the form of provisioning, regulating, supporting, and cultural services (MEA, 2005). In the seminal paper published in *Nature*, Costanza et al., (1997) derived a monetary value of Earth’s resources in the form of natural capital. At the same time, Vitousek, et al., (1997) detailed the extent of human domination on Earth’s ecosystems. The authors quantified the significant transformation of terrestrial land surface, redistribution of carbon to the atmosphere, alterations to global biogeochemical cycles, impacts on ocean resources, and human influences on biodiversity (Vitousek et al, 1997). The merging of scientific and economic evidence amplified the relationships between humans and the environment and called to action a shift in decision making by governments, businesses, and individuals.

Part I is guided by a theory based question:

(SRQ1): Does the corporate sustainability paradigm complement the goals of the sustainable development paradigm?

Chapter 1: Sustainable Development in Marine and Coastal Tourism

The current global human population totals more than 7.2 billion, and exerts tremendous pressure on resources as individuals, communities, and nations seek a foothold in the global economy (Sachs, 2015). Understanding the processes and consequences of a human dominated planet has driven science, policy, and management in seeking solutions to Earth’s most pressing problems. Tourism is one industry that plays a critical role in the world’s economy, accounting for one out of eleven jobs globally (UNWTO, 2015). The following sections in Chapter 1 introduce the sustainable development paradigm, and detail sustainable tourism in the marine and coastal zone as a means of meeting the environmental, social, and economic goals of sustainable development.

1.1 The Sustainable Development Paradigm

The sustainable development (SD) paradigm (Figure 1) has emerged as an overarching principle to guide decision making in the 21st century (Kates, Parris, & Leiserowitz, 2005). The SD paradigm is the systems framework that considers environmental, social, and economic pillars and their connections through a multi-scale Earth system (Sachs, 2015). The three pillars of sustainable development establish the analytic and normative framework to which the most

accepted definition of sustainable development is applied: “humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future

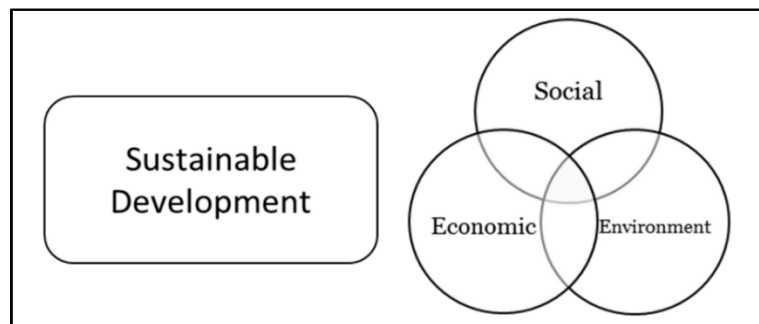


Figure 1: The Sustainable Development Paradigm (Adapted from Sachs, 2015)

generations to meet their own needs” (Sachs, 2012, WCED, 1987). Intellectually, the three pillars of sustainable development provide a system of complex interactions that can be analyzed and assimilated across a variety of disciplines. As a normative framework, sustainable development serves as a guiding principle that may be adopted by communities, political institutions, or business organizations.

Driven by intergovernmental and nongovernmental organizations, efforts to implement the SD paradigm has resulted in a series of non-binding agreements. Since the convening of The United Nations Conference of the Human Environment in 1972, sustainable development has infused the discourse of international conferences concerning humans and the environment. In 1987 the UN established Brundtland Commission introduced the formal definition of sustainable development in the report, *Our Common Future*. In 1992 the United Nations Conference on Environment and Development in Rio de Janeiro resulted in Agenda 21, a general framework for applying the SD paradigm. In the convening years a number of UN declarations and agreements have been extended, including the UN General Assembly’s commitment to the Millennium Development Goals (MDGs) at the turn of the 21st century. The MDGs included eight goals spanning hunger, poverty, education, health, gender equality, and environment. In 2015, the UN introduced a new sustainable development agenda that includes seventeen goals targeting poverty, environmental protection, and global prosperity to be met by year 2030.

The central feature of SD paradigm is a moral argument emphasizing intergenerational equity and the inclusion of economic progress while sustaining environmental and social resources (Sachs, 2012). This is of course difficult to achieve as access to economic opportunity is often associated with tradeoffs for environment or society. Guided by intergovernmental and

nongovernmental organizations, tourism is an industry where the three pillars of sustainable development may align.

1.2 Coastal and Marine Tourism

According to the United Nations World Tourism Organization, international tourist arrivals reached 1.2 billion in 2015, a growth of 4.4% from 2014 levels (UNWTO, 2015). The global tourism industry accounts for 10% of global GDP, and USD 1.5 trillion in exports (UNWTO, 2015). The UNWTO projects a continued growth of 3.3% annually through year 2030. Although one of the largest economic industries in the world, tourism remains difficult to define as it includes multiple sectors and spans across all geographies.

One definition that best describes tourism is given by Fennell: “the interrelated system that includes tourists and the associated services that are provided and utilized (facilities, attractions, transportation and accommodation) to aid in their movement” (Fennell, 1999). According to the UNWTO, an international tourist¹ is a person traveling for more than one night but not more than a year, with the main purpose to partake in activities for business or pleasure (UNWTO, 2015). The growth of tourism as an activity and industry has created numerous overlapping markets based on geographies or by activity including mass travel, business travel, ecotourism, cultural tourism, adventure travel, and coastal and marine tourism.

Some may consider a broad definition of marine and coastal tourism that could include an afternoon picnic at the beach, or going to an aquarium miles from the coastline (Orams, 1999). Although those activities have connections to marine resources, they do not fall into the coastal and marine tourism definition. To define tourism in the coastal zone, it’s important to define the

¹ A domestic tourist is one that is traveling to a specific destinations for more than 1 night, but less than 6 months.

geography of the coastal environment and the types of tourist activities. The most authoritative definition is provided by Miller et al., 2008 who defines coastal and marine tourism as a “special case of tourism that takes place in regions of the open ocean and along continental, island, and polar coastlines as well as in all manner of associated bays, harbors, inlets and estuaries” (Miller, Orams, Luck, Auyong, and Graupl, 2008).

Coastal and marine tourism is driven by the desire for sun, surf, and sand. A more nuanced assessment finds that tourists traveling to the coastal zone seek a unique combination of nature and culture (UNEP, 2009). Coastlines provide scenic beauty, beaches, water, and rich biodiversity. Culturally, coastal destinations include historical experiences, unique and healthy food, and a diversity of accommodation settings (UNEP, 2009). The origins of coastal tourism date to Roman times when social elites visited villas built along the Mediterranean coast (UNEP, 2009). In recent years, advancements in SCUBA, surfing, cruising, and other forms of recreation have led to tremendous growth of the industry (Holden & Fennell, 2013).

According to the UNWTO, 12 of the world’s top 15 destination countries have coastlines (UNEP, 2009). The growth of coastal tourism in the 20th century in the Mediterranean, South East Asia, Australia, and domestically in California and Florida, indicate coastal tourism as a major market segment. In thriving coastal destinations, the economic benefits support infrastructure development, expanded job opportunities for local people, and better access to health care and education (UNEP, 2009). However, not all impacts of expanded tourism are positive, as local people may be marginalized and natural resources impaired.

1.3 Sustainable Tourism

Following the publication of the Brundtland Report, the growing interest in sustainable development spurred academic, government, and industry interest for sustainable tourism.

Sustainable tourism is defined as “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities” (UNEP, WTO 2005 Making Tourism More Sustainable pg. 12). Agenda 21, the result of the UN conference in Rio in 1992, laid the groundwork for applying the sustainable development paradigm to the tourism industry (Aronsson, 2000). In 1995, the first World Conference on Sustainable Tourism was held on the Spanish island of Lanzarote. Leaders from UNESCO, the World Tourism Organization (UNWTO), and leading international organizations discussed tourism’s role in sustainable development (Aronsson, 2000). The resulting Charter for Sustainable Tourism first introduced the concept of sustainable tourism and issued a call to action. The 2002 World Summit on Sustainable Development in Johannesburg addressed sustainable tourism as a means for alleviating poverty while protecting natural resources (World Summit on Sustainable Development, 2003). That same year was declared the International Year of Ecotourism, and the World Ecotourism Summit was held in Quebec City, Canada.

Underpinning sustainable tourism is a recognition that tourism can be positive or negative when considering the sustainable development paradigm. Butler (1980) illustrated this point by introducing the Tourist Destination Life Cycle (Figure 2). The model describes the stages of development of a tourism destination including Exploration, Development,

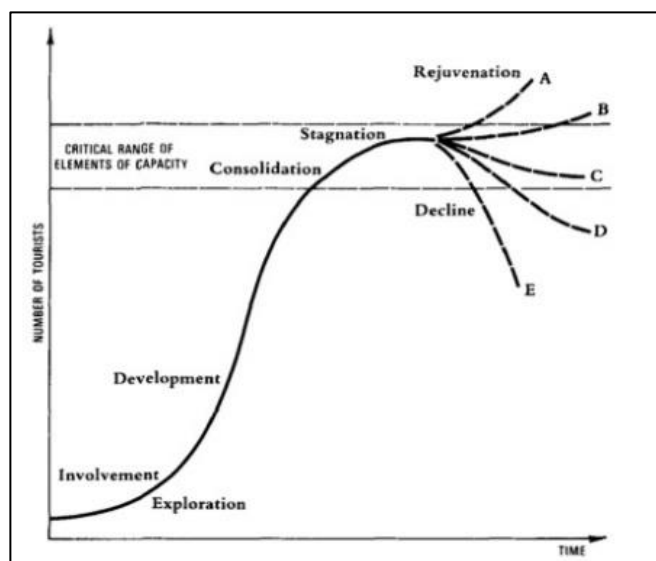


Figure 2: Tourist Destination Life Cycle (Butler, 1980)

Consolidation, Stagnation and eventually Decline (Butler, 1980). The reasons for destination decline are attributed to overuse of natural or cultural resources, and negative impacts associated with unsustainable visitation (Butler, 1980).

Specific to the coastal zone, tourism impacts on the environment and communities can have complex outcomes. Consumption of valuable freshwater, food, and energy resources can stress local environments and social systems. Emissions of greenhouse gasses, waste and effluent disposal from land or ship based sources, and overall impacts on biodiversity are important environmental concerns (Bonilla-Priego et al., 2014). Societal considerations include cultural impacts on communities, labor relations such as employment and workforce health and safety, and economic impacts on supply chain, communities and governments (Bonilla-Priego et al., 2014). Applied to Butler's Tourist Destination Life Cycle model, the connections between environmental, social and economic components of a coastal tourism system are apparent and the potential consequences of the tourism phenomenon revealed. The purpose of sustainable tourism is to balance the economic prosperity it promises while sustaining environmental and cultural resources that tourism depends on.

According to Mathieson and Wall (1982), tourism impacts and their outcomes are the result of complex relationships among communities, tourists, and the environment. Deciphering tourism sustainability is aided by the use of a model, framework or some form of a structured representation of the various components of the system. There are a number of stakeholders in any tourism system, and the connections of power and influence are important to consider. In *Sustainable Tourism Management*, Swarbrooke delineates between the public sector, industry, voluntary sector, the host community, media, and the tourist (1999). This is one way to identify various stakeholders. In this case, tourism itself may be analyzed as a system that encompasses

stakeholder relationships across environmental, social and economic landscapes. Under the paradigm of sustainable development, there are several frameworks that provide insight and guidance for understanding stakeholder relationships and human-natural connections.

1.4 Tourism System Frameworks

Social-Ecological Systems Framework

The most deliberated framework used to conceptualize humans and nature, is the social-ecological systems (SES) framework. A social-ecological system is defined as an “integrated system of ecosystems and human society with reciprocal feedback and interdependence” (Folke, Carpenter, Walker, Scheffer, & Chapin, 2010). In an effort to frame the complex relationships of societal and ecological systems with concern for sustainable development, the SESs framework employs a systems dynamic principle and includes the terms resilience, adaptability, vulnerability and transformability (Berkes, Colding, & Folke, 2003; Walker, Holling, Carpenter, & Kinzig, 2004). The use of these concepts focuses on analyzing SESs as systems in constant change and the ability of actors in the system to respond to crisis and change (Berkes, et al., 2003).

The social-ecological systems theory stems from contributions by the Reliance Network which applies multiple disciplines including economics, ecosystem science, institutional research and complex systems theory to the concept of sustainability (Berkes, et al., 2003). In framing the issue of sustainable tourism in the coastal zone the use of the SESs framework defines coastal ecosystems as linked to social systems through the goods and services they provide, creating complex social-ecological systems (Ostrom, 2009). The tourism industry may be viewed as an actor in the coastal SES that benefits from and also impacts, the goods and services the system

provides. Evaluating sustainable tourism in the coastal zone may benefit from examining the use of specific frameworks of tourism systems.

The Human-Artifactual-Natural System (HANs) Conceptual Framework

The Human-Artifactual-Natural System (HANS) Conceptual Framework (Figure 3) provides a platform for analysis of complex social-ecological systems (Miller, Carter, Walsh, Peake, 2014). Building on previous social-ecological system models, the HANS framework includes three components: a

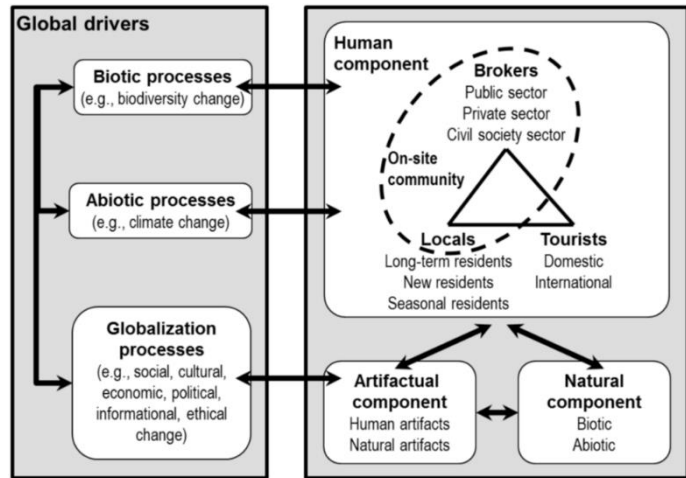


Figure 3: *The Human-Artifactual-Natural Systems Framework (Miller et al., 2015)*

human component, natural component and artifactual component (Miller et. al, 2014). The addition of a separate artifactual component allows for a robust analysis determining artifacts (objects pertaining to the built environment) influence the human and natural components (Miller et al., 2014). The HANS framework accounts for three global drivers of change that exert influence on the system itself: biotic, abiotic, and globalization processes (Miller et. al, 2014). By applying the HANS framework to the coastal marine system, an analyst can define boundaries, identify dynamic relationships, assess direction of influence, and evaluate possible outcomes as interactions between components and within components influence change in the system.

The Broker-Local-Tourist model

To explore the utility of the HANs model, it is useful to understand the foundation framework known as the Broker-Local-Tourist (Figure 4) introduced by Miller and Auyong (1991). Nested as the 'Human Component' is the HANs mode, the B-L-T framework provides the foundation for analyzing the social

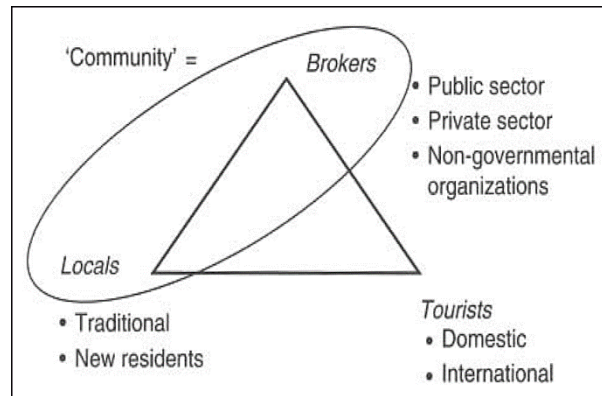


Figure 4: The Broker-Local-Tourist (Miller and Auyong, 1990)

components of a tourism system. A tourism system is made up of individuals or groups of people identified as brokers, locals, or tourists. Brokers are part of the public, private, or civil society sectors and are those individuals or groups that have a professional stake in the tourism industry. Locals are people that reside within a tourism destination but do not participate professionally or as a means of income. Tourists are those that travel to a destination for business, pleasure, or educational purposes and then return to home (Miller & Auyong, 1991). Framing tourism as a system of social interactions between brokers, locals, and tourists identifies stakeholder influence and aids in the decision making process for sustainable tourism development.

The frameworks discussed above provide conceptual models for directing analysis of marine and coastal tourism systems. Such analysis provides guidance to the regulatory, management, or policy decision making process concerning marine and coastal resources. In this context there are additional frameworks such as the livelihoods approach, ecosystem based management, human well-being, and marine spatial planning that could provide direction for the management and regulation of resources. These frameworks are engaged by public sector agencies and non-governmental interest groups. Further discussion of these approaches is beyond

the scope of this thesis, as the primary concern is industry approaches to tourism sustainability. It should be noted that the aforementioned frameworks for the management of resources focus attention on the consideration of stakeholders. In this sense, the importance of the underpinning concept of stakeholder theory to drive decision making is parallel in both public sector management and industry interests in sustainability.

While the theory of sustainable tourism has received extensive deliberation from academics, there remains a lack of proven results. Approaches to sustainable tourism may derive from a destination perspective or an industry perspective. Tourism planners, NGO representatives, and government regulators have made efforts to incorporate the sustainable development paradigm into tourism management, arguing the moral necessity for sustainable development. While intergovernmental and nongovernmental organizations continue to implement the sustainable development paradigm, individual companies and industries are accepting an increased role in meeting environmental protection, social equity, and economic development goals, and proving a business case for their actions.

Chapter 2: Corporate Sustainability

Since the declaration of the Millennium Development Goals, a shift to include industry in advancing the sustainable development agenda has emerged through the field of corporate sustainability. Several intergovernmental organizations such as The UN Global Compact, The Global Reporting Initiative, and the International Organization for Standardization (ISO) have partnered with industry firms to craft strategic actions to meet the goals of sustainable development. Efforts have escalated since the introduction of the 2030 Sustainable Development Goals, which called on industry to make progress on sustainable development. United Nations special advisor and prominent scholar Jeffrey D. Sachs highlights, “neither the MDGs nor the SDGs will be achieved without the leadership of private companies, large and small” (Sachs, 2012, pg 2211). The following sections in Chapter 2 detail the underpinning concepts and theory that drive corporate sustainability decision making in industry.

2.1 The Corporate Sustainability Paradigm

Companies are embracing an emerging trend to integrate social and environmental responsibility into their decision making process (Laszlo, 2003; Savitz & Weber, 2006). Fundamental to these initiatives is a systems thinking framework to understand stakeholder values and a company’s impact on environmental and social conditions (Epstein & Roy, 2003). Terms and concepts such as stakeholder theory, corporate social responsibility, social and environmental accounting, (also known as the triple bottom line framework), and shared value creation, describe strategies to meet this end. There is an extensive literature associated with corporate sustainability. For an introduction and description of stakeholder theory see (Freeman, 1984; Clarkson, 1995; Preston & Sapienza, 1990); for corporate social responsibility see

(Bowen, 1953; Davis, 1960; Carol, 1979, 1991, 1999; Carol & Shabana 2010; Combs & Holiday, 2011); for social and environmental accounting see (Deegan, Rankin, & Tobin, 2002; Gray, Owens, & Adams, 1996; Gray, Gray, & Bebbington, 2010); for triple bottom line see (Elkington 1998; Savitz and Weber, 2006; Willard, 2002); and for shared value creation see (Porter & Kramer, 2006, 2011).

Each of the corporate sustainability concepts are complimentary whereby consideration of the environmental, social, and economic components and a firm’s role in the system is

fundamental. Applied to industries, the sustainable development pillars translate to the corporate sustainability paradigm as planet, people, and profits (Figure 2). This paradigm of business management emphasizes a company’s

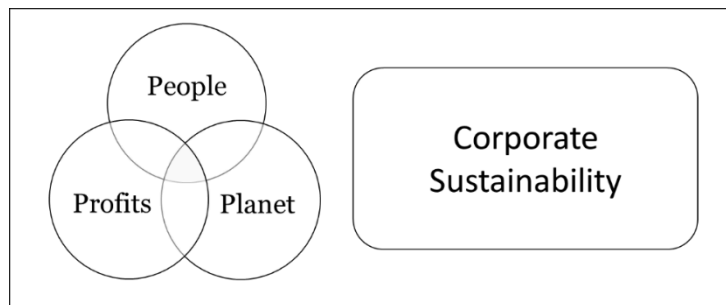


Figure 5: The Corporate Sustainability Paradigm (Adapted from Elkington, 1998)

responsibility not only to shareholders but also to the environment and society.

2.2 Stakeholder Theory

Underpinning corporate sustainability is the notion of a firm’s connectedness to a variety of stakeholders. The principle of stakeholder theory came to attention during the 1930s when General Electric recognized four interest groups: customers, employees, the public, and shareholders (Preston & Sapienza, 1990). Today, stakeholder theory is applied to the business, policy, resource management, and health disciplines (Brugha, & Varvasovszky, 2000). It recognizes the critical role of “stakeholders (individuals, groups, and organizations) who have an interest and the potential to influence the action and aims of an organization, project, or policy direction” (Brugha, & Varvasovszky, 2000, pg. 239). Decision makers, managers, or analysts, through a process of

engaging stakeholders, gain valuable understanding of a particular system by identifying the key actors and assessing their respective interests in that system (Pomeroy & Douvere, 2008).

In the context of business management, R. Edward Freeman is credited with first identifying that businesses should consider a variety of stakeholders in their decision making process (Freeman & Reed, 1983). Freeman defines stakeholders as “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman 1984, pg 46). The consideration of stakeholders in a firm’s decision making process has received criticism from those who believe that the only stakeholder a business should consider is a company’s shareholders (Preston & Sapienza, 1990). Freeman’s theory suggests a firm’s financial performance and returns to shareholders is related to the management of its stakeholders, making stakeholder management a necessary business function (Donaldson & Preston, 1995, Freeman 1984).

Applying the theory of stakeholder engagement to business practices requires understanding stakeholder salience, to manage stakeholder and shareholder expectations in business decision making (Preston & Sapienza, 1990, Mitchell, Agle, and Wood, 1997). Freeman’s theory suggests a firm may engage with internal and external stakeholders. Internal stakeholders include management and non-management employees, while external stakeholders are all others connected to the firms practice (Freeman, 1984). Segmenting of stakeholders is achieved by identifying those that are primary or secondary (Clackson, 1995; Darnall, Henriques, & Sadorsky, 2010). Primary stakeholders are essential to a firm’s survival and have a direct economic interest in the firm’s practices (Clarkson 1995). These groups include all internal stakeholder groups, and customers, suppliers, governments, and communities who impact a firms operations (Clarkson, 1995, Donaldson & Preston, 1995, Darnall et al., 2010). Secondary

stakeholders are those that are not involved in the firm's financial results, but are in some way connected through social or environmental concerns (Mitchel, et al., 1997, Darnall et al., 2010). For analysis, Mitchell et al., (1997) details several attributes to assess stakeholder salience including, power, legitimacy, and urgency.

The wider application of stakeholder theory for understanding the influences among complex ecological, social, and economic systems has drawn interest from a number of disciplines including economics, political science, environmental science and conflict management (Pomeroy and Douvere, 2008). The application of stakeholder analysis in corporate sustainability is established by Clarkson (1995), and further methods described by Laszlo (2002). For this thesis, stakeholder theory is viewed as a unifying theme between the sustainable development and corporate sustainability paradigms.

2.3 Corporate Social Responsibility

Corporate social responsibility (CSR) is defined as the “voluntary actions that a corporation implements as it pursues its mission and fulfills its perceived obligations to stakeholders, including employees, communities, the environment, and society as a whole” (Coombs & Holladay, 2011 pg. 8). Werther and Chandler (2006) describe CSR as both a means for operating, and an end, for maintaining a firm's legitimacy to society. In its broadest sense, CSR is concerned with the role of business in society, and assumes some level of responsibility of business practices for societal well-being (Coombs & Holladay, 2011).

Corporate social responsibility emerged into the business lexicon during the post World-War II globalization (Carol & Shabana, 2010). The influential work by Howard R. Bowen, *The Social Responsibilities of the Businessman* was the first to offer a comprehensive discussion about the ethical role of business in society and introduce ‘the doctrine of social responsibility’

(Bowen, 1953). Corporate social responsibility gained prominence in the 1960s when civil rights, women's rights, and environmental movements were reshaping society and bringing the social and environmental impacts of business into public consideration (Carol & Shabana, 2010). An early definition of CSR is given by Davis (1960), as "businesses' decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest" (Davis, 1960, pg. 70).

Assuming a responsibility to society beyond a firm's fiduciary responsibility to create wealth for shareholders is controversial, and some economists (see Friedman 1970) dismiss these concerns as misguided (Carrol, 1991). The counter argument to CSR contends that if a firm ceases to make a profit then the firm ceases to exist, and therefore all actions taken beyond the fiduciary responsibility to create shareholder profit is unethical. Economist Milton Friedman argued, the sole purpose of business is "to make as much money as possible while conforming to the basic rules of society, both those embodied in law and those embodied in ethical custom" (Friedman, 1970). Friedman's doctrine of business ethics is rooted in the belief that free market capitalism is able to resolve social matters (Carrol, 1991). However, Friedman's statement on business ethics includes a notion of adhering to legal and societal customs. For today's business owners, the landscape of business ethics has shifted as government and consumer expectations have changed the customs Friedman considers the basic rules of society.

The CSR discourse has evolved in an attempt to reconcile the tensions between Friedman's philosophy and CSR advocates. Carol offers a pyramid model to describe business responsibilities. Economic obligations form the base, followed by legal, ethical, and philanthropic responsibilities at the top of the pyramid (Carol, 1991). Carol expands the idea that philanthropic responsibilities make a business a good corporate citizen as they "contribute

resources to the community” (Carol, 1991 pg. 42). Porter & Kramer (2002) argue that corporate philanthropy supports the business case, if philanthropy is strategic. Strategic philanthropy is defined as “the process by which contributions are targeted to serve direct business interests while also servicing beneficiary organizations” (Tokaski 1999, pg. 34). This is in contrast to the traditional way of giving money whereby a business gives to any number of causes unrelated to the core business practice or at the whims of company executives (Tokaski, 1999). Strategic philanthropy, as a part of corporate sustainability, complements the CSR strategy for operating and legitimizes the firm’s role in society.

2.4 Triple Bottom Line Accounting

The ethical debate regarding corporate sustainability is fueled by the inherent fiduciary responsibility of firms to produce a profit for shareholders (Laszlo, 2003). This shareholder value is considered the bottom line and the classic theory of business ethics insists that increasing the bottom line is the sole purpose of business (Friedman, 1970). However, basing all corporate decisions on increasing the bottom line without consideration for other factors, may not always sustain shareholder value. In this regard, shareholder value is contingent on a firm’s connection to environmental and social conditions, which sets the stage for applying the corporate sustainability paradigm. Of course, increasing shareholder value is fundamental to any successful sustainability strategy, and firms are proving that implementing corporate sustainability does indeed increase shareholder profits (Epstein & Roy, 2003).

Introduced by Elkington (1998) in his seminal work *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*, the triple bottom line concept is a framework for assessing sustainability of industry firms. Elkington declares, “increasingly, we [business enthusiasts]

think in terms of a ‘triple bottom line,’ focusing on economic prosperity, environmental quality and – the element which business has tended to overlook – social justice” (1998, pg. 2).

Similar to CSR, the triple bottom line theory developed during the 1970s with growing concern for industry impacts on the environment and society (Fifka, 2013). Today, the triple bottom line framework integrates a systems thinking approach to corporate decision making and calls for the consideration of a firm’s impact on people, planet and profits. To call it the triple bottom line makes it necessary to measure each value (people, planet, profits) with as much emphasis as the others (Yongvanich & Guthrie, 2006). The challenge of applying the triple bottom line framework rests in measuring social and environmental value and quantifying real external costs and pricing.

Measuring shareholder value is the cash gained on capital, minus the cash cost of capital (Laszlo, 2003). Measuring environmental and social value is not as simple, and the triple bottom line framework introduced by Elkington does not offer direct methodology for quantitative measures of planet and people. This is a challenge across all disciplines grappling with methodologies for measuring sustainability. Although the quantitative application of the triple bottom line framework is yet to be determined, it has been successful initiating a call for increased transparency of business practices.

2.5 Social and Environmental Reporting

The voluntary reporting of a firm’s social and environmental impacts has gained popularity in response to increased consumer, stakeholder, and government pressure (Kolk, 2010; O’Rourke, 2004). Leading sustainability scholars, Senge and Carstedt assert that “the world in which key corporate decisions could be made behind closed doors is disappearing” (2001, pg. 35). This evolution includes a range of reporting mechanisms from one-page statements of

sustainability commitments to all-inclusive reports detailing specific initiatives and measured outcomes on the triple bottom line (De Grosbois, 2016; Kolk 2010). De Grosbois (2016) propose three forms of corporate sustainability reporting: reported commitments, reported initiatives, reported results and outcomes. The Global Reporting Initiative defines sustainability reporting as “the practice of measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development” (GRI, 2011, pg. 3).

Public disclosure, or transparency, is a “strategy for both creating and responding to market incentives for improved performance, and a means for mitigating risks of market sanction” (O’Rourke, 2004, pg 7). Triple bottom line transparency in part fulfills a company’s obligations to consumers, investors, regulators, and other stakeholders. In doing so, a firm achieves the bottom-line benefit of competitive advantage, increased efficiency, and management of risks and stakeholder concerns (O’Rourke, 2004). Similar to financial statements not always representing a firms true financial standing, triple bottom line transparency may not be a true representation of a firms sustainability practices. The popular term *greenwashing* is used to highlight the misrepresentation of information, falsifying claims, and intentionally using deception to bolster a firms environmental or social standing.

Attempts to standardize sustainability reporting have resulted in several third party mechanisms including the Global Reporting Initiative (GRI) (<https://www.globalreporting.org>); the UN Global Compact (<https://www.unglobalcompact.org>); the International Organizations of Standardization’s sustainability standards, ISO 14001 (<http://www.iso.org/>); and the Sustainability Accounting Standards Board (<http://www.sasb.org>). Although third party organizations have made methods of standardization more available, the choice to disclose triple

bottom line impacts is still voluntary, as government regulations are non-existent. In the absence of regulations, the transparency movement may ultimately be guided by awareness as Senge, and Carstedt have affirmed, “with increasing awareness will come pressure for greater accountability for social and natural capital” (2001, pg; 35).

2.6 The Business Case for Corporate Sustainability

The tensions surrounding the ethics of business continue today as firms reconcile the corporate sustainability (CS) discussion. Identifying the business case for CS activities has become popular in both academic and practitioner circles. Scholars have described the business case theory for corporate sustainability (Carroll & Shabana, 2010, Porter & Kramer 2006, 2011, Kurucz et al., 2009). At the same time, a growing number of companies are embracing some form of CS activities and are proving positive results for shareholder value (cases presented in Lazlo, 2003; Willard, 2002). Kurucz et al., (2009) propose four categories of benefits for firms engaged in corporate sustainability activities: (1) cost and risk reduction, (2) gaining competitive advantage, (3) developing reputation and legitimacy, and (4) seeking win-win outcomes through synergistic value creation.

Reducing costs and mitigating risks to business operations has a direct bottom line benefit and is a primary focus for practitioners (Carroll & Shabana, 2010). The focus of cost and risk reduction is most often the natural environment, whereby proactive engagement can reduce the cost of regulatory compliance and enhance operational efficiencies (Berman et al., 1999). For example, a proactive reduction in fossil fuel consumption would result in reduced costs to the firm in the form of increased efficiency in the near-term and protection against carbon regulatory measures in the long-term. As a result, reducing carbon pollution yields a positive benefit to the environment, society, and the business.

According to Carroll and Shabana (2010), competitive advantage refers to a firm's strategy to differentiate themselves from their competitors. Corporate sustainability is one way a firm differentiates itself. Through engagement with strategic CS activities that meet the demands of stakeholders, a firm creates a competitive advantage whereby those stakeholders would prefer the firm over its competitors (Kurucz et al., 2009). Strategic philanthropy can also result in a competitive advantage. Porter and Kramer (2002) propose, when philanthropic activities are directed to causes aligned with common interests in business functions and societal outcomes, philanthropy can capture value for the business bottom line. In this case, philanthropic activities have acted to influence the decisions of stakeholders in the firms favor. This is most obvious when considering consumer choices to support a firm based on the firm's contributions to a specific beneficiary organization. In such cases, philanthropy can grow the competitive advantage of firms, fulfill obligations to stakeholders, and create win-win scenarios for the company and society (Porter & Kramer, 2002).

Developing reputation and legitimacy sanctions a firm's operations in society (Carroll and Shabana, 2010). Defined by Suchman (1995), "legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, pg. 574). Legitimacy and reputation serve the business case by attracting customers, investors, and employees (Smith, 2003). Increased pressure on corporate practices by third party organizations is an example of how firm's legitimacy and reputation may become compromised (O'Rourke, 2005). Such was the case with Nike in the late 1990s, when a multi-country boycott in response to poor labor practices in Asian factories forced executives to embrace substantial changes to their supply chain (O'Rourke, 2005; Smith, 2003). In response to increased pressure to act

responsibly, legitimacy is used to explain and justify the voluntary reporting of a firm's social and environmental footprint. By doing so, a firm demonstrates their ability to meet mutually beneficial goals to shareholders and society, and in essence justifies their place in society (Carroll & Shabana, 2010).

Seeking win-win outcomes through synergistic value creation has become the new action of corporate sustainability initiatives (Porter and Kramer, 2011). Fundamental to these activities is a merging of stakeholder interests to identify strategic initiatives that satisfy and capitalize on overlapping demands (Kurucz et al., 2009). Known as creating shared value (CSV), these initiatives are a form of corporate sustainability whereby the core business objectives and competencies are integrated with stakeholder interests to create shared value returns for the firm and its stakeholders (Font et al., 2016; Porter & Kramer 2011). A firm can achieve CSV by “reconceiving products and markets, redefining productivity in the value chain, and building supporting industry clusters at the company's locations” (Porter & Kramer 2011 pg. 65).

Arguments against the created shared value approach highlight a lack of long-term vision of intergenerational equity (Elkington, 2012). In essence, CSV dilutes corporate sustainability to near-term resource efficiency, and fails to address the imperfections of industrial capitalism as a driver of resource depletion and associated consequences of climate change (Elkington, 2012). Although CSV is focused on “expanding value through improved operational process, not about sharing the value already created” the end goal of creating a competitive advantage while enhancing the communities connected to the firm is complementary to the theory of corporate sustainability (Font et al., 2016, pg. 176). Porter and Kramer (2011) argue creating shared value expands the business case for corporate sustainability by internalizing the benefits of positive outcomes for environmental and social externalities. In doing so, innovation and productivity are

pressed into action to solve immense social and environmental challenges (Porter and Kramer 2011).

Final Remarks on the Corporate Sustainability Paradigm

Chapter 2 has detailed the development of corporate sustainability (CS) and highlighted industry efforts towards transparency and generating the business case for sustainability initiatives. A few points are highlighted:

1. CS is a systems paradigm whereby industry must consider its relationship to the environment and society (planet, people, profits) and therefore mirrors and is complementary to the sustainable development paradigm (environmental, social economic).
2. CS is comprised of voluntary actions by industry firms that could include philanthropy, waste and emission reductions, supply chain initiatives, labor standards, stakeholder considerations, and others.
3. Accounting, and transparency of corporate sustainability initiatives contribute to the business case as firms realize positive bottom line benefits from competitive advantage, risk and cost reduction, gaining legitimacy, and creating shared value amongst shareholders and stakeholders.
4. Methods for internalizing the costs and benefits of managing natural and social externalities are not well established. This is a significant barrier to further development of the corporate sustainability paradigm.

Few accepted standardized metrics exist to measure a company's performance in terms of social and environmental outcomes. Corporate sustainability practitioners face the challenge of quantifying the business case for managing externalities when the benefits are not concentrated with individual firms, rather diffused across environmental and community stakeholders, and future generations. Furthermore, the time horizon for decision making is not defined. Should a company forgo near-term profits for estimated long-term sustainability? The literature does not address implications for managing complex dynamics of global processes such as climate change, biodiversity shifts, and changes to economic or political systems. These concerns plague corporate sustainability theorists and practitioners as they consider the usefulness of the paradigm in meeting the overarching goals of sustainable development. The question remains: do the efforts of industry firms toward corporate sustainability result in positive outcomes for sustainable development?

Returning to SRQ1 which guides Part I of this thesis: *Does the corporate sustainability paradigm complement the goals of the sustainable development paradigm?* The literature suggests that yes, the corporate sustainability paradigm does complement the goals of the sustainable development paradigm. However, it is unclear if the goal of intergenerational equity of sustainable development is accounted for in corporate sustainability decision making. This remains a significant hurdle for governments and industry as the future of natural and social resources are under increasing pressure from global change processes.

Chapter 3: The Capital Values Sustainability Framework

The Capital Values Sustainability Framework (CVSF) (Figure 6) is proposed as a new conceptual framework that merges the SD and CS paradigms. The CVSF has four components: three capital stocks (natural, business, social), connected to global drivers of change. Applied to the CVSF, *capital* refers to the economic value of internal assets (business capital), and external assets of natural and social capital. There is an extensive literature detailing the different forms of natural capital (see: Daly, 1997; Dempsey & Robertson, 2012; MEA, 2005) and social capital (see: Adler & Kwon, 2002; Coleman, 1988; Putnam 2000). Here, the division of *capital* between natural, business, and social, takes a new form as capital stocks are viewed from the individual firm's perspective. In this case, social capital is not limited to the social science tradition as described by Alder and Kwon (2002), but also includes public goods – those that are not natural capital – such as public infrastructure.

Recalling the Brundtland Commission's definition of sustainable development, the emphasis on intergenerational equity is the most difficult challenge as dynamic global processes shift baseline assumptions. The primary objective of the CVSF is to integrate global drivers such as climate change, biodiversity change, and globalization processes and their effect on capital stocks. In doing so, a firm identifies its place within a dynamic system and can develop a strategy that better aligns with the intergenerational goals of sustainable development. The CVSF is based on the corporate sustainability paradigm of planet, people, and profits translated to natural capital, social capital, and business (firms) capital. The CVSF is designed to be used from the perspective of a single firm engaged in developing corporate sustainability initiatives. In effect, the CVSF merges the sustainable development paradigm, and corporate sustainability paradigm.

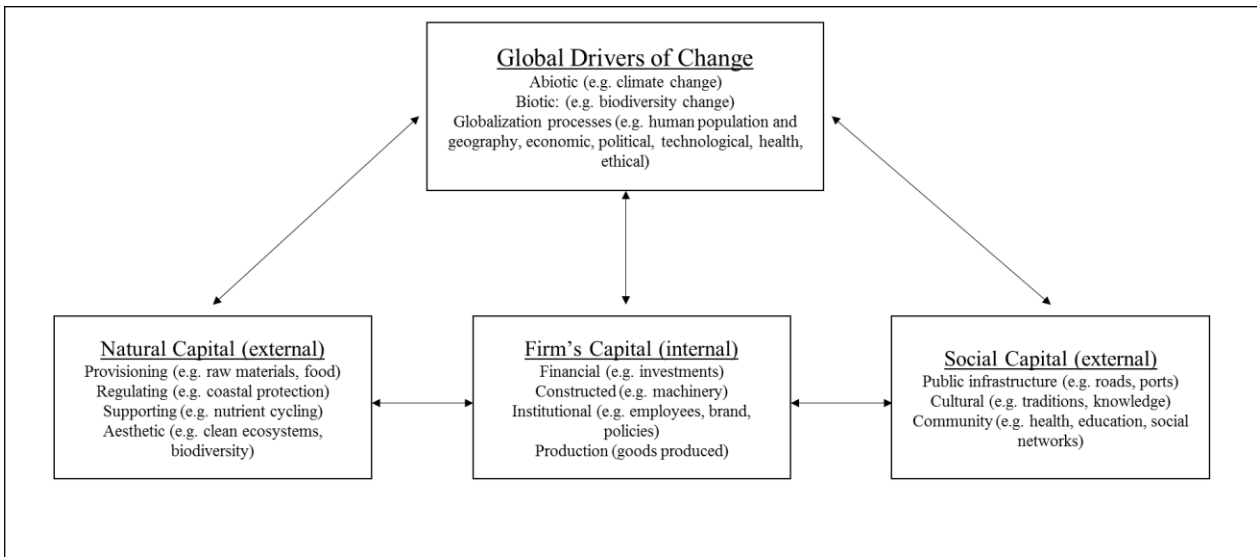


Figure 6: The Capital Values Sustainability Framework

In *Natural Capitalism: Creating the next industrial revolution*, prominent sustainability leaders Paul Hawken, Amory Lovins, and Hunter Lovins popularized the theory of including natural and social capital in business decision making (1999). In the Harvard Business Review article predating the books release, the authors introduce four interconnected shifts in industry practices that make up the natural capitalism approach (pg. 146):

- 1) “Dramatically increase the productivity of natural resources”
- 2) “Shift to biologically inspired production models”
- 3) “Move to a solutions-based business model”
- 4) “Reinvest in natural capital”

The authors emphasize “whole-systems thinking”, “closed-loop manufacturing”, and “technological innovation” for advancing the corporate sustainability paradigm based on the inclusion of natural capital (Lovins & Hawken, pg. 157). The CVSF draws from the approach of *natural capitalism* to integrate natural and social capital. Ultimately, the new framework

proposed offers a conceptualization of the system that may be useful for businesses implementing corporate sustainability strategies.

The Capital Values Sustainability Framework also draws from Miller et al., Human-Artifactual-Natural systems (HANs) model, with the inclusion of global drivers of change. Multidisciplinary researchers of the social-ecological systems (SESs) model, or the Human-artifactual-natural systems (HANs) model would find the application familiar as a systems framework. Complex system principles such as non-linearity, scale, feedbacks, resilience, adaptability, and vulnerability could apply. These system principles are important to consider in a firm's decision making, and may prove useful for spurring innovation and solutions to environmental and social challenges.

Natural Capital

In general terms, natural capital refers to the stock of natural resources including minerals, soils, air, water, and biodiversity (Dempsey & Robertson 2012). The goods and services derived from natural stocks include provisioning services (food and raw materials) regulating services (coastal protection, carbon storage, waste treatment and pollination) supporting services (nutrient cycling and soil formation) and aesthetic value for recreation (MEA, 2005). Natural capital is analogous with the benefits humans receive from ecosystems, collectively called ecosystem services. In resource economics, natural capital emerged in the 1990s via the work H. Daly (1994), G. Daly (1997), and Costanza et al (1997) amongst others. In 2005, the Millennium Ecosystems Assessment (MEA) published key findings detailing the degradation of valuable ecosystem services and emphasized integrating natural capital economics into government and industry decision making (MEA, 2005).

The Capital Values Sustainability Framework prioritizes the consideration of natural capital for business decision making. In doing so, a firm assesses ecosystem services to their business capitals, and considers the influence of global processes on the future value of capital stocks. Firms could develop corporate sustainability initiatives that ensure the continued access and growth of essential resources and the continued benefits received from ecosystem services. These measures reduce risk and vulnerability to climate change or biodiversity loss by mitigating the impacts and seeking adaptive solutions. Progress in mapping and modeling economic valuation of ecosystem services is evolving and may ultimately provide quantifiable metrics that industry firms could utilize with the CVSF (Kareiva, 2011). The development of natural capital economics will validate the case for inclusion of natural capital in corporate sustainability decision making.

Business Capital

The business capital of the CVSF includes a firm's financial, infrastructure, institutional, and all forms of wealth and resources a firm controls. For the use in the CVSF, shareholders and employees are considered internal human capital of the firm. Using the CVSF highlights the long-term growth of business capital as it relies on a firm's relationship with natural and social capital, and this relationship is influenced by global drivers of change. Similar to Porter and Kramer's (2011) Created Shared Value model, the CVSF assists firms in identifying strategic opportunities to grow long-term business capital through understanding and growing natural and social capital.

Social Capital

The CVSF defines social capital as the community resources that a firm depends on for operating. These resources include tangible objects like roads, bridges, ports and other public infrastructure, and intangible resources such as culture, education, health, human well-being, and social networks. The term social capital is most often associated with social science disciplines and has informed the study of social dimensions including politics, health, education, institutions, and organizations (Adler & Kwon, 2002). The political scientist Robert Putnam has detailed the positive and negative outcomes of social capital on communities and identified the value of social capital in increasing economic productivity (Putnam, 2000). In addition to the social science tradition, The CVSF considers the public infrastructure as social capital as it provides value to a firm but is not business capital.

Global Drivers of Change

Adapted from Miller et al., (2015), global drivers of change are processes that influence natural, business, and social capital values. Divided into three dominant categories, global drivers include 1) biotic processes such as changing biodiversity, 2) abiotic processes including climate change, 3) and globalization processes such as shifts in human geography, population dynamics, political and economic systems, technological change, and ethical custom.

Using the Capital Values Sustainability Framework

There are three initial uses of the CVSF for practitioners 1) benchmarking the relationship of a firm's business capital to natural and social capital through global drivers, 2) identification of risk and vulnerability of a firm's business capital to global drivers and associated impacts on natural and social capital, 3) prioritizing stakeholder relationships and

sustainability initiatives that account for global drivers and have the greatest impact on growing capital stocks without diminishing others. For example, a firm may identify their fossil fuel emissions are escalating global climate change, and diminishing the natural capital they are dependent upon for the production of goods and resources. This is creating additional costs in the short-term from supply chain matters and leaving the firm vulnerable to regulatory changes, and availability of resources in the long-term. The CVSF could be used to mitigate short-term costs by identifying priority stakeholders for maintaining the supply of natural capital, while developing long-term solutions for increasing natural capital by mitigating the influence on global climate change through strategic investments in clean power infrastructure.

Using the CVSF to understand a firm's position in the dynamic system of global drivers and capital stocks could reveal a number of innovative solutions that meet the challenge of sustainable development. The conceptual framework is a first step to realizing this goal. It is also easy to see negative applications. For example, it could be used to increase short-term gains by influencing global forces. A firm that produces military weapons could identify political drivers that would increase the demand for their goods during times of conflict. War is of course outside the paradigm of sustainable development, making the use of the CVSF unsuitable.

The Capital Values Sustainability Framework is intended for individual firms developing a sustainability strategy. The familiar corporate sustainability ven-diagram (Figure 5) established business interests (profit) as connected to people and the planet forming a triple bottom line (Elkington, 1998). The contribution of the CVSF is the integration of a dynamic systems perspective into the management of corporate sustainability. The CVSF introduces global drivers of change as necessary considerations to meet the goals of sustainable development and aligns the corporate sustainability terminology with that of modern economics in considering stocks of

natural and social capital. Complexity is a potential barrier in applying the CVSF as it spans disciplines in Earth system sciences, economics, business management, public policy, and others. However, advancements in complex climate, ecosystem, financial and economic modeling could be applied to the CVSF model.

A preliminary method is recommended in Table 1 for applying the CVSF for a single firm actor, assessing and implementing a sustainability strategy.

Steps	Example Considerations
1. Acceptance that your business is part of global change	Direct impacts on firms capital; indirect impacts through natural and social capital
2. Identify core business practices	Manufacturing; transportation; retail; service; technology; etc.
3. Assess the natural and social capital that business capital relies on	Raw materials; coastal protection; nutrient cycling; desirable environment; public services; family well-being;
4. Understand the influence of global processes on business, natural and social capital, and vice versa	Risk and vulnerability of capital stocks; business capital contributions; feedback mechanisms; compounding impacts
5. Identify primary and secondary stakeholders who influence those processes	Investors; employees; strategic alliances; partnerships; supply chain vendors; customers
6. Prioritize initiatives that result in expanding capital stocks	Investments; innovations; policies; reductions; efficiencies, philanthropy
7. Identify metrics to assess outcomes	Informed by resource economics, natural sciences, social science
8. Evaluate in an iterative process and report	Shifting baselines

Table 1: Method for CVSF Implementation

Acceptance is listed as Step #1 for any firm engaging in sustainability activities. In accepting the position of a firm as part of a larger system of complex interactions between capital stocks and global processes, a firm realizes its positive and negative contributions to the system. In Step #2, a firm identifies its core business practices and assesses the internal business capital related to social and natural capital. Step #3 identifies the specific natural and social capital stocks the firm is connected with, and Step #4 initiates a process to understand the influence of global process of these capital stocks. This step is vital to understanding the risk and vulnerability of a firm's business capital to forces of global processes. System dynamics should be applied at this stage to assess feedback mechanisms, scale, compounding influences, and adaptive capacity. Once a firm's position in the system is detailed then strategic initiatives can be developed in Step #6 based on stakeholder identification and salience. In the CVSF, stakeholders should be segmented according to their influence on specific capital stocks. Stakeholder salience is determined not only through the direct relationship with the firm's capital but also through their connection to global drivers of change. This allows the firm to prioritize stakeholder relationships who have the greatest effect on maintaining capital stocks. In Step #7 the firm identifies and assesses metrics of associated outcomes and initiatives on capital stock values. The final step initiates an evaluative process to track progress and iterate as needed. The last step is important as the inclusion of global drivers of change into the decision making system, integrates a dynamic principle of ever shifting baselines. Finally, a firm is called to report on initiatives and outcomes as this process contributes to increasing a firms capital stocks by highlighting efforts and successes to consumers, stakeholders, and shareholders.

Part II: Corporate Sustainability of Cruise Industry Firms

“We are not students of some subject matter, but students of problems. And problems may cut right across the borders of any subject matter or principle”
- Karl Popper

Part I of this thesis established the sustainable development and corporate sustainability paradigms as parallel ideals helping to shape the current and future decision making of intergovernmental and nongovernmental organizations, and industry firms. Chapter 1 described the coastal and marine tourism industry and the applied the SD paradigm for managing tourism as a form of sustainable tourism. Chapter 2 introduced the underpinning concepts of corporate sustainability and connections to the SD paradigm. The literature suggests a number of theories and methods for meeting near-term goals of corporate sustainability. However, little guidance is given for fulfilling the intergenerational goal of sustainable development. The Capital Values Sustainability Framework is introduced as a systems model for integrating global drivers of change and stocks of natural, business, and social capital as related to a single firm. In considering global processes, firms engaged in corporate sustainability initiatives benefit by identifying priority high impact initiatives for meeting longer-term goals.

Part II of the thesis focuses on current corporate sustainability initiatives of cruise industry firms and is guided by two subsequent research questions:

(SRQ2) Is the message of sustainability reflected on cruise industry firm’s publications in a way that satisfies the corporate sustainability and sustainable development paradigms?

(SRQ3) To what extent do contemporary practices align with key elements of the Capital Values Sustainability Framework?

Chapter 4 identifies cruise industry firms as brokers in the coastal and marine tourism system. Drawing from academic and industry reports, the impacts of the cruise industry are described using the sustainable development terminology of environment, social, and economic. Chapter 5 addresses SRQ1 and SRQ2 and presents a content analysis of cruise firm publications, reports and websites. Using the Capital Values Sustainability Framework, notable initiatives by Carnival Corporation & PLC are detailed to address SRQ2. Key findings of this thesis and an assessment of the Capital Values Sustainability Framework are discussed in Chapter 6.

Chapter 4: The Cruise Industry

The cruise industry represents the single fastest growing segment of the global travel and tourism market (SASB, 2015). The associated influence on the environment, society and economy are of significant concern. Consumption of resources (food, fuel, and water), greenhouse gas emissions, waste disposal, and impacts on biodiversity are significant environmental concerns. Issues of shipboard health and safety along with impacts on destination communities are important social considerations. The economic impacts of the cruise industry are also called to question as economic benefits are not concentrated in host communities, and destinations may suffer unforeseen economic costs. As one of the largest tourism market segments, the cruise industry firms play an important role as private-sector brokers in the marine and coastal tourism system.

4.1 Cruise Industry Brokers

There are a number of business and market segments that make up the marine and coastal tourism system. Included is a range of accommodation, transportation, service, retail, and tour operator businesses. Tour operators include businesses offering some sort of tour, experience, activity, or adventure. As defined by Sustainable Travel International in the *NTA Tour Operators Guide to Sustainable Tourism*, tour operators are:

Companies whose main business is taking individuals or groups of people to one or several places. Tours typically combine multiple vacation elements such as walking and driving and viewing and interacting with the environment. This category encompasses both in-bound and out-bound tour operators as well as tour wholesalers and travel agents (STI, 2010).

Cruise firms are primary examples of tour operators, although the nature of the cruise business is such that it includes all or some types of tourism businesses. In this case, individual cruise firms are considered private-sector tourism brokers with connections linking the Local, and Tourist components of Miller's Broker-Local-Tourist model (Figure 5).

According to the Cruise Line International Association, the maritime cruise industry has experienced an annual average passenger growth rate of 7.2% since 1980, and is considered the fastest growing segment of the leisure travel market (CLIA, 2015). An estimated 34 new cruise vessels are projected to begin operations by year end 2016, with itineraries spanning from Polar regions to tropical destinations. (FCCA, 2013). In the U.S. the cruise industry contributes \$44 billion of gross output when accounting for direct and indirect economic impacts (CLIA, 2015). As with other tour operator businesses, the cruise industry serves as the intermediary between tourists and the particular destination. This implies the cruise industry has a unique role in applying corporate sustainability measures to achieve sustainable tourism results.

The cruise industry is segmented by mass-market, adventure, luxury, and family cruising. Furthermore, the cruise industry encompasses a range of vessel sizes. Ships can be as small as yacht style vessels carrying 10-20 passengers, to the mega cruise ships with accommodations for more than 6,000 passengers. Firms range in size from small privately owned companies to large publically traded multi-national corporations. An important distinction can be made between small-ship, and large-ship cruising. For this thesis, small-ship cruising is defined as vessels carrying less the 500 passengers. Aside from size, perhaps the greatest difference between small and large ship cruising is a matter of focus (smallshipcruises.com). In contrast to large ship cruising which focuses inward on shipboard amenities, small ship cruising focuses outward on

the destination (smallshipcruises.com). The focus outward attracts a clientele that values natural and cultural experiences, and also imposes a reliance on access to natural and social capital.

A significant risk to business operations for mass-market cruising is increased government regulations creating additional costs to operators or negative public relations campaigns from third party organizations. For all market segments clientele may be lost, or access restricted to ecologically valuable locations from negative impacts on natural or social capital attributed to cruise operations. Following the business case theory of corporate sustainability offered Carroll and Shabana (2010), cruise industry firms must consider their impacts on natural and social capital to ensure their legitimacy and license to operate as granted by society and regulators.

4.2 Governing Regulations of Cruise Tourism

The regulatory framework for an individual cruise ship is subjected to international, national, state and local jurisdictions. Cruise companies have the flexibility to choose the country in which a ship is registered, allowing for greater flexibility in dealing with strict regulatory measures in certain countries. Commonly called flying a *flag of convenience*, this strategy allows cruise industry firms to avoid taxes and regulations that impact a company's bottom line. The only stipulation is that the country of registration must be a member of the International Maritime Organization (IMO) and subsequently held accountable by the international and national regulatory frameworks for safety, labor, and environment. The International Convention for the Safety of Life at Sea (SOLAS) is the international treaty that establishes requirements for vessel safety. SOLAS regulates vessel construction, equipment, and operations, through industry standards. The International Labor Organization's Maritime Labor Convention (2006) regulates

the conditions of maritime labor. The International Convention for the Prevention of Pollution from Ships (1973/1978), known as MARPOL attempts to minimize pollution from ships by governing the discharge of materials and the emissions of greenhouse gases. International regulations for waste disposal are under jurisdiction of Annex IV MARPOL, which allows for the disposal of any waste, treated or untreated, 12 nautical miles from shore. When ships are traveling in the territorial sea of a specific country they are subjected to that countries rules and regulations. For example, in US waters, the main governing regulations for cruise ships include: the Clean Water Act, the Refuse Disposal Act, the Resource Conservation and Recovery Act, the Clean Air Act, the Oil Pollution Act of 1990, and the Act to Prevent Pollution from Ships.

4.3 Environmental, Social, and Economic Impacts of Cruise Tourism

The following impact assessment is based on a literature review of academic and practitioner reports and focuses on industry wide impacts. The terminology follows that of the sustainable development paradigm whereby impacts are considered to the environment, social, and economic components of the system. Table 2 provides an overview of cruise industry impacts, segmented by environmental, social, and economic. Of course, the consideration of cruise industry impacts should be viewed as transcending any segmentation as they are fundamentally effecting the entire system. This is most obvious when considering social and economic impacts, which could easily be grouped together as socioeconomic impacts. This makes segmentation difficult because the categories some consider fundamentally ‘social,’ others consider fundamentally ‘economic.’ In this case, segmentation is provided for organizational purposes, however others may choose to segment cruise industry impacts across the tourism system in a different manner.

Table 2: Environmental, Social, and Economic Impacts of Cruise Industry Operations

Environmental (Bonilla-Priego et al., 2014, SASB, 2015)	Social (Bonilla-Priego et al., 2014, SASB, 2015)	Economic (Clancy, 2008)
<ul style="list-style-type: none"> • Consumption of natural resources • Waste discharge • Emissions of greenhouse gases • Shoreline modifications • Impacts on biodiversity 	<ul style="list-style-type: none"> • Fair labor practices • Shipboard health and safety • Human rights • Overcrowding in Ports • Homogenization of port facilities and vendors • Noise pollution • Loss of cultural identity 	<ul style="list-style-type: none"> • Leakage of the economic benefit from the host community

Environmental Impacts

Cruise ships have come under scrutiny for their impacts on coastal communities and ecosystems due to the negative externalities associated with their operations. These include consumption of natural resources, waste discharge, emissions of greenhouse gases, shoreline modifications, and impacts on biodiversity (Bonilla-Priego et al., 2014, SASB, 2015). Large cruise ships are often equated to floating cities. The consumption of water, food, and energy resources and the generated waste streams have significant environmental concerns. Veronneau & Roy (2009) found that consumption of food and freshwater are 1.5 times normal consumption patterns, creating additional stress on resources. Sorenson (2006) detailed the impacts of high capacity cruise ships coupled with the building of new port terminals on sensitive coral reef ecosystems in Cozumel Mexico. Ecosystem impacts are not isolated to Mexico, as numerous cases have been highlighted in the work by Klein (2011). The materials that are used in ship construction must also be considered for their impacts on biodiversity. Anti-fouling agents used

on the hull of ships contain hazardous chemicals that are harmful to marine organisms (Bonilla-Priego et al., 2014).

In addition to impacts on biodiversity, the greatest environmental consequences of the cruise ship industry are waste effluent and greenhouse gas emissions. The discharge of waste water includes treated and untreated effluents, oily bilge water, and ballast water (SASB, 2015). Ships are equipped with systems that separate wastewater from sinks, showers, and laundry (grey water), and wastewater generated from toilets and medical facilities (black water). Based on an EPA report from 2004, the Sustainability Accounting Standards Board calculated the weekly discharge of black water sewage for an average size cruise ship to be 176,400 gallons (SASB, 2015). Treated and untreated sewage poses risks to fishery resources, biodiversity, and human health. Black water contains harmful bacteria and viruses, while grey water contains high levels of nutrients that impact the chemical balance and functioning of marine ecosystems. Oily bilge water has the most direct impact as a pollutant for marine ecosystems (Bonilla-Priego et al., 2014). Although retained onboard for discharge at port facilities or treated and discharged at sea, the impacts of petrochemicals on marine ecosystems cascade through the food web harming fish, birds, and marine mammals. For large cruise ships, the need to carry ballast water for stability requirements distributes invasive species throughout the oceans, leading to impacts on native ecosystems.

The energy requirements for powering cruise ships is a significant environmental hurdle for the industry. The result of burning diesel fuel to power the ships, greenhouse gas emissions contribute to global climate change and poor air quality locally. Although emissions vary depending on size of vessel and type of fuel used, Oceana has estimated the contribution to air pollution from one average size cruise ship for one day equal to 12,000 automobiles (Oceana,

2003). Ships most often use heavy bunker fuel which in addition to carbon dioxide includes nitrogen oxides (NO_x), sulfur oxides (SO_x) and particulate matter (Klein, 2011; SASB, 2015). The cruise industry contributes approximately 9.5% of GHG emissions attributed to global shipping, along with 5-8% of SO_x, and 15% of NO_x emissions (SASB, 2015). In addition to emissions from burning fossil fuels, large cruise ships incinerate waste onboard contributing to poor air quality and impacts on human health (Oceana, 2003). Oceana estimates the average cruise ship generates 7 tons of garbage during a one week cruise (Oceana, 2003).

Social Impacts

The impacts of cruise tourism on people and society is considered for two dimensions: people onboard the ships themselves, and the port communities where the ships visit. Fair labor practices, shipboard health and safety, and human rights are primary concerns onboard cruise ships (SASB, 2015; Bonilla-Priego, 2014). Cruise lines employ a large number of workers from across the globe for contract positions. Workers often face strenuous working conditions that include long-hours, poor living conditions, and low wages (SASB, 2015). The lack of regulation for flying a flag of convenience puts workers at a disadvantage for ensuring fair labor standards. Wages may be determined by nationality and cultural background rather than performance or position standards (Bonilla-Priego et al., 2014). One estimate puts monthly earnings at less than \$1000 for more than half of onboard employees (SASB, 2015). This is troubling as many workers are hired through external agencies that charge a high placement fee putting workers into debt before the start of their employment (Bonilla-Priego, 2014).

Other considerations include the health and safety of passengers and crew. The 2012 grounding and associated loss of life and capital of the Costa Concordia highlighted the inherent dangers of cruise travel. The incident called into question the safety standards of ships, firms,

and the industry, as regulated by SOLAS. Other health and safety concerns include injury, crime, fires, and disease outbreaks (SASB, 2015).

The impact on port communities can include unequal distribution of benefits, overcrowding, homogenization of port facilities and vendors, noise pollution, and loss of cultural identity (Klein, 2011). The sheer number of people that cruise ships unload in port destinations can overwhelm local communities, facilities, and resources, impacting quality of life while creating issues of social justice and inequality. There may be positive outcomes including interactions between residents and cruise passengers that offer a cultural learning experience and opportunities for local people to benefit economically (De Grosbois, 2016). However this is not well described in the literature and may ultimately not be significant.

Economic Impacts

The economic impact of cruise ship tourism has received extensive attention from industry reports (CLIA, 2015; FCCA, 2015) and academic publications (Clancy 2008; Dowling 2006). Positive impacts include job creation, capital expenditures, revenue generation for destination businesses, government revenues, and development of infrastructure and facilities (Dowling, 2006; De Grosbois, 2016). A report prepared by the Business Research and Economic Advisors (BREA) for the Florida-Caribbean Cruise Association (FCCA), estimated for year 2013/2014 that cruise tourism generated \$3.16 billion in direct expenditures, 75,050 jobs, and \$976 million in employee wages for 35 destinations that were included in the study (FCCA, 2015).

Some (Clancy, 2008; Klein, 2011) argue the economic benefits claimed by industry reports are overstated and do not account for negative costs to communities. Many cruise companies own and operate vendor services and retail businesses creating ‘leakage’ of the

economic benefit from the host community (Clancy, 2008). By internalizing business services, while also leveraging power for favorable contracts with excursion, transportation, shopping and restaurant vendors, cruise firms are maximizing internal profits while creating unequal distribution of benefits to host destinations.

Given the context of diminishing natural capital globally and the influence of global drivers of change such as climate and human population, the environmental, social, and economic impacts of the cruise industry are troubling. However increased attention on these impacts is leading to the development of corporate sustainability initiatives by individual cruise industry firms. These firms are proving the business case for corporate sustainability and in some ways shifting their impacts to create positive contributions for sustainable development.

Chapter 5: An Exploratory Study of Cruise Industry Sustainability

The cruise industry is increasingly called to scrutiny for negative impacts on environmental, social, and economic conditions, as detailed in Chapter 4 (Clancy, 2008; Hritz & Cecil, 2008; Klein, 2011; Oceana, 2003). In response, a number of firms are offering some form of public disclosure relating to their environmental, social, and economic performance. However Klein (2011) highlights there is limited research of the sustainability reporting and performance of cruise industry firms. Through a content analysis of 22 cruise firm publications and assessment of noteworthy initiatives of Carnival Corporation & PLC, this thesis provides an exploratory study of current sustainability activities of cruise industry firms.

This research takes a quantitative and qualitative approach. A content analysis of cruise firm publications and websites provides a preliminary empirical study of the sustainability activities of 22 firms. The sustainability categories used in the content analysis are related to the known environmental, social, and economic impact of the cruise industry. A qualitative assessment of noteworthy initiatives is provided to investigate the potential application of the Capital Values Sustainability Framework.

Qualitative and Quantitative Methods for Examining Sustainability Reporting

In the most general sense, quantitative is numbers, and qualitative is not. Qualitative research may be defined as a “pot-pourri of interpretive techniques” (Das 1983; pg. 301). Generally it “refers to the meanings, concepts, definitions, characteristics, metaphor, symbols, and descriptions of things” (Berg 1989, pg., 2). Mack et al., define qualitative research as a method of scientific inquiry that “...seeks to understand a given research problem or topic from the perspectives of the local population it involves” (Mack, Woodson, MacQueen, Guest, & Namey, 2005, pg. 1). Van Maanen (1983) offers further distinction between qualitative and

quantitative methods by asserting that qualitative researchers describe process rather than structure in the study of social systems (Van Maanen, 1983).

The study of cruise industry firm's sustainability follows the above guidelines offered by Van Maanen. The method of content analysis is used to study the structure of reporting mechanisms. A qualitative assessment of specific sustainability initiatives highlights the processes – in this case, sustainability activities. It is worth noting the exploratory nature of this research, in that corporate sustainability reporting is assessed, and not sustainability performance.

5.1 Exploratory Study: Content Analysis Methods

A content analysis of cruise industry firms social and environmental reporting was executed to assess how the message of sustainability is reflected in firm's public disclosures. There is a broad literature (Gray et al., 1995; Guthrie & Abeysekera 2006) detailing the study of social environmental reporting (SER) that has in general been concerned with understanding how firms interact with society through various reporting mechanisms. Parker (2005) identified content analysis as the dominant form of empirical research in the field of social and environmental accountability research.

In general terms, Weber (1990) defined content analysis as a coding method of content or text based on chosen criteria into pre-determined categories (Weber, 1990). In the field of social and environmental reporting, Guthrie (2006) defines content analysis as a “technique for gathering data” which “involves codifying qualitative and quantitative information into pre-defined categories in order to derive patterns in the presentation and reporting of information” (Guthrie, 2006, pg. 120). Guthrie (2006) further describes three primary considerations and several limitations for performing content analysis of social and environmental reports:

- 1) Unit analysis - categories of classification must be clearly and operationally defined;
- 2) Data capture - process of collecting data must be systematic and clear that an item either belongs or does not belong to a category;
- 3) Reliability and validity of content analysis - must demonstrate some characteristics for reliability and validity;
- 4) Limitations - captures quantity and not quality of reporting; and is subjective in capturing a range of narratives of a given topic.

Exploratory Content Analysis Research Methods

For analysis of selected cruise industry firms, a set of categories was developed, each containing specific units of analysis (Table 3). Categories include firm profile, sustainability reporting on firm website, and sustainability reporting via official publication. The units of analysis reveal an overall understanding of each firm's sustainability position and determine how reporting is approached, either on specific webpages or via official reports. The selected units of analysis establish the firm's background profile or address an environmental, social, or economic impact as described in Chapter 4. These categories are informed by the Global Reporting Initiative indicators of sustainability performance, and set to assess how the pillars of sustainability (environment, social, economic) are represented by individual cruise firms. This analysis focused on six environmental, five social, and one economic unit of analysis. There is overlap between units of analysis as some that are considered social in this study may be considered economic in other studies. The single economic unit of analysis was determined to combine the related efforts by firms to demonstrate their role in driving economic conditions in host communities.

Table 3: Cruise Firm Sustainability Reporting Content Analysis Structure

CATEGORY	UNIT OF ANALYSIS	UNIT CONDITION ¹
FIRM PROFILES	HQ Location	
	Privately owned or subsidiary?	
	Size of vessels - # of passengers	Range
	Sustainability' in mission, values, why travel with us? statement	(0,1)
	Specific sustainable/responsible travel statement	(0,1)
SUSTAINABILITY REPORTING ON WEBSITE	Enviro: GHG Emissions Reported	(0,1)
	Enviro: Emissions Reductions or Offsets (GHGs)	(0,1,2,3)
	Enviro: Waste Water Disposal (discharge systems for grey/black, ballast water)	(0,1,2,3)
	Enviro: Hard Waste Disposal (recycling, hazardous)	(0,1,2,3)
	Enviro: Consumption (water, food, materials)	(0,1,2,3)
	Enviro: Supply Chain 'Greening'	(0,1,2,3)
	Social: Biodiversity Stewardship through operational practices	(0,1,2,3)
	Social: Labor Information: training, development, benefits, wages	(0,1,2,3)
	Social: Occupational Health and Safety	(0,1,2,3)
	Social: Social, community and/or cultural capital	(0,1,2,3)
	Social: Philanthropy (conservation, education, health, community development)	(0,1,2,3)
Econ: Community Economic Penetration(vendors, suppliers, employees)	(0,1,2,3)	
SUSTAINABILITY REPORTING VIA OFFICIAL PUBLICATIONS	Enviro: GHG Emissions Reported	(0,1)
	Enviro: Emissions Reductions or Offsets (GHGs)	(0,1,2,3)
	Enviro: Waste Water Disposal (discharge systems for grey/black, ballast water)	(0,1,2,3)
	Enviro: Hard Waste Disposal (recycling, hazardous)	(0,1,2,3)
	Enviro: Consumption (water, food, materials)	(0,1,2,3)
	Enviro: Supply Chain 'Greening'	(0,1,2,3)
	Enviro: Biodiversity Stewardship through operational practices	(0,1,2,3)
	Social: Labor Information: training, development, benefits, wages	(0,1,2,3)
	Social: Occupational Health and Safety	(0,1,2,3)
	Social: Social, community and/or cultural capital	(0,1,2,3)
	Social: Philanthropy (conservation, education, health, community development)	(0,1,2,3)
Econ: Community Economic Penetration (vendors, suppliers, employees)	(0,1,2,3)	
¹ (0 = ABSENT, 1 = PRESENCE); (0 = ABSENT, 1 = STATEMENT, 2 = INITIATIVE, 3 = OUTCOME)		

Each unit of analysis was assessed using a condition of reporting: presence or absence (0 = No; 1 = Yes), or a measure of the type of disclosure the firm reported (0 = No, 1 = Statement, 2 = Initiatives, 3 = Outcomes). A statement refers to some form of commitment to a particular category. An initiative was determined based on a specific action or activity that a firm reported. An outcome was determined if the unit of analysis reported a qualitative or quantitative metric describing the result of the initiative undertaken by the firm.

A total of 22 firms were sampled for this exploratory study: 12 small-ship cruise firms, and 10 large-ship cruise firms (Table 4). These firms were chosen based on an internet search for small and large-ship cruise industry firms. There are other firms in the cruise industry that were omitted from this study based on their primary operating location outside of the marine and coastal zone such as European firms focusing on river cruises. Others were omitted based on information presented in a foreign language other than English or because their primary business practices included shipping or other marine industries. Small-ship cruise firms are those with an average vessel passenger capacity less than 500 passengers, and large-ship cruise firms are those with an average vessel passenger capacity greater than 500 passengers.

Table 4: Cruise Firm Sample (N=22)

Small Ship Cruise Lines	Large Ship Cruise Lines
Blount Small Ship Adventures	Crystal Cruises
Un-Cruise Adventures	Holland-America Line
Lindblad Expeditions Inc.	Royal-Caribbean International
Adventure Smith Explorations	MSC Cruises (Mediterranean Shipping Company)
American Cruise lines	Norwegian Cruise Lines
Zegrahm Expeditions	Disney Cruises - Part of Walt Disney Company
Quark Expeditions	Carnival Cruise Lines
Windstar Cruises	Celebrity Cruises
Ponant Yacht Cruises and Expeditions	Costa Cruises
Paul Gauguin Cruises	Princess Cruises
Seabourn Cruise Line	
SilverSea Cruises	

In order to capture data that describes a firm's profile and ethos, firm webpages were searched to identify a firm's size, operating structure, and commitment to sustainability. Firm webpages were searched for specific information and terms relating to sustainability. After the

basic information had been collected, a search of the firm's website for official reports relating to sustainability was conducted. Official reports were determined to be those reports separate from the firm's website itself, clearly generated for the purpose of disclosing sustainability activities. If official reports were found, then a content analysis was performed using the pre-determined categories. Further content analysis of firm's webpages was performed to determine the sustainability activities that firms disclose in unofficial reports. The categories used for the website analysis mirror those used for analysis of official reports.

5.2 Exploratory Study: Content Analysis Results

The content analysis of firm's websites found that 59% of all cruise industry firms sampled have an explicit sustainable or responsible travel statement. This includes 58% of small-ship cruise firms, and 60% of large-ship cruise firms. Results indicate small-ship cruise firms are less likely to disclose sustainability information on their websites or via official reports. Both market segments were found to report more on environmental initiatives than on social initiatives. Appendix A presents the content analysis matrix results of cruise industry firm's official sustainability publications, and Appendix B presents the matrix results of individual firm's sustainability reporting on websites.

Official Reporting

Table 5 presents the content analysis results of official publications by small-ship and large-ship cruise firms and shows a contrast between small-ship and large-ship market segments. Only two out of twelve (16.6%) small-ship firms produced an official publication, compared to seven out of ten (70%) large-ship firms.

Table 5: Sustainability Reporting of Small and Large-ship Cruise Firms via Official Reports

UNITS OF ANALYSIS REPORTED	TOTAL SMALL-SHIP FIRMS REPORTING (N=12)	TOTAL LARGE-SHIP FIRMS REPORTING (N=10)
Official reports	2	6
Greenhouse gas emissions reported	1	7
Emissions reductions (GHGs)	1	7
Waste water disposal	1	7
Hard waste disposal	1	7
Consumption	2	4
Supply chain 'greening'	2	7
Biodiversity stewardship through operational practices	1	7
Labor information	1	7
Health and safety	1	7
Social, community and/or cultural capital initiatives	1	7
Philanthropy	2	7
Community economic penetration	1	7

Of the two small-ship firms officially reporting, Quark Expeditions produced the most comprehensive publication with eleven out of twelve units of analysis reported (Table 6). The report titled ‘Sustainability and Safety’ provided statements on six units of analysis, and described initiatives targeting five units of analysis. The report details Quark’s efforts to reduce environmental impacts by implementing a carbon offset program for their Antarctic Cruise itineraries, and also for staff air travel. Further statements and initiatives including using eco-friendly cleaning supplies in their hotel operations, and sourcing only sustainable seafood have a direct impact on environmental conditions. Windstar Cruises provides information on four units of analysis, primarily focused on environmental impacts. Windstar Cruises was the only small-ship firm to provide information on emissions of greenhouse gasses. The report also describes Windstar’s efforts to source all food and beverage products from local and sustainable sources, and initiatives to reduce consumption of plastic water bottles.

Quark Expeditions discloses information for each social and economic unit of analysis. Information provided in their official report includes considerations for labor, ship-board health and safety, and community efforts through partnerships and philanthropy. They also report a commitment to positive economic contributions for the communities they visit. Windstar reports their specific philanthropic strategies targeting the communities where they do business.

Table 6: Content Analysis of Two Small-ship Cruise Firm's Official Sustainability Reports

	Quark Expeditions	Windstar Cruises
Greenhouse Gas Emissions Reported (0,1)	0	1
Emissions Reductions (GHGs) (0,1,2,3)	2	0
Waste Water Disposal (0,1,2,3)	1	0
Hard Waste Disposal (0,1,2,3)	1	0
Consumption (0,1,2,3)	2	2
Supply Chain 'Greening' (0,1,2,3)	1	2
Biodiversity Stewardship (0,1,2,3)	2	0
Labor Information (0,1,2,3)	2	0
Health and Safety (0,1,2,3)	2	0
Social, community, cultural capital (0,1,2,3)	1	2
Philanthropy (0,1,2,3)	2	2
Community Economic Penetration (0,1,2,3)	1	0

Seven large-ship cruise firms sampled in this study have published official sustainability reports in the last five years. All reports follow the Global Reporting Initiative (GRI) sustainability reporting guidelines. Figure 7 represents the condition of reporting (*statement, initiative, and outcomes*) for each sustainability unit as reported by individual firms.

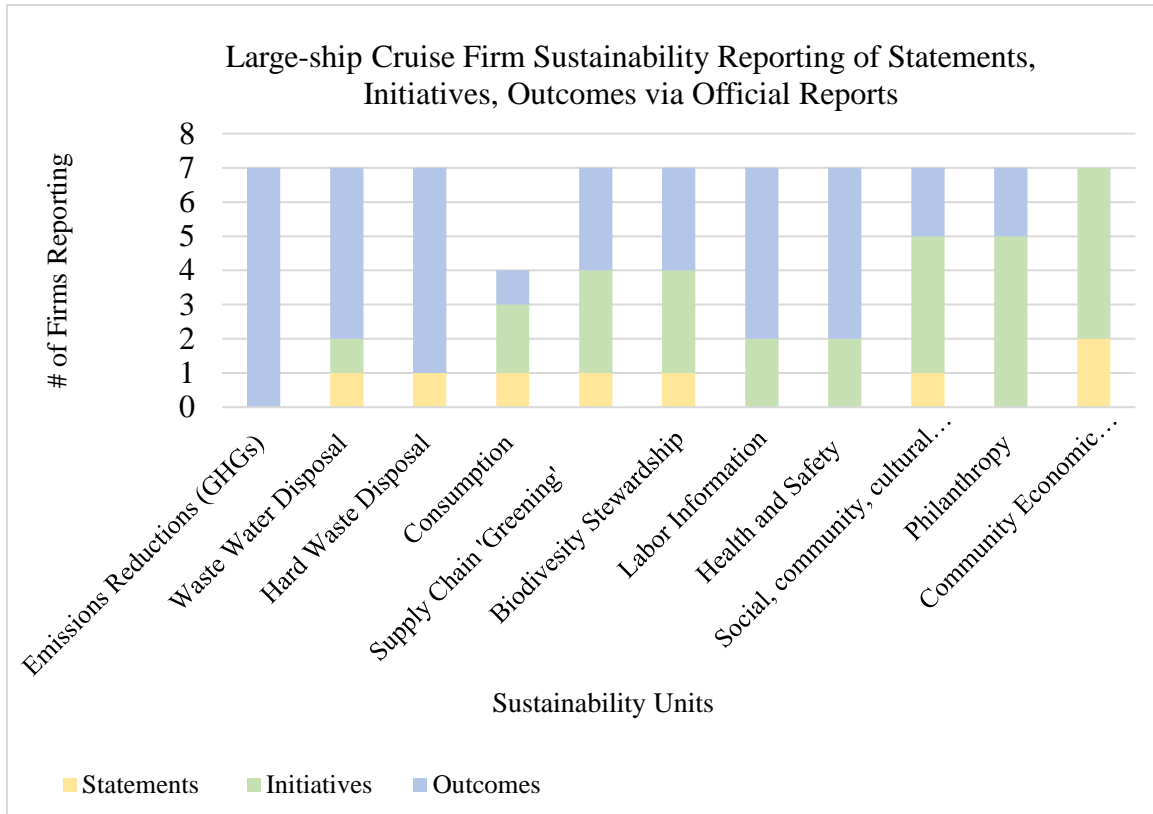


Figure 7: Large-ship Cruise Firms Official Sustainability Reporting

For large-ship cruise firms providing sustainability reports, environmental units of analysis were more likely to have outcomes reported than social or economic units. Emissions reductions, waste water disposal, and hard waste disposal are the top sustainability units that large-ship firms report. All seven firms who generated an official report provided *outcome* information for their efforts to reduce greenhouse gas emissions. Five firms disclose outcomes for their efforts in reducing the impacts of waste water disposal, and six firms disclose outcomes of their efforts to reduce impacts of hard waste disposal. These particular environmental units of analysis are associated with specific metrics that firms are able to track such as a tons of carbon emitted, amount of water discharged, and amount of waste diverted from landfills via recycling efforts. Only four firms reported any efforts to reduce consumption of water or other materials.

Consumption as a unit of analysis may be considered more difficult to measure and therefore report outcomes.

The reporting of social units of analysis by large-ship cruise firms included five firms reporting outcomes of their efforts towards fair labor standards and increased shipboard health and safety. Only two firms reported efforts to increase social, community, cultural capital; Royal-Caribbean International and Carnival Corporation & PLC. The efforts by Royal-Caribbean include company employee's participation in community development projects, serving on non-profit boards, and devoting resources for disaster relief efforts following Typhoon Haiyan in the Philippines. Carnival's efforts towards increasing social capital include the launch of the Fathom brand, which is developing a new form of cruise tourism focused on impact travel.

Community economic penetration was the only sustainability unit that outcomes were not reported. Five firms did report on initiatives to partner with local suppliers in some of the destinations they visit, while two firms reported statements of commitment to increasing local supplier alliances.

Website Reporting

Table 7 presents the content results of the sustainability reporting of cruise industry firms via on their respective websites. The results indicate that similarly to official published reports, the sustainability efforts reported on websites varies between small and large-ship market segments.

Table 7: Sustainability Reporting of Small and Large-ship Cruise Firms via Websites

UNITS OF ANALYSIS REPORTED	TOTAL SMALL-SHIP FIRMS REPORTING (N=12)	TOTAL LARGE-SHIP FIRMS REPORTING (N=10)
GHG Emissions Reported	1	1
Emissions Reductions or Offsets (GHGs)	3	6
Waste Water Disposal	2	7
Hard Waste Disposal	2	7
Consumption	0	5
Supply Chain 'Greening'	2	3
Biodiversity Stewardship through operational practices	6	6
Labor Information	0	2
Occupational Health and Safety	2	2
Social, community and/or cultural capital	5	5
Philanthropy	5	7
Community Economic Penetration	0	1

With only two small-ship cruise firms publishing official sustainability reports, this study found eight small-ship cruise firms (66.6%) report some form of sustainability activity on their websites. Figure 8 represents the condition of reporting (*statements, initiatives, outcomes*) of small-ship cruise firms via their websites. The results indicate that although reporting on websites is greater than via official reports, there is still a significant lack of reporting outcome information of sustainability efforts by small-ship firms.

Concerning environmental units of analysis, only one firm, Ponant Yacht Cruises and Expeditions discloses outcomes of their efforts towards reducing greenhouse gas emissions. The firm also describes initiatives such as recycling grey water to wash outside decks of the ships, and using a ceramic filtration system to remove hydrocarbon content from oily bilge water. Un-Cruise Adventures reports statements of sustainably sourced seafood, recycling practices, reusable water bottles in guest cabins. A total of six small-ship firms report their efforts towards biodiversity stewardship which was the most common unit reported (Figure 8). These efforts

include operational policies for reducing impacts on marine wildlife, and commitments to increase biodiversity research and stewardship.

The reporting on social and economic units of analysis varies, but results indicate some efforts towards increasing community and social capital, philanthropic activities and strategic alliances for community economic development. Lindblad Expeditions discloses extensive information on their philanthropic activities including the outcomes for communities and environmental conservation. Lindblad Expeditions has partnered with National Geographic to form the LEX-NG Fund to support community and conservation projects in the destinations the firm visits. Un-Cruise Adventures discloses information on their efforts to cultivate local partnerships for cultural tours, local purchasing practices, and donations to local organizations where the firm operates.

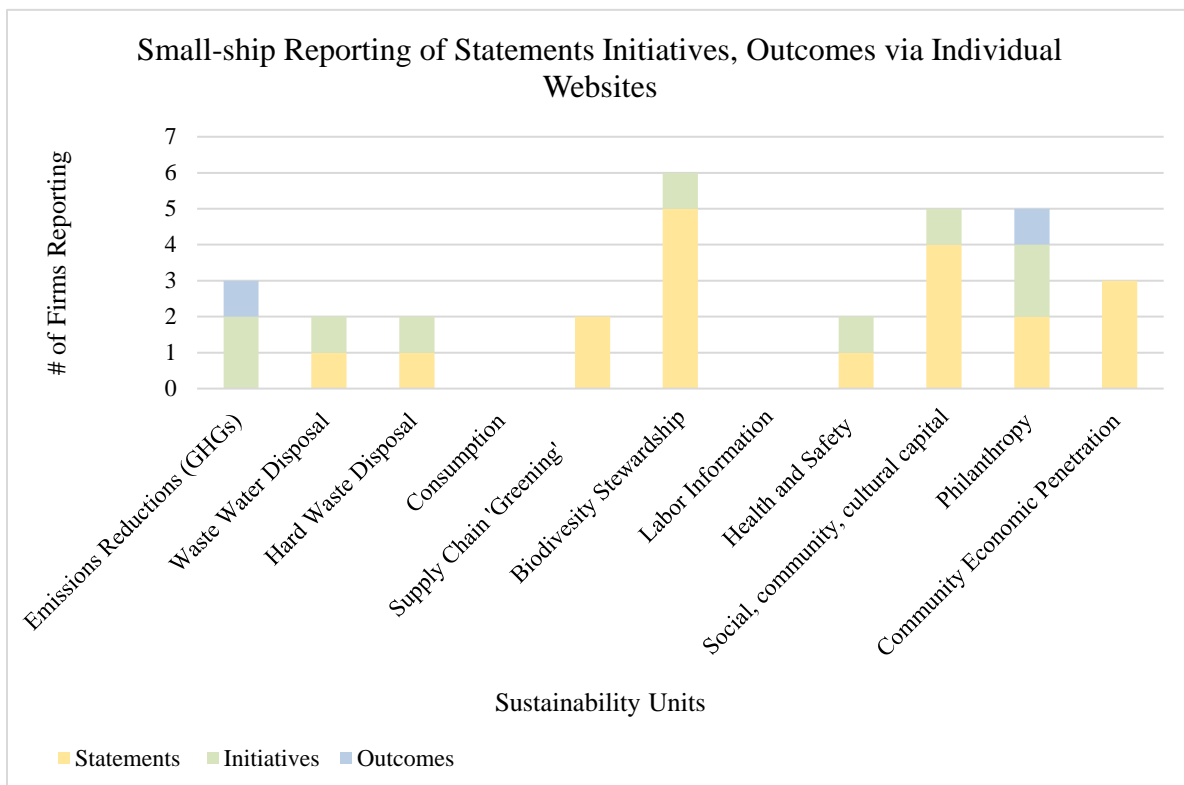


Figure 8: Small-ship Sustainability Reporting on Firm Websites

Large-ship cruise firms reporting on individual websites takes a variety forms from general statements of commitment to reporting of outcomes (Figure 9). In general, the reporting of sustainability units on firm websites is not as structured as the official published reports by the same firms. A total of eight firms (80%) disclose information on sustainability units in some manner.

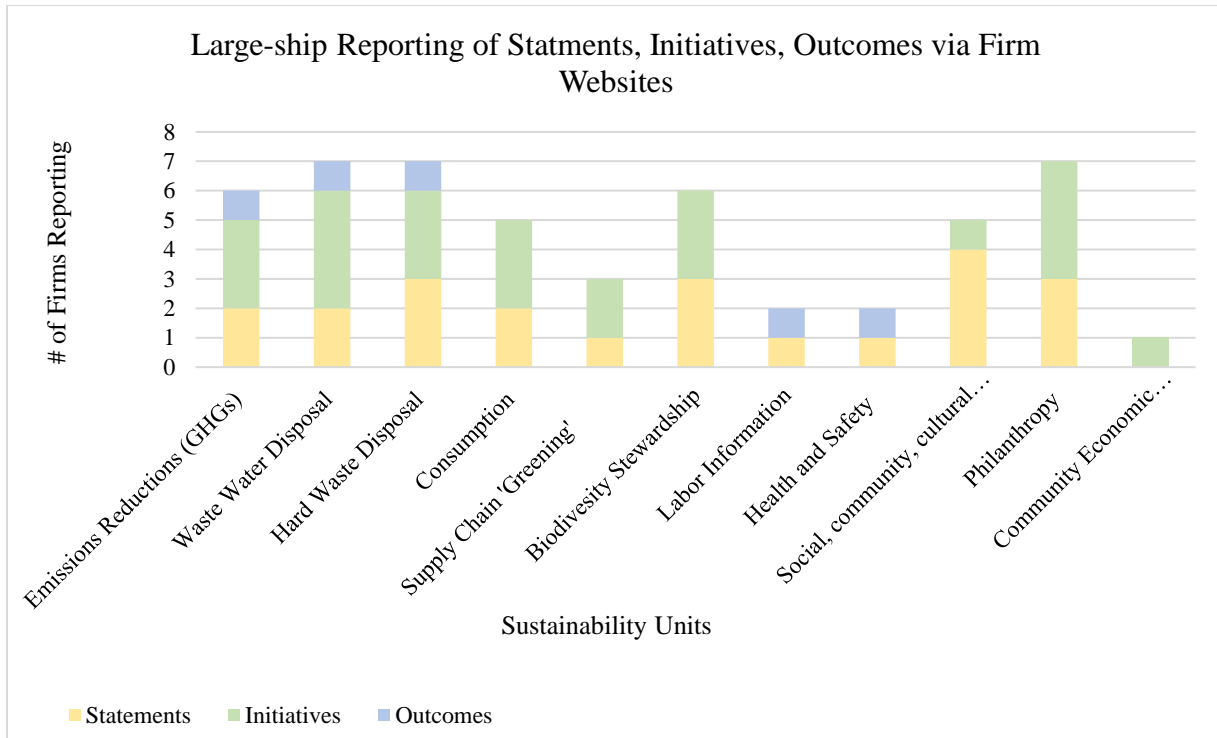


Figure 9: Large-ship Sustainability Reporting on Firm Websites

Large-ship firms are most likely to report on environmental units of analysis with several reporting initiatives targeting emissions reductions, waste water disposal, hard waste disposal, and biodiversity stewardship. The most common sustainability units that firms report are waste water disposal, hard waste disposal. Crystal cruises, who does not publish an official sustainability report, does report statements of commitment for waste water disposal, hard waste disposal, consumption, supply chain greening, and biodiversity stewardship. Similarly, MSC

Cruises also does not publish an official report, but does report statements of commitment for emissions reductions, waste water disposal, hard waste disposal. As is the case with Norwegian Cruise Lines who reports statements for emissions reductions, and biodiversity stewardship, in addition to initiatives for waste water disposal, and hard waste disposal on their website.

There is a significant lack of reporting of social and economic unit of analysis by large-ship cruise firms on their websites. Only Costa Cruises reports outcome information for their efforts towards labor practices, and shipboard health and safety. In light of the efforts by Costa Cruises to disclose information on their website, it is worth considering that these efforts may be in response to the negative public relations sentiment, associated with the Costa Concordia grounding and subsequent loss of life in 2012.

In Summary

The exploratory study of sustainability reporting by cruise industry firms indicates that sustainability is represented in a variety of ways on firm websites and official publications. The reporting mechanisms between small and large ship market segments can be differentiated in general terms, by small-ship cruise firms reporting on websites, and large-ship cruise firms reporting via official reports. Several firms report specific sustainability activities ranging from efforts to reduce greenhouse gas emissions, to creating volunteer tourism programs for their guests to participate in. There is a greater effort by all firms to report sustainability initiatives to reduce impacts on environmental concerns, then social or economic concerns. Costa Cruises provides the most extensive reporting for sustainability units on their website as well as through an official publication. In light of the considerable loss of life and capital, along with lost social legitimacy in the wake of the Costa Concordia grounding, the efforts of Costa Cruises towards increased transparency across sustainability units should not be overlooked.

It is worth noting this thesis does not provide a performance analysis of the specific activities cruise firms are reporting. Figure 7 demonstrates large-ship cruise firms are generating official reports with various level of reporting conditions, however the relative influence of these efforts to reduce negative environmental, social, and economic impacts is not known.

The exploratory nature of this thesis is an effort to understand the current sustainability reporting and therefore practices of a sample of cruise industry firms. Although this research shows some reporting of sustainability activities, it does not provide an analysis of the particular influence (positive or negative) on environmental, social, or economic conditions.

5.3 Capital Values Sustainability Framework Assessment

Part II of this thesis has thus far applied the sustainable development terminology of environment, social, and economic to describe cruise industry sustainability and explore sustainability reporting of individual firms. Using the CVSF as a conceptual guide along with the associated terminology of capital stocks and global drivers of change, a qualitative assessment explores the sustainability activities of Carnival Corporation & PLC as they relate to fulfilling the business case of corporate sustainability, and the intergenerational equity goals of sustainable development.

Carnival Corporation & PLC

Carnival Corporation & PLC (hereafter Carnival) is the largest cruise ship firm in the world. The cruise conglomerate controls ten brands including, AIDA Cruises, Carnival Cruise Line, Costa Cruises, Cunard Line, Holland America Line, P&O Cruises, P&O Australia, Princess Cruises, Seabourn Cruise Line, and the recently launched Fathom brand. The exploratory content

analysis of cruise firm sustainability reporting presented above, reveals the efforts by some Carnival brands to disclose sustainability activities via official reports across a range of environmental, social and economic dimensions. In the last two years, Carnival has undertaken three significant sustainability initiatives: (1) launch of a new cruise line focused on social impact travel named Fathom, (2) the first liquefied natural gas (LNG) powered mega-ships ordered for use by partner brand Costa Cruises, and (3) a \$2.5 million dollar partnership investment with The Nature Conservancy.

Fathom Impact Travel

Fathom is Carnival's newest cruise line launched in March of 2016 targeting the travel market segment focused on impact travel. Impact travel is most closely associated with a form of alternative travel known as volunteer tourism. Wearing (2001) defines a volunteer tourist as someone who may "...for various reasons volunteer in an organized way to undertake holidays that might involve aiding or alleviating the material poverty of some groups in society, the restoration of certain environments or research into aspect of society or environment" (Wearing 2001, pg; 1) The benefits of volunteer tourism to both tourists and host communities are controversial in many ways which has been the focus of several academic studies, but is beyond the scope of this thesis.²

Fathom describes their own form of impact travel as "...a new kind of cruise that combines your love of travel with your desire to make a difference" (<https://www.fathom.org>, accessed on May 15th, 2016). Fathom is operating week long cruises from Miami to the

² There is an extensive literature on the potential positive benefits (see: Wearing, 2001; Broad, 2003; Brown and Morrison, 2003) and negative impacts (see: Guttentag, 2009) of volunteer tourism on both the tourist and host communities.

Dominican Republic and Cuba. The cruises to Cuba include guest participation in a form of cultural immersion, and are a first for the cruise industry since the recent opening of economic relations between Cuba and the United States. The firm has established partnerships with two non-governmental organizations focused on sustainable development initiatives; Entrena, and IDDI - Instituto Dominicano De Desarrollo Integral Inc. Although volunteer tourism is not a new form of tourism, Fathom is pioneering the cruise ship setting for this particular form of alternative tourism. According to the Fathom website:

“Every Fathom journey is based on our sincere belief that the person-to-person connection is among the strongest catalysts for transformation. What sets Fathom apart is the long-term, systematic partnership approach with its partner countries paired with the unique business model that allows for sustained impact and lasting development. Fathom’s scale and global vision reach beyond what the world has ever seen.”

The success of Carnival’s Fathom brand to fulfil obligations to shareholders to generate profits, while also fulfilling intergenerational goals of sustainability development is yet to be determined. However, applying the Capital Values Sustainability Framework highlights potential synergies between this particular corporate sustainability initiative and the sustainable development paradigm.

Carnival’s investment in developing the Fathom brand of impact travel is targeting the development of social capital in the destinations the firm visits. By doing so Carnival is increasing the firm’s institutional, financial and production capital. Carnival increases its legitimacy in society and brand reputation as a firm that has positive social impacts. The positive brand reputation is important for attracting new customers as consumers are increasingly concerned with business impacts on environment and society. These efforts are important for establishing positive relationships with destination governments and communities where the firm

does business. A positive brand reputation can also attract top employees which further strengthens the firm's internal capital.

The business case can also be made for Carnival's efforts in increasing the social network or fabric of society in the destinations it visits (see Putnam, 2000). In doing so, the firm contributes to the long-term development of desirable destinations which the firm is reliant upon for its operations. These efforts relate to long-term consideration of global drivers of change and the need to create resilient communities in the face of changing global processes. Achieving the desired results is dependent on Fathom's ability to generate profits, which may be contingent upon a variety of factors outside the business case scenarios of corporate sustainability such as sales, marketing, and operations. Carnival's investment in developing the Fathom brand of cruise impact travel can be viewed as a significant effort towards increasing the social capital the firm is connected to, and in return, increasing the firm's long-term business capital.

Costa Cruises Innovation Investments

Costa Cruises, a UK based subsidiary of Carnival Corporation & PLC focuses their operations on European markets. In 2015, the firm released plans for the deployment of two new cruise ships to be 100% powered by liquefied natural gas (LNG). Each new ship will carry 6,600 passengers and will begin service in 2019. LNG is a cleaner burning fuel compared to traditional marine fuels with significantly less contributions of harmful air pollutants, particulate matter, and greenhouse gas emissions (Thomson, Corbett, & Winebrake, 2015).

Using the CVSF to assess Costa Cruises investments in new innovative technologies reveals several benefits for the firm's capital and connected natural and social capital stocks. As concern for the industry's impact on the environment and contributions to climate change continue to grow, the transition to LNG protects the firm from potential future regulations

limiting the use of marine fuels. The initial investment in the new technology may be seen as a proactive measure to protect the firm against future impacts of climate change on its operations. Although the financial cost/benefit analysis of switching to LNG is not known, it may be assumed the increased efficiency of LNG will increase shareholder profit in the long-term.

Along with increasing the firm's internal capital, the switch to cleaner fuels also increases the firm's reputation in society which attracts future customers who are concerned with environmental impacts. With Costa Cruises leading the way in implementing new technologies, the firm also connects to the social capital infrastructure of the destinations it visits. The new ships will need new supply infrastructure, which ultimately helps transition the entire industry to the cleaner burning fuel. Reducing air pollution and greenhouse gas emissions, the firm is decreasing its impacts on natural capital, which has a number of short-term and long-term benefits for the firm and society.

Partnership with The Nature Conservancy

In 2014, Carnival formed a partnership to invest \$2.5 million to The Nature Conservancy's Mapping Ocean Wealth project. The project aims to identify the most critical areas where the ocean's benefits to society are produced and establish support for protecting those places. The project implements ecosystem services valuation to derive economic assets of the world's ocean resources. The work is aimed at protecting and enhancing the natural capital of the oceans and considers future impacts of climate change, while prioritizing areas for coastal ecosystem protection.

In the CVSF, Carnival's investment in The Nature Conservancy's project is viewed as an investment in natural capital that has a direct influence on the future operations of all of Carnival's brands. As a cruise ship firm that markets and sells the aesthetic value of the

destinations it visits, Carnival has a direct stake in maintaining the health and function of ocean and coastal ecosystems. The CVSF highlights the direct influence of this natural capital on the firm's capital. The focus on mapping marine resources under dynamic influences of climate change also highlights Carnival's investment in protecting the capital values it depends on for the long-term sustainability of the firm's operations.

In Summary

Using the CVSF reveals each initiative as part of a larger sustainability strategy that considers the firm's impact on natural and social capital under the influence of global drivers change. In doing so, Carnival is merging the business case theory for engaging corporate sustainability initiatives while at the same time working to fulfil the intergenerational goals of sustainable development. The three initiatives assessed are part of a larger sustainability strategy taking place throughout Carnival's ten cruise industry brands (Carnival Corporation's New Sustainability Report, 2016). The extent to which these activities are successful at meeting the common goals of corporate sustainability and sustainable development is not known. However, the CVSF highlights how these activities may be understood relative to both paradigms.

Chapter 6: Discussion of Key Findings

Part II of this thesis details the environmental, social, and economic impacts of the cruise industry, highlighting the opportunity for individual firms to engage corporate sustainability initiatives. In doing so, firms not only achieve positive bottom line returns, but also progress the intergenerational goals of sustainable development. The content analysis of sustainability publications from 22 cruise industry firms reveals a number of firms already engaged in corporate sustainability in some form. The qualitative assessment using the CVSF of Carnival's corporate sustainability efforts provides an initial example of the utility of the framework in assessing a firm's sustainability position relative to capital stocks and global drivers of change. Chapter 6 draws from the exploratory study of Part II of this thesis to answer Subsequent Research Questions 1 and 2, and discuss the application of the Capital Values Sustainability Framework.

6.1 Key Findings

(SRQ1): Is the message of sustainability reflected on cruise industry firm's publications in a way that satisfies the corporate sustainability and sustainable development paradigms?

SRQ1 provides the broad research question underpinning the content analysis performed in this study. Through the exploration of cruise industry firm's sustainability publications, this thesis finds that to some degree, the message of sustainability is reflected on some cruise industry firm's publications. However only nine firms (41%) sampled in this study provide official sustainability reports, while other firms that report sustainability on their websites do so without adhering to third party instruments such as the Global Reporting Initiative. This makes

determining the degree to which sustainability satisfies the corporate sustainability and sustainable development paradigms difficult to determine.

Those firms that report sustainability activities tend to report on environmental initiatives more often than on social or economic initiatives. This is consistent with the findings of Bonilla-Priego et al., (2014) who determined a greater propensity of cruise firms to report on environmental initiatives that can be tied to a firm's financial bottom-line. The exploratory research presented in this thesis found a greater number of firms report initiatives and outcomes of their efforts to reduce greenhouse gas emissions, hard waste disposal, and waste water disposal. This finding is evident for both small and large-ship cruise firms, and those reporting through official publications or on their websites. The efforts to report on environmental concerns highlights the business case for corporate sustainability as firms seek to reduce costs, gain a competitive advantage, and maintain legitimacy for their operations to society (Carroll & Shabana, 2010). These initiatives may be seen as proactive measures in response to growing concerns of cruise industry impacts and possible future government regulations. However, the extent of these efforts to ultimately fulfil the intergenerational equity goals of sustainable development remains unseen.

An Opportunity for Small-ship Cruise Industry Firms

The reporting mechanisms vary across the industry with large-ship cruise firms providing more detailed official disclosures of sustainability practices, while small-ship cruise firms provide statements of commitment but little information of specific strategies and outcomes. The exploratory study highlights a gap in sustainability reporting by small-ship cruise firms.

There may be several reasons for a lack of reporting including: no perceived benefit from firm leadership, no resources for creating initiatives and reporting, or little internal knowledge of

sustainability practices. This exploratory study indicates that many small-ship cruise firms do express environmental or social commitments and therefore have some knowledge of the relationship to environmental, social, and economic conditions of the destinations they visit. It could then be inferred that many of the small-ship cruise firms lack the resources to develop and implement strategies for sustainability and sustainability reporting. By failing to devote resources to these measures, the small-ship cruise firms are missing out on the opportunity to capitalize internal profits that are associated with the business case for corporate sustainability (Carroll & Shabana, 2010).

In comparison, this research highlights some of the large-ship cruise firms as leading the way in developing, implementing, and reporting on sustainability activities through robust mechanisms such as the Global Reporting Initiative. This is curious as the large-ship cruise firms may be perceived to have greater impacts across environmental, social, and economic conditions the small-ship firms. Furthermore, the small-ship cruise firms could also be perceived to have a greater reliance upon the environmental and social conditions as their business models focus outward on the destinations (smallshipscruises.com). This would suggest a greater need for small-ship cruise firms to develop strategies for sustainability that seek to protect the firm's interests in maintaining the quality of environmental and social conditions.

(SRQ2): To what extent do contemporary practices align with key elements of the Capital Values Sustainability Framework?

The contemporary sustainability activities of cruise industry firms align to some degree with key elements of the Capital Values Sustainability Framework. The exploratory example of sustainability efforts by Carnival Corporation & PLC demonstrate efforts to maintain value in the natural and social capital stocks they have determined fundamental to the firms operations.

These initiatives demonstrate concern for global drivers of change through the impact of climate change, and challenges of human dimensions such as education and poverty. Using the CVSF, Carnival's sustainability efforts are viewed as targeting both the business case for corporate sustainability and long-term intergenerational equity goals of sustainable development.

As the world's largest cruise firm, Carnival's efforts to achieve sustainability outcomes should not be understated. Their industry leadership is important for moving the entire cruise industry towards more sustainable operations through the development of innovative strategies such as liquefied natural gas powered ships. Investments through the Nature Conservancy Partnership in maintaining natural capital indicates the firm is aware of its reliance on healthy and functioning marine ecosystems. Furthermore, their efforts to develop the new impact travel brand Fathom indicates a movement to include greater social considerations in their sustainability strategy. These are positive steps forward for the firm and the industry. In doing so, Carnival is capitalizing on the business case for corporate sustainability by reducing future costs attributed to changing regulatory frameworks, gaining a competitive advantage as an industry leader, establishing and maintaining legitimacy in society, and creating shared value for the natural, business, and social capital the firm is engaged with.

6.2 Applying the Capital Values Sustainability Framework

The Capital Values Sustainability Framework is promising for the application to industry firms and their efforts towards sustainability. In qualitatively assessing Carnival's sustainability efforts, the CVSF has provided a useful model for merging the corporate sustainability paradigm with the sustainable development paradigm. This exploratory study indicates that the CVSF could be used to guide individual firms in creating a sustainability strategy that generates bottom line returns, and targets the goal of intergenerational equity. In doing so, the CVSF could be used

to effectively safeguard the long-term viability of a firm's operations in the face of accelerating impacts from global change mechanisms.

The strength of the CVSF is the conceptualization of a firm's internal capital as it relates to the external natural and social capital a firm is reliant upon for operating. In deciphering the relationships between internal and external capital, a firm can develop strategies that maintain or grow the capital needed for long-term success. The efforts of Carnival Corporation & PLC to establish volunteer programs in the destinations it visits, signals an effort to increase social capital. Their investments in conservation partnerships signals an effort to increase natural capital. Both of these initiatives are strategic in that the firm has chosen specific areas that have a direct influence on growing the internal capital of the firm. Carnival's innovation strategy to develop cleaner, more efficient ships can be viewed as an internal investment that has direct influence on growing natural and social capital over the long-term, while also providing a strategy for facing the global change mechanism of climate change.

The weakness of the CVSF is the lack of developed financial metrics that internalize the costs and benefits of initiatives targeting external capital stocks. This limitation has a direct influence on a firm's capability to develop corporate sustainability strategies that fulfil the business case goal of generating profits. Related to this limitation is a need to develop financial models that utilize discounting rates accounting for future costs and benefits of pursuing specific initiatives. Developing financial models that are able to account for future costs and benefits as they relate to capital stocks and global drivers of change would promote strategies that achieve the intergenerational goals of sustainable development. The growing field of ecosystem services and related natural capital economic theory is promising, and may ultimately provide the models necessary to promote both the business case for corporate sustainability and long-term goals of

sustainable development. In this case, the CVSF may serve as a powerful conceptual model to guide decision making and highlight the relationships between capital stocks and global drivers of change.

Conclusion

This thesis has addressed the topics of the sustainable development paradigm and corporate sustainability paradigm through a focus on cruise industry firms. The Capital Values Sustainability Framework (CVSF) is a conceptual model that merges the business case goals of corporate sustainability and the long-term intergenerational equity goals of sustainable development. The CVSF accounts for three capital stocks that effect a firm's operations and success in achieving the goal of corporate sustainability; natural capital, social capital, and a firm's internal capital. The CVSF maintains the business case for corporate sustainability by detailing a firm's reliance on stocks of natural, and social capital. The framework merges the sustainable development paradigm through the accounting for global drivers of change that have a direct influence for achieving intergenerational equity. This thesis concentrated on cruise industry firms to explore how the common goals of sustainable development and corporate sustainability are currently employed, and the application of the CVSF for merging both paradigms.

Focusing on the cruise industry, the environmental, social, and economic impacts of the industry were highlighted to determine how sustainability strategies by individual firms may be formulated. A content analysis of 22 cruise industry firm's publications and websites was performed as an exploratory study to assess the current strategies by firms. The results indicate large-ship cruise firms are more likely than small-ship firms, to report the outcomes of their sustainability activities through official reports following the Global Reporting Initiative's disclosure framework. Small-ship cruise firms are more likely to report statements of commitments to sustainability categories on their websites, but few firms publish official reports detailing specific outcomes of their efforts.

In addition, this thesis explored the utility of the CVSF through a qualitative analysis of Carnival Corporation & PLC's sustainability initiatives. Using the CVSF as a conceptual model, Carnival's initiatives are identified as targeting specific natural and social capital stocks the firm is directly connected to, while considering the future impacts of climate change and human dimensions such as poverty on their business operations. In doing so, Carnival is fulfilling the business goal of corporate sustainability by benefiting from reduced costs, gaining a competitive advantage, increasing legitimacy in society, and developing win-win outcomes for their stakeholders. At the same time, by accounting for the impacts of global change processes, the firm is developing strategies that target the long-term goal of intergenerational equity that is the foundation of the sustainable development paradigm.

Of course the negative impacts of Carnival's operations on environmental, social, and economic dimensions are of significant concern. Although some firms including Carnival are reducing their impacts and working to develop sustainability strategies, the question remains, is it enough? The CVSF provides the conceptual model for merging the corporate sustainability and sustainable development paradigms and may ultimately prove valuable in helping firms meet their sustainability goals.

The future use of the CVSF as a conceptual model used for guiding sustainability by individual cruise firms would benefit from the development of metrics that allow firms to internalize the costs and benefits of their sustainability initiatives on natural and social capital. The growing field of ecosystem services could be used within the CVSF to meet this end. Furthermore, accounting for long-term intergenerational equity will require some form of economic and financial accounting that applies discounting models of future costs and benefits

for natural and social capital. The application of the CVSF as a conceptual model is a first step in this process and may guide the development of such economic models.

This thesis has focused on cruise industry firms, but the utility of the CVSF may also apply to other sectors of the marine and coastal tourism industry. Diverse private sector tourism brokers and entrepreneurs; for example, those who manage hotels, lodges, and provide tour and ecotourism services, may all benefit from the CVSF as a conceptual model guiding their own sustainability practices.

Beyond the tourism industry, the CVSF may also be utilized by firms in the shipping, oil and gas, renewable energy, aquaculture and fishing industries who wish to develop strategies for long-term business viability. Each industry is directly connected to natural capital and social capital stocks and subjected to global change processes, and would benefit from the CVSF.

Practitioners throughout the field of marine and environmental affairs may find the CVSF helpful in understanding the dynamic relationship between business interests and the impacts across environmental, social, and economic dimensions. As the field of marine and environmental affairs is concerned with the intersection of humans and nature, the CVSF could serve an important role as a conceptual model for merging the sustainable development paradigm and the corporate sustainability paradigm, and achieving positive outcomes for nature and society.

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Appendices

Appendix A: Sustainability Reporting Matrix of Official Reports from Small and Large Ship Cruise Firms

Company Name & Website	Background Reporting Information			Environmental Reporting							Social Reporting				Economic Reporting
	Sustainability/CSR report last 5 years? (0, 1)	GRI framework used? (0, 1)	Regulatory Statement? (0, 1)	GHG Emissions Reported (0, 1)	Emissions Reductions (GHGs) (0, 1, 2, 3)	Waste Water Disposal (grey/black, ballast water) (0, 1, 2, 3)	Hard Waste Disposal (recycling, hazardous) (0, 1, 2, 3)	Consumption (water, food, materials) (0, 1, 2, 3)	Supply Chain 'Greening' (0, 1, 2, 3)	Biodiversity Stewardship through operational practices (0, 1, 2, 3)	Labor Information: training, development, benefits, wages (0, 1, 2, 3)	Health and Safety (0, 1, 2, 3)	Destination community and/or cultural capital initiatives (0, 1, 2, 3)	Destination Philanthropy (Conservation, education, health, community development) (0, 1, 2, 3)	Community Economic Penetration (vendors, suppliers, employees) (0, 1, 2, 3)
Blount	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Un-Cruise Adventures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Linblad Expeditions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adventure Smith Explorations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
American Cruiselines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zegrahm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quark Expeditions	1	0	1	0	2	1	1	2	1	2	1	2	1	2	1
Windstar Cruises (report for Xanterra)	0	0	0	1	0	0	0	2	1	0	0	2	0	0	0
Ponant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paul Gauguin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seabourn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SilverSea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Cruises	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Holland-America	1	1	1	1	3	2	3	0	1	2	3	3	1	2	1
Royal-Caribbean	1	1	1	1	3	3	3	2	3	3	3	3	3	3	2
MSC Cruises	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norwegian Cruise Lines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Disney Cruises (report for Walt Disney Company)	1	1	1	0	3	1	1	1	2	1	3	3	2	2	1
Carnival Cruise Lines (report part of Carnival Corp)	1	1	1	1	3	3	3	0	2	2	2	2	3	2	2
Celebrity (Report from Royal-Caribbean)	1	1	1	1	3	3	3	3	3	3	3	3	3	3	2
Costa	1	1	1	1	3	3	3	3	3	3	3	3	3	3	2
Princess (report part of Carnival Corp)	1	1	1	1	3	3	3	0	2	2	2	2	2	2	2

For columns with (0,1), then (0 = No, 1 = Yes); For columns with (0,1,2,3) then (0 = No, 1 = Statement, 2 = Initiatives, 3 = Outcomes)

Appendix B: Sustainability Reporting Matrix of Website Reporting from Small and Large Ship Cruise Firms

Company Name & Website	Environmental Reporting							Social Reporting				Economic Reporting
	GHG Emissions Reported (0,1)	Emissions Reductions or Offsets (GHGs) (0,1,2,3)	Waste Water Disposal (grey/black, ballast water) (0,1,2,3)	Hard Waste Disposal (recycling, hazardous) (0,1,2,3)	Consumption (water, food, materials) (0,1,2,3)	Supply Chain 'Greening' (0,1,2,3)	Biodiversity Stewardship through operational practices (0,1,2,3)	Labor Information: training, development, benefits, wages (0,1,2,3)	Occupational Health and Safety (0,1,2,3)	Destination community and/or cultural capital (0,1,2,3)	Destination Philanthropy (Conservation, education, health, community development) (0,1,2,3)	Community Economic Penetration (vendors, suppliers, employees) (0,1,2,3)
Blount	0	0	0	0	0	0	0	0	0	0	0	0
Un-Cruise Adventures	0	0	0	1	0	1	1	0	0	1	1	1
Lindblad Expeditions	0	0	0	0	0	0	1	0	1	1	3	1
Adventure Smith Explorations	0	2	0	0	0	0	1	0	0	0	0	0
American Cruise lines	0	0	0	0	0	0	0	0	0	0	0	0
Zegrahm	0	0	0	0	0	0	1	0	0	1	2	0
Quark Expeditions	0	2	1	0	0	1	1	0	0	2	2	1
Windstar Cruises	0	0	0	0	0	0	0	0	0	0	0	0
Ponant	1	2	3	2	0	0	2	0	2	0	0	0
Paul Gauguin	0	0	0	0	0	0	0	0	0	1	0	0
Seabourn	0	0	0	0	0	0	0	0	0	0	0	0
SilverSea	0	0	0	0	0	0	0	0	0	0	1	0
Crystal Cruises	0	0	1	1	1	1	1	0	0	0	2	0
Holland-America	0	0	0	0	0	0	0	0	0	1	1	0
Royal-Caribbean	0	2	2	2	2	2	2	0	0	1	2	0
MSC Cruises	0	1	1	1	0	0	0	0	0	1	1	0
Norwegian Cruise Lines	0	1	2	2	0	0	1	0	0	0	0	0
Disney Cruises	0	0	0	0	0	0	0	0	0	0	0	0
Carnival Cruise Lines	0	0	0	0	0	0	0	0	0	0	0	0
Celebrity	0	2	2	1	1	0	1	0	0	0	2	0
Costa	1	3	3	3	2	2	2	3	3	2	1	2
Princess	0	2	2	2	2	0	2	1	1	1	2	0

