

School of Accounting and Corporate Governance

**Exploring the philosophical approaches underpinning the practice of
corporate environmental reporting**

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Statement of Originality

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Abstract

This study explores the philosophical underpinnings of corporate environmental disclosure from an ethical perspective to deepen the understanding of stakeholder engagement in the reporting process. Concerns regarding stakeholder engagement have been of increasing interest as the demand for different types of information have been made on entities. The degree of cynicism towards these reports indicates that many stakeholders do not believe that entities engage with them in meeting their information needs. This study questions whether there is a gap between corporate reporting and stakeholder engagement.

This issue can be explored through the lens of environmental ethics, which describes the approaches used to perceive and interact with the environment. Discourse analysis was adopted firstly to analyse the environmental disclosures of a single case study company, and secondly, to analyse the interview transcripts of a number of representatives of the company's key stakeholder groups in regard to stakeholder engagement and environmental information disclosure. Using discourse analysis, the three predominant branches of environmental ethics (utilitarianism, deontology and virtue ethics) were applied to these bodies of text in order to ascertain the ethical approaches of the case study company and its stakeholders.

It was found that a gap existed between the ethical approaches expressed in the case study company's environmental disclosures, and those expressed by external stakeholders. This gap widened as the relationship between the company and the stakeholder became less direct. Stakeholders whose relationship with the company involved internal understandings viewed the environmental interactions and subsequent reports through deontological and utilitarian approaches, corresponding to how these issues were expressed in the disclosures.

Considering other environmental issues exclusive of the case study company, a virtue ethics approach was used by all stakeholders. This approach was also used by stakeholders affected on a more personal level, and who also viewed the environmental interaction of the company with a degree of cynicism.

Environmental reports require a common language to effectively communicate with stakeholders. This study suggests that the common language of stakeholders is framed in a virtue ethics approach, which diverges from the approach expressed in the company's environmental reports. This study has enhanced our understanding through the application of

environmental ethics to stakeholders' engagement and corporate environmental disclosure, and offers a potentially fruitful opportunity for further research.

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Chapter 1

Introduction

1.1 Introduction

In recent years there has been increasing debate in regard to the preparation and content of environmental reports and the means by which organisations should engage with their stakeholders. Knowledge is continually sought to assist in understanding the motivations, effectiveness, intention and outcomes of publicly available environment reports and stakeholder engagement. This study adds to that knowledge by exploring the philosophical approaches underpinning the practice of corporate environmental reporting. In this context environmental ethics is adopted as a way to provide further insights to understanding stakeholder engagement through the reporting process. This is achieved through an analysis of the environmental ethics expressed by the case study company in its environmental disclosures, and compared with the ethical approaches demonstrated by representatives of the company's key stakeholder groups in reference to those disclosures.

1.2 Environmental Ethics

One way to explain why organisations release environmental information is through the lens of accountability, which highlights the answerability of organisations to others (Gray *et al* 1987). Accountability encompasses engagement with stakeholders based on the social responsibility to justify organisational actions which affect shared resources such as the environment and social justice. It acknowledges that organisational activity impacts others, and equally can be impacted *by* others.

The malleability of environmental accounting is highlighted by Hines (1988), who discussed the socially constructed and constructing nature of accounting. In this way, organisational boundaries, the nature of what is being reported, and how it is being reported create a discourse which presents how the organisation would like to be perceived.

Utilising this theme of critique, this study introduces a philosophical perspective through the application of environmental ethics, in an attempt to deepen the understanding of stakeholder engagement through the disclosure of environmental information. Contemporary environmental ethics has evolved into three branches which represent three distinct approaches to the environment: utilitarianism, deontology and virtue ethics. The ontology of

each of these approaches dictates that environmental issues, as well as the environment itself can be understood from distinct perspectives, deconstructing environmental issues from a hegemony of discourse into a rich and diverse multiplicity.

1.3 Research Problem and Objectives

Many organisations choose to release environmental information in an attempt to engage stakeholders and increase accountability. However gaps in accountability have been identified in these reports, highlighting the need for further research into their effectiveness in terms of stakeholder engagement (Adams 2004; Rodrigue 2010).

Reflecting changing community concerns regarding the health of the natural environment, philosophical approaches to the ethical consideration of the environment are also evolving. Rather than continuing to consider the environment as a secondary matter, some ethical frameworks such as deep ecology, which is a branch of virtue ethics, consider the environment as central to human existence and have evolved in order to encompass this perspective. Other ethical frameworks such as utilitarianism have remained anthropocentric, but expanded to encompass environmental issues.

Given the varying approaches with which stakeholders may view environmental issues, it follows that a gap may exist between the approach of an organisation, as reflected in its environmental disclosures, and those of its stakeholders. Using environmental reports as a method of accountability is open to interpretation, and the analysis of the philosophical underpinnings of not only the reports themselves, but stakeholder perceptions of them, contributes to the debate, and leads to the research question which guides this study:

Can an exploration of philosophical underpinnings through the application of environmental ethics contribute to the understanding of stakeholders' engagement with corporate environmental disclosure?

1.4 Significance of the Research

Recognising that corporate environmental disclosures are socially constructed provides a starting point through which to explore stakeholder engagement. This has not previously been explored philosophically through the lens of environmental ethics. Consequently, this study contributes to the body of knowledge by illuminating the different approaches to

environmental issues taken by the corporation as well as by key stakeholders. As an exploratory study, this research presents the first step to further analyses of this nature.

An exploration of this kind is able to highlight potential problems in engaging stakeholders through the disclosure of environmental information. In this way, this study hopes to improve the understanding of stakeholders' engagement in the reporting process through corporate environmental disclosure.

1.5 Outline of the Dissertation

This dissertation consists of five chapters, a reference section and three appendices. The second chapter provides an overview of the literature relevant to the research question, which leads to a gap in the literature where this research sits. Beginning with a discussion of the socially *constructed* and *constructing* nature of accounting, chapter two then explores some of the ontologies upon which accounting is founded. From there, accountability is explored, and the concept of sustainability, and environmental reporting practices are examined and critiqued. As this research compares the ethical approaches of the corporation with those of its stakeholders, the three environmental ethics frameworks are then discussed and the research question framed.

The third chapter discusses the methods adopted to answer the research question, and applies environmental ethics to corporate environmental disclosure. Using a qualitative approach, the application of discourse analysis on the environmental disclosures of a single case study company, and the interviews of a number of its key stakeholders are discussed and justified.

The results of this analysis are discussed in the fourth chapter of this dissertation. The application of the three traditional ethical approaches is explained in depth, along with the findings from doing so. Conclusions are arrived at and described in the fifth and final chapter of this dissertation, along with a discussion of the significance of the findings, suggestions for further research, and an outline of the limitations of this research.

1.6 Summary

This chapter outlined the research objective by providing a brief background to the research problem. Following this, the significance of this research and how it contributes to the existing body of knowledge were discussed, along with a description of the structure of this dissertation and an introduction to the research question. This introductory chapter is

followed by a review of the current body of knowledge in this area, which illustrates the gap in the current literature where this research fits.

Chapter 2

Literature Review

2.1 Introduction

Environmental reporting provides an “account” of organisational interaction with the environment. In response to increasing social interest, these accounts have become an important way for corporations to engage with stakeholders. However concerns have been raised regarding the motivations, effectiveness, intention and outcomes of these accounts. The current literature is yet to explore these issues through a philosophical lens applying an environmental ethics perspective. Accordingly, this research explores the ethical approaches of the organisation, along with those of key stakeholder groups in seeking to analyse the firm’s engagement with stakeholders through environmental reporting.

To explore the notion that philosophy and ethics can be used to examine the fundamental issues in accounting practice, the idea that accounting is socially constructed (and *constructing*) is introduced in this chapter. Following a discussion of the underlying ontologies of traditional accounting, the practice of accounting is explored through the concept of accountability. Following this, sustainability and environmental reporting practices are discussed from a critical perspective. As this research compares the ethical approaches of the corporation with those of its key stakeholders, the three traditional environmental ethical frameworks are then presented. Engaging with the literature in this chapter leads to the space juxtaposed between accounting and environmental ethics where this research fits.

Underpinning an exploration into the ethical frameworks upon which environmental reporting is based, lies the implication that such reporting is constructed through layers of history and convention. Ethical thought changes as social life varies, and as such is inseparable from social and historical contexts (MacIntyre 1998). Ethics, as a social construction, can be thought of as what is most acceptable within certain social situations, and as such is irrevocably reflected in the actions of that society, including in conventions such as accounting. In order to uncover these underpinnings, this chapter begins with a discussion of the socially constructed nature of accounting (of which corporate reporting is an element).

2.2 Accounting as a social construct

Accountants participate in the act of social construction through maintaining the illusion of objectivity. In this way accountants are not only following a preconceived reality, but also perpetuating it through their participation (Hines 1988). The positivist school of accounting research in particular, which tends to explain accounting based on the assumptions of self-interest and wealth maximisation, maintains the construction of accounting without questioning. The value of recognising the socially constructed nature of accounting lies in the aspiration to deconstruct its façade in order to allow for the possibility of alternative approaches to be incorporated into the structure of accounting, in particular accounting for the environment.

*It seems to me, that your power is a hidden power, because people only think of you as **communicating** reality, but in communicating reality, you **construct** reality.*
(Hines 1988, p. 257).

Hines (1988) discusses positivist accounting's implied claims that it performs the value neutral task of communicating reality. This perception allows accounting to maintain the legitimate position it holds within society. However, for accounting to develop as an integral part of society, it is equally relevant that the underpinnings which are its foundations be examined closely, its values exposed and its neutrality questioned. Hines argues that through such an inquiry, accounting can continue to evolve on firmer foundations.

In her later work, Hines (1992) explains the value of 'the negative' or the 'universal feminine' and in doing so contributes to dismantling the defence constructed and maintained by the positivist school of accounting research. Hines calls for an allowance of the negative space within accounting, which entails an acceptance of approaches other than the traditional positivist approach. Hines equates the positivist traditions with a patriarchal approach, which attempts to 'fill the void' by creating and maintaining the impression that accounting objectively records events that are real and as such, is value neutral.

Broadbent (1998) further exposes the socially constructed nature of accounting which was exposed by Hines (1988; 1992). Broadbent (1998) illustrates the patriarchal nature of accounting logic, and creates a space for more feminine understandings to be accepted as part of the account of business. Basing her claim on Habermas' 'Ideal Speech Situation', where a multitude of dialogues are required in order to reach an understanding (Bohman & Rehg

2011), Broadbent critiques current accounting practice which she interprets as informed by a singular, patriarchal world view. By this, she means that the values accounting favours are those associated with what Hines (1992) called the 'universal masculine'. Abstraction, emotional distance, authority, and a homogeneity stemming from the dominance of a single approach are examples of some of the values underpinning accounting that are associated with a masculine approach. Broadbent (1998) argues that this approach is biased to favour a certain type of rationality and subordinates alternative perspectives, such as perspectives associated with the 'universal feminine'. In doing so, she highlights the need to incorporate a diversity of views into accounting. She argues that allowing other voices to be heard and included in the accounting conversation dismantles the dominance of a singular narrative and allows for a more inclusive, relational, feminist approach.

The bias towards a masculine rationality that Hines (1992) and Broadbent (1998) argue against can be traced back to the philosophies of Descartes, who, in the 16th century developed an approach which reinforced the perceived superiority of reason. He philosophically severed the relationship between the human experience and the environment, (Descartes 2005), and in this way, established a hierarchy between reason and physicality, otherwise known as the Cartesian split, which permeates Western thought still today. The persistence of Cartesian thought can be demonstrated by the common perception in Western culture that humans are separate and superior to the environment. This perception is reflected in accounting practices which treat environmental issues as externalities, and not an integral part of the human, or organisational experience.

Birkin (1996) links the deep Cartesian schism in the psyche of Western thought with the West's shaky relationship with the environment, and argues that it offers little in the way of a model for reporting on environmental issues. He argues that an effective environmental account would be based on a deep ecology perspective¹, which is a system incompatible with Cartesian thought, and more closely related to Hines' (1992) account of the universal feminine. While offering some directional suggestions in Birkin (1996), Birkin (2000) later develops these concepts further. He distinguishes between the Cartesian ontology of discrete

¹ Deep ecology is an ethical framework which deconstructs the dualistic Western view and constructs in its place a vision of the world as a series of interconnecting systems, placing humans within these systems, rather than separate and superior (Mathews 1991).

objects and an approach moving closer to the deep ecology perspective, of an ontology of interconnected events, and provides some pragmatic alternatives, such as the Cloverleaf Account of Sustainable Development. The Cloverleaf model draws the focus of corporate reporting away from the ontology of discrete objects, towards an account which uses relationships and informational flows to characterise business activity.

The Cartesian split, the universal masculine and the patriarchal approach to accounting logic reflect the same issue from different angles – that a social reality has been built which favours the masculine, the dominant, the hierarchy of humans over the natural environment and the homogeneity of perspectives. Where are values such as connectedness, alterity², care, relationality, emotion and intuition? Is there a way for these alternative voices to be heard in accounting and reporting for the environment? Broadbent (1998) suggests a multitude of dialogues need to be heard in order to reach an understanding, allowing these voices to contribute to the narrative of accounting. This may be encouraged with Gray *et al's* (1987) interpretation of accountability as it allows the needs of others to be heard.

2.3 Accountability

Gray *et al* define accountability as “the onus, requirement or responsibility to provide an account (by no means necessarily a financial account) or reckoning of the actions for which one is responsible” (Gray *et al* 1987, p. 2). From this perspective, accountability is the conduit by which the firm discloses its obligations to stakeholders, and creates a stronger link between the organisation and its stakeholders. Although accountability focuses on communication *from* the organisation *to* stakeholders, it also implies a relationship in which information flows bilaterally. This bilateral flow is evident where the organisation receives information about the concerns of stakeholders, and in turn provides information about actions undertaken to address those concerns. It is by this implication that Gray’s view of accountability moves the focus of environmental accounting away from the organisation and towards the community and environment. This empowers the stakeholder through having a voice with which to influence the organisation.

² Alterity refers to the quality of difference, or otherness. It is a concept frequently drawn from in feminist thought as an alternative to homogeneity and universalism, concepts associated with a patriarchal perspective.

While Gray (1992) sees accountability in an emancipatory light, the concept is critiqued by others, who suggest that it might also be used by those in power as a means of control over those with less power (Greer and Patel 2000; O'Dwyer 2005), a perspective shared by Roberts (2009), who critiques accountability's focus on transparency by looking at the organisation through the lens of psychoanalysis. Comparing the organisation facing accountability and transparency with a child as it becomes self-aware, he holds that the act of becoming self-aware alters the internal decision making processes of the organisation. This change in perspective moves the focus from action to appearances. He argues that forcing transparency onto organisations will have the unintended consequence of introducing self-censorship and deception into the reporting process, thus creating a barrier between the organisation and stakeholders, as opposed to the intention of opening up the communicative channels within this relationship.

Although accountability is a term commonly connected to environmental reporting (Gray 1992; Adams 2004; Moneva *et al* 2006), Greer and Patel (2000), along with O'Dwyer (2005) and Roberts (2009) have provided critiques which open this term to a more critical line of inquiry. At its core, accountability is a concept which implies an opening up, an *answering to* stakeholders which invites others to voice their views to the organisation, in this way dismantling the hierarchy of the organisation. However, these critiques have highlighted the possibility for accountability to also be used as a way to reinforce that hierarchy. While accountability is obviously a useful concept, these critiques help to reveal layers of meaning built into our understanding of social and environmental reporting, not all of which can be answered by the call for increased accountability.

Adams (2004) threads the concept of accountability into an ethical framework by revealing a 'reporting-performance' portrayal gap between a single case study firm's ethical, social and environmental disclosures and information about the firm's performance obtained from other sources³. She found evidence of inconsistency between the message being portrayed in the organisation's own disclosure and what was represented through other sources, demonstrating a reporting-performance portrayal gap. The magnitude of this gap was held to be a measure of the firm's accountability to stakeholders. This means that when the firm is

³ These alternative sources include media reports, databases, reference books and the websites of stakeholders such as Greenpeace, Corporate Watch and the Dow Jones Index.

reporting on events differently to other sources, it appears that the disclosures are not actually fulfilling an accountability function by providing an account to stakeholders about actions they are responsible for, but rather providing more of a public relations function of telling stakeholders what the organisation wants them to hear.

The 'reporting-performance' gap highlighted by Adams (2004) is drawn on by Rodrigue (2010), who uses similar methods to Adams to compare a firm's environmental disclosures with information obtained from other sources regarding the firm's environmental practices. Drawing also from Lewis and Unerman's (1999) earlier work on ethical relativism, Rodrigue asserts that a wider disparity between the ethical frameworks of the firm and its stakeholders leads to a lower level of accountability. Basing her framework on 'informational dynamics', she argues that a firm's environmental performance is understood through multiple reports disclosed by the firm and from other sources.

Rodrigue (2010) maintains that environmental disclosure aims to demonstrate a correspondence between the ethical position of the firm and that of its stakeholders. Considering a wide variety of stakeholder perceptions represented in publicly available publications, Rodrigue found a diverse range of perceptions about the environmental actions of the case study firm. As such, her research confirmed that the environmental disclosure of that firm did not achieve its purpose. Like Adams (2004), Rodrigue found that when the views held by the organisation concurred with those of its stakeholders, a higher level of accountability was achieved. In order to explore these issues, environmental and sustainability reporting will be discussed.

2.4 Environmental and Sustainability Reporting

Environmental reporting is an element of sustainability reporting, which traditionally also incorporates the disclosure of social and financial measures. Underpinning the concept of the sustainability report is the definition of sustainable development composed as part of the Brundtland report, which was released in 1987 in response to the UN's concern regarding increasing environmental degradation and reduction of natural resources. It contains a definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987, p. 87). This definition encompasses not only environmental concerns, but social and economic as well. It is also worth pointing out that it is entirely anthropocentric in its

perspective. It has been widely accepted by the business community as it combines two divergent concepts: sustainability and development, in a way that does not threaten the normal practice of modern business.

The term 'sustainability' is not straightforward, with researchers such as Gray and Bebbington (2000) regarding it as ambiguous and critical of its ability to be manipulated to suit a wide range of often divergent meanings. They note the frequent use of the term in annual reports, but found only one example from a wide sample of reports questioning whether environmental sustainability is congruent with economic growth. Rather than providing a way to practice business sustainably, they claim that sustainability reports are constructed as a defence against meaningful change to environmental management practice.

Environmental reports are argued by Gray (2010) to generally represent how the corporation would like stakeholders to view the issue of sustainability – as something contained and controllable which ignores “the growing body of scientific consensus” (p. 48) that unbridled economic growth is exclusive to sustainability. He follows this line of argument by questioning how to account for sustainability, and suggests the calculation of an ecological footprint, which measures the amount of area any activity requires for sustenance. He concludes without entirely supporting any of the possible solutions he mentions, only that each one contributes to a part of the narrative of environmental sustainability, without encompassing the issue in its entirety. For a solution that accomplishes this feat, Gray urges researchers to reflect and explore the meaning of sustainability further.

Gray (2010) points towards modernity as a way of thinking which supports and underpins *unsustainability*, however rather than abandoning modernity altogether, he opts for a post-modern option, retaining portions of modernity, but not at the expense of social justice and the environment. Sustainability is a possibility according to Gray, but for one structure which is the anti-thesis of sustainability: the business organisation in its current form.

Despite Gray's (2010) pessimism, environmental reporting practices continue to evolve. The guidance for current environmental reporting practices is largely derived from the principles developed by the Global Reporting Initiative (GRI). These guidelines incorporate directions to report on environmental, social and financial issues, an approach which is derived from the definition of sustainability in the Brundtland Report (Moneva *et al* 2006).

Yet even though most corporations now follow the GRI, Gray (2010) argues that the repeated use of the terms ‘sustainability’ and ‘sustainable development’ constructs a dominant narrative that disregards critical questioning. Similarly, O’Dwyer and Owen (2005) argue that whereas accountability is a process of opening the organisation up to questioning, sustainability reporting tends towards closing organisations off to questioning. In this way the sustainability movement is being appropriated by business in order to increase legitimisation (Gray 2010). To enable Gray’s vision of sustainability, the organisation must be critiqued, challenged and questioned, in particular through the role accounting plays in relation to the organisation.

2.5 Normative Environmental Ethics

Considering the approaches underpinning corporate environmental disclosure through the philosophical lens of environmental ethics is one way to answer Gray’s call for such a critique of the dominant narrative of organisational sustainability. There are a multitude of ways to approach ethical considerations in regard to the natural environment, which are yet to be explored through the vehicle of corporate environmental disclosure.

Normative environmental ethics traditionally falls into three categories; utilitarianism, deontology and virtue ethics. While these three branches of Western ethical systems were founded on the ethical dilemmas of human-to-human interactions, each can be considered in the context of the human relationship with nature, reflecting the increasing social interest in recognising the value of the natural environment. While all of these approaches offer their unique perspective, and are often used collectively, each offers varying effectiveness in different contexts (Elliot 2001).

2.5.1 Utilitarianism as an Environmental Ethic

Utilitarianism is a branch of consequentialism first articulated by Bentham in the 19th century. In developing utilitarianism, Bentham (1907) attempted to pin point what made an action “good” or otherwise. He came to the conclusion that a “good” action would reduce suffering and increase pleasure. From this foundation he constructed an ethical framework which attempts to gauge the total suffering in comparison to the total pleasure that results from an action. The ethical decision then rests only on this answer, and disregards other contextual issues.

From Bentham's foundational utilitarianism, Singer (1990) expanded the net of ethical consideration to encompass other sentient creatures in addition to humans, based on their ability to experience suffering and pleasure. While Singer's expansion of utilitarianism allowed for the consideration of beings other than humans, the utilitarian model does not allow for the ethical consideration of non-sentient systems such as eco systems, only for the sentient beings living within these systems. As such, while Singer successfully argued for the expansion of moral consideration, the mechanisms within the method he used present a weakness as an environmental ethical framework.

Another argument which demonstrates utilitarianism's weakness as an environmental ethic is the view that our current environmental crisis is the result of the aggregation of a myriad of unforeseen consequences (Sandler 2010). Since many of our actions have unintended consequences, both positive and negative, the attempt to base an ethical framework on only foreseen consequences seems unrealistic and unable to capture many of the unanticipated results of our actions, particularly in relation to the natural environment. For these reasons utilitarianism is often rejected as an effective environmental ethic.

However, utilitarianism is not altogether ineffectual, and still offers a way to consider ethical decisions which have an environmental impact. Utilitarianism is often used in business and government decisions, where the relative costs and benefits are instrumental in evaluating an outcome. It is similarly useful for considerations of a particular species' wellbeing, although as discussed, is not as useful for broader issues such as the consideration of the environment as a whole. For this reason, utilitarianism's relative simplicity offers a useful tool to be used in collaboration with other methods of ethical decision making (Elliot 2001).

2.5.2 Deontology as an Environmental Ethic

Like utilitarianism, deontology seems to offer a method of ethical decision making which is simple and easily converted to many different ethical dilemmas. Deontology is an ethical system developed by Kant, who claimed that if an action is truly ethical, it can be repeated universally in all similar situations (Larry & Moore 2008). Like Bentham, Kant (2001) attempted to reduce moral decisions down to their minimum motivation, in order to discover the core meaning of ethics, which would allow for a set of rules which could be applicable to all ethical problems. In doing so, he removed motivations such as self-interest and the preference towards those we know, since these factors create variations which cannot be

universalised. What Kant was left with was the essence of morality, which he claimed could be used in any ethical decision.

Although Kant (2001) himself did not mention the environment directly in his work, his foundational philosophy centred around the concept that only rational beings are to be treated as ends, and all else can be ethically treated as a means to this end. As such, deontology is unlikely to offer a comprehensive framework for environmental ethics.

However, concepts such as duty and obligation are still useful ethical instruments for environmental ethics. Like utilitarianism, deontology is a useful tool for some issues within environmental ethics, yet still lacks the internal mechanisms to account for the diversity of moral considerations in the context of the environment.

2.5.3 Virtue Ethics as an Environmental Ethic

Virtue ethics, on the other hand, locates the ethical decision within the subject, and allows for a subjective evaluation of ethical decisions. From its beginnings with Aristotle, it has developed and branched out into a myriad of ethical approaches which are less concerned with the reduction of moral motivations, and focused more on the context within which the decision is being made (Kenny 2010). While its beginnings were primarily anthropocentric, much like utilitarianism and deontology, the foundations of virtue ethics lay not with the attempt to shave down ethics to its bare essence, but to consider ethical decisions in context (O'Neill 2001). These foundations have allowed virtue ethics to evolve to encompass environmental issues. Two contemporary frameworks representing a virtue ethics underpinning are deep ecology and ecofeminism. While these two branches are similar, they are differentiated by a subtle difference in their approaches to the human relationship with the environment.

In Mathew's (1991) development of deep ecology, the atomistic Newtonian perception of the environment is contrasted with an alternative paradigm based on Einstein's approach to matter as a dynamic continuum, which corresponds to perceiving the environment as a series of interdependent dynamic systems. The deep ecology perspective interprets these interrelated systems as a 'self' and as such redefines the traditional concept of a self. From the deep ecology perspective, it is possible to give ethical consideration to ecological systems, and to morally consider the wellbeing of these systems; a consideration not compatible with either the utilitarian or deontological approaches.

Plumwood (1995) explains that ecofeminism is differentiated from deep ecology through its retention of an alterity between selves. Rather than re-creating the self into a homogenous whole, ecofeminism honours the differences and therefore the relationships between things. Through this focus on plurality, ecofeminism allows the ethical decision to emerge from the context, rather than as an externally imposed universal rule or calculation. Both deep ecology and ecofeminism emphasise the role of care and relationality, two aspects which transpire from the self and differ in contexts, an approach inherited from Aristotle's original conception of virtue ethics.

In exploring the philosophical underpinnings of corporate environmental disclosure, these three ethical frameworks, although at times overlapping, and not exhaustive, provide a basis for evaluating the approaches used by stakeholders in comparison to those used by the organisation. They present a tool with which to critique and question the organisational approach to disclosing environmental information with stakeholders.

2.6 Development of Research Question

Conventional accounting practice is the product of a social construction built with systems of thought founded in a Cartesian style dualism between the organisation and 'the other'. Hines (1988; 1992), Broadbent (1998) and Birkin (1996; 2000), have exposed various aspects of the socially constructed nature of conventional accounting, and in the process have contributed to opening up a space for alternative understandings within the accounting body of knowledge. More specifically, Gray and Bebbington (2000) have unlocked the concept of sustainability, inviting a deeper look into what environmental sustainability actually means, and what it might contribute to current business practice and reporting. The concept of accountability has furnished accounting with a deeper understanding about the motivations behind the preparation of environmental reporting, and Adams (2004), Rodrigue (2010), and Lewis and Unerman (1999) have added to the texture of these theories through the perspectives of various ethical dimensions.

Through exploring the philosophical underpinnings of environmental disclosure, the socially constructed nature of accounting is highlighted. If these publicly available reports are socially constructed in their current form, then it is equally valid to suppose that they can be re-constructed on the basis of the ethical approaches with which stakeholders will read them.

This research project aims to compare the ethical approaches used by stakeholders with the ethical approaches demonstrated through the environmental reports.

Accepting the invitation from Gray to look deeper into the meanings of sustainability and how these meanings might interplay with environmental reporting, this research aims to answer the question:

Can an exploration of philosophical underpinnings through the application of environmental ethics contribute to the understanding of stakeholders' engagement with corporate environmental disclosure?

Chapter 3

Methods

3.1 Introduction

The methods adopted to explore the philosophical approaches underpinning the practice of corporate environmental reporting are discussed in this chapter. Recognising that environmental disclosures are socially constructed and their use as a form of accountability is open to interpretation, analysing the disclosures and exploring stakeholder perceptions of these reports is essential. This chapter explains the case study and the discourse analysis used to explore this issue.

3.2 Qualitative Approach

Exploring socially constructed disclosures through an ethical frame requires an in-depth analysis of the rich textual data set, and hence a qualitative approach is necessary for this research. To gather data to explore ethical underpinnings requires not only environmental disclosures but also stakeholder interpretations of these disclosures. Qualitative research has proven to be particularly useful in the exploration of social issues through multiple perspectives (Cresswell 2013).

3.3 Case Study Company

As this is the first time the environmental ethical underpinnings of environmental disclosures are being explored, one company is used to demonstrate the procedure and to reflect on the findings. Using a case study approach with one company enables a deeper level of understanding, particularly with complex issues (Yin 2009). This is even more relevant where a company has unique features (Cresswell 2013). In this context, Tassal was identified as a case study worthy of exploration as Australia's largest aquaculture business and the first Australian aquaculture company to attain certification reflecting best environmental practices. Tassal obtained 'Best Aquaculture Practices' certification, is recognised as one of the top three fish farming companies (Seafood Intelligence 2013), and is a signatory to the charter committing to sustainable aquaculture practices (World Wildlife Fund 2013). Despite these achievements in environmental reporting, Tassal is still the object of some controversy within the community regarding its perceived environmental impacts, with many viewing the company as the perpetrator of substantial environmental harm. This makes Tassal an ideal case study for this research.

3.4 Data Collection

Data is collected firstly through the ‘Chairperson’s and CEO’s Report’ in Tassal’s 2010 annual report (the first example of Tassal publicly disclosing environmental information), and the environment section of the sustainability reports prepared by Tassal in 2011 and 2012, and secondly, through interviews with a diverse mix of stakeholders. Stakeholders will be chosen for their divergent views of Tassal’s environmental management and reporting practices, ranging from stakeholders who hold a very negative view of Tassal, to those who believe that Tassal is performing well in regards to its environmental impact. Stakeholders will also be chosen for their different level of knowledge regarding Tassal’s environment reports, ranging from those who have never read the environment section of the sustainability reports, to those who have an in-depth knowledge of the reports. To ensure the data collected is reliable, the researcher and interviewees will review the interview transcripts.

3.5 Discourse Analysis

Analysis of the data will be undertaken through the lens of discourse analysis. The concept of discourse incorporates the practices of talking, writing (Hardy 2001) and communicating in a broader sense, for instance through imagery and tone (Moerman & van der Laan 2007; Grant *et al* 2004). Discourse analysis is a method of analysing text, allowing for an in-depth exploration of a case study through a careful analysis of the meanings sometimes concealed beneath the words within organisational communications.

As discourse constructs meaning by making sense of events from a specific perspective, its analysis deconstructs and illuminates the implicit meanings contained within it (Hardy 2001). Such analysis acknowledges that discourse is used to communicate not only the explicit object of communication, but also its embedded ideologies (Heracleous 2004).

Since the ethical perspectives of both Tassal and its stakeholders are not expected to be communicated explicitly, a method which focuses on implied meaning and qualitative understanding is required. For this reason discourse analysis will be used to analyse the environmental section of Tassal’s sustainability reports as well as the transcripts from stakeholder interviews.

A limitation to this study is the possible subjectivity involved in the analysis. To reduce this element two independent experts will confirm the classifications of ethical approaches.

3.5.1 Discourse Groupings

In order to analyse the discourse involved in this case study, the differing approaches offered by interviewees as well as the environment sections within Tassal's annual reports will be compared through their relations to the three philosophical approaches to environmental ethics (utilitarianism, deontology and virtue ethics). While it is acknowledged that ethical approaches may not fit neatly into pre-conceived classifications, discourse analysis methods are flexible enough to allow for these natural variations. Following Butteriss *et al* (2001), beliefs and assumptions underpinning an object of discourse are more clearly defined through the application of discourse groupings. As such, this project will apply discourse groupings to the case study to demonstrate approaches founded in the three traditional environmental ethical systems as follows.

3.5.1.1 Discourse Groupings for Utilitarianism

The first ethical framework considered in this project, utilitarianism, is commonly used for the consideration of environmental ethics (Elliot 2001). Utilitarian thinking encourages a narrow field of consideration. For instance, it is not possible to continue to calculate the consequences of an action beyond a fairly immediate circle of events. This method of thought is reflected in sustainability reports through the lack of attention to the environmental impacts along the supply chain and full life cycle costs. As such, the utilitarian framework will be discerned from the discourses by demonstration of simple calculations, a numerical focus, short term and site-specific effects. For example, in this case study, a belief that the environmental impact is restricted to the site of the salmon ponds or other production facility sites would be considered an example of utilitarianism.

Utilitarianism involves a calculation of sorts, to evaluate the perceived maximisation of happiness which results from a decision. The nature of this calculation implies that only beings capable of experiencing happiness are accounted for in utilitarianism, therefore a focus on the experiences of sentient animals will also discern a utilitarian approach from the discourse.

The definition of sustainable development offered in the Brundtland Report (WCED 1987) forms the basis of much of the organisational understanding of the term sustainability. This definition focuses on the fulfilment of anthropocentric needs, demonstrating a bias towards human interests. Since these human interests represent what Bentham (1907) originally

incorporated in his field of utilitarian consideration, and corresponds with the underlying partiality towards sentience, the term ‘sustainability’ is considered also as representative of a utilitarian framework unless the context of the dialogue implies otherwise.

3.5.1.2 Discourse Grouping for Deontology

The second ethical framework to be used as the basis of a discourse grouping is deontology. Deontology focuses on ethical decisions which are repeatable in all similar circumstances. This approach is witnessed in laws and regulations which are applied to a broad horizon of situations. Consequently, any reference to Environmental Protection Agency regulations, or other guidelines and standards set by bodies in either a mandatory or voluntary capacity represents an ethical stance founded in a deontological view.

For the same reasons, references to actions which must *always* or *never* occur, or simply as the *right* or *wrong* thing to do, without reference to a wider context, are considered deontological. In this vein, other ethical ‘instructions’ such as ‘do unto others as you would have them do to you’, are considered deontological in nature.

Similarly, references to ethical decisions that are based on social contractarian views are also considered deontological, since the essence of the social contract is that members of a society collectively agree to follow the implicit and explicit rules of that society (D’Agostino *et al* 2012). The social contract tradition will be distinguished by statements referring to social license, social acceptability and social expectations.

3.5.1.3 Discourse Grouping for Virtue Ethics

The third ethical framework to be explored through these discourse groupings is virtue ethics. Aristotle’s virtue ethics focused on a personal sense of ‘living a good life’, which was not directly related to any universal or externally imposed ethical rule. As such, comments focused on a personal way of living which are mentioned in relation to the environment are considered to be representative of the virtue ethics grouping. Contemporary versions of virtue ethics such as deep ecology and ecofeminism, which have extended Aristotle’s original articulation will also help to interpret the discourse.

Since the deep ecology view is characterised by a holistic and interconnected perspective (Mathews 1991), discussion of these aspects will also form a part of the virtue ethics grouping. This perspective will be signified by mention of indicators whose condition is

reflected in a wider context, eco-systems and both temporally and chronologically wider systems. For example, any mention of environmental impact on marine eco-systems, of climate change or the relationships between systems or impacts would be considered demonstrations of a deep ecology perspective.

A subtle distinction between deep ecology and ecofeminism lies with ecofeminism's focus on relationships between different beings (Warren 2001). As such, discussion of relationships between the self and the particularities of the environment, or between the various aspects of nature will also be used as an indication of a virtue ethics approach.

These three discourse groupings will be explored through the analysis of Tassal's publicly available environmental disclosures which will then be compared with the analysis of transcripts of semi-structured interviews with various stakeholder representatives.

3.6 Interviews

The nature of information being sought from this project dictates that an in-depth discussion takes place regarding the interviewees' ethical positions concerning the reporting of environmental practices by the case firm. This is best achieved through a semi-structured interview as the set of questions can be adjusted to suit individual interviewees (Eriksson and Kovalainen 2008). This way interviewees are free to raise issues that reflect perspectives which may not have been covered adequately with the pre-planned interview questions. As such the semi-structured interview framework allows for rich discussions, and consequently, richer data including the experience, values, feelings, knowledge and sensory experience of the interviewees (King and Horrocks 2010).

3.6.1 Interview questions

The interview schedule is provided in Appendix A. These questions are designed to ascertain the position of the interviewee in regard to Tassal's reporting of environmental practices, as well as its approach to environmental ethics in general. It is acknowledged that an interviewee may not have an explicit knowledge of environmental ethics. This is not seen as an obstacle, however, as these three ethical frameworks are descriptions of the way environmental issues are generally viewed. The interview questions are designed to draw out these views and frame them in order to ascertain which of the three traditional ethical frameworks are being utilised by stakeholders.

3.6.2 Interviewees

Under guidance from the Social Sciences Human Research Ethics Committee (HREC), approval for interviewee participation will be first sought from Tassal before invitations to participate will be sent. Within the limits set by the HREC, maximum variation sampling will be used within the stakeholder groups, to include those who are impacted by Tassal's environmental management in a wide range of ways. Some of these stakeholders will be impacted by Tassal's practices on a personal level, some may have a view which is focused on an economic outlook, while others are expected to hold views in defence of the environment itself (See Appendix D). This diversity of views is structured to provide the research project with a maximum variation sampling approach in order to increase validity, as suggested by Creswell (2013) and Yin (2009).

3.7 Summary

This chapter has explained and justified the methods adopted to explore the philosophical approaches underpinning the practice of corporate environmental disclosure. The single case study approach, organisational discourse analysis, discourse groupings, choice of stakeholders and interview protocols have been discussed, explained and justified. Any foreseen limitations and criticisms have also been addressed in the process of this chapter. The findings of the research through the application of these methods will be discussed in the next chapter.

Chapter 4

Results & Discussion

4.1 Introduction

This chapter presents the results found through the application of methods discussed in the previous chapter, in order to answer the research question which guides this study:

Can an exploration of philosophical underpinnings through the application of environmental ethics contribute to the understanding of stakeholders' engagement with corporate environmental disclosure?

It has been recognised that an important aspect of an organisation's relationship with its stakeholders is the correspondence of values between these two parties, as represented through the accounts provided by the organisation, and subsequent stakeholder perceptions (Adams 2004; Rodrigue 2010). To make an assessment of whether an understanding of stakeholder engagement through the lens of environmental ethics is able to enhance our understanding of the engagement process, this chapter identifies the values expressed in the environment section of Tassal's sustainability reports, as well as those expressed in stakeholder interviews, to identify the degree of correspondence between those values.

4.2 Case Study

The single case study chosen for this research project was Tassal, a Tasmanian company whose principle activities include the hatching, farming, processing, marketing and sales of Atlantic salmon. Tassal was founded in 1986 as a private company, becoming a listed company in 2003. In 2010 Tassal became Australia's largest salmon producer - operating seven marine farms in the waters of Tasmania, six of which are in the south east of the state, with the most recently established farm site at Port Macquarie, in western Tasmania. They operate three processing facilities and two hatcheries in Tasmania, with two wholly owned subsidiaries; Tassal Operations Pty Ltd and Aquatas Pty Ltd (Tassal 2012; 2013). In 2013 Tassal was benchmarked as one of Australia's top two salmon farming companies for corporate, social and environmental reporting (Tassal 2013).

4.3 Data Collection

The first level of data collected for this research project comprises of the entire record of Tassal's publicly available environmental disclosures. These consist of a discussion within

the ‘Chairperson’s and CEO’s Report’ in the 2010 annual report (Tassal 2010); and the environment section of the sustainability reports of 2011 (Tassal 2011) and 2012 (Tassal 2012). The second level of data collected were semi-structured interviews conducted with nine of the ten stakeholder representatives approached for interviews⁴. Of the nine interviewees, seven were initially approached by Tassal’s community engagement officer, and once initial agreement was provided, the researcher then emailed a copy of the information sheet and consent form with an invitation to participate in the research project. The remaining two were approached directly by the researcher, after approval was sought from Tassal for their participation, in accordance with HREC advice (see Appendix B for the information sheet and Appendix C for the consent form, both of which were sent to participants). Interviews were completed over a period of one month, in order to minimise the effect of the possibility of rapid change in the organisational environment.

Interviewee relationships with Tassal ranged from internal stakeholders (S1), those who have an internal role with Tassal but work independently (S2, S5, S3), those whose professional role dictates that they work in conjunction or cooperation with Tassal (S4), those whose professional role involves scrutinising Tassal on behalf of a section of the community which is critical of Tassal’s environmental impacts, (S6), those who are in semi-professional roles where they find themselves at variance with Tassal (S7, S8), to the stakeholder who’s relationship with Tassal is based on the impact on personal issues such as home and community (S9). These relationships and the associated codes are illustrated in Table 4.1.

Table 4.1 Interviewed Stakeholders

| Internal Stakeholder | Code |
|---|-------------|
| Member of Tassal | S1 |
| External Stakeholders with an internal perspective | |
| Member of a related industry body | S2 |
| Member of a large environmental group | S3 |
| Local government | S4 |
| Member of the scientific community | S5 |
| External Stakeholders | |
| Community environmental law specialist | S6 |
| Member of Southern Coast Care Association of Tasmania | S7 |
| Member of the scientific community | S8 |
| Member of the local community | S9 |

⁴ The tenth stakeholder approached did not reply to the invitation to participate in this study.

4.4 Discourse Analysis

Tassal's environmental disclosures and the transcripts from stakeholder interviews were analysed using discourse analysis. The environmental ethical approaches expressed in the Tassal disclosures were then compared with the environmental ethical approaches evident in the stakeholder interview transcripts.

Discourse analysis calls for the consideration of not only *what* is being said, but also *how* it is being said. This project considers patterns and strategies which are apparent within the discourse, as well as in the text. Acknowledging the underlying patterns involves asking questions such as what kind of language is being used? What is the context? What are the themes? To answer these questions a range of discourse groupings were developed.

The groupings aided with understanding the beliefs and assumptions underpinning the discourses, and enabled an identification of different themes from within Tassal's environmental disclosures and the stakeholders' perspectives. The discourse groupings created represent the key elements of the three predominant ethical approaches to environmental issues – utilitarianism, deontology and virtue ethics (see Appendix E). Sub groupings within these three primary approaches reflected the different ontological approaches and hence aided the classification. It should be noted that the frameworks underpinning ethical approaches could overlap so that one statement may be representative of two or more approaches. In such cases, the statement was either divided into separate phrases, or included in more than one grouping.

Context is very important and has to be taken into account when distinguishing between the ethical approaches within the discourse groupings. Therefore, positioning of the phrase, surrounding phrases, tone of voice and related comments are all taken into consideration. For example water quality is mentioned regularly in the Tassal environmental disclosures, and was originally considered as relating to wider, regional effects, and consequently grouped as "VEH1: Wide outlooks", but while interviewing a stakeholder internal to Tassal, it was discovered that water quality was considered by Tassal as a site specific matter.

Consequently, references to water quality found in the Tassal environmental disclosures were grouped as "UN1: Site specific focus". The next three sections provide an overview of the three discourse groupings, followed by analyses of the data to which these groupings were applied.

4.4.1 Utilitarian Discourse Groupings

Utilitarianism is founded on the concept of balancing positive and negative outcomes in a somewhat calculative formula. These outcomes are measured using a scale of happiness and suffering, experiences that are limited to sentient beings (Singer 1990). The utilitarian approach aligns closely with traditional financial accounting and reporting. Due to utilitarianism’s focus on foreseeable consequences, this ethical framework encourages a narrow field of consideration (Sandler 2010).

In light of these key aspects, sub-groupings based on balancing, a narrow focus and sentience were developed (as shown in Table 4.2). By grouping discourse into these categories, it became clear that this ethical approach was widely drawn from in Tassal’s environmental disclosures and in the interviews with stakeholders, particularly those with closer ties to Tassal’s operations. Below is an example of the UB2 subcategory of the utilitarian discourse grouping:

S2: “Tassal provide a very important economic input, employment in regional areas of Tasmania, and even social and health benefits to Australia. Unlike a lot of fisheries the product’s sold in Australia. It’s available at a reasonable price to everyone, unlike rock lobster or abalone. So, you know, you need to be able to trade off - all businesses have an impact.”

Table 4.2 Utilitarian discourse groupings

| Balancing | | Narrow Focus | | Sentience | |
|-----------|---|--------------|--|-----------|--|
| UB1 | Balancing negative and positive outcomes | UN1 | Site specific focus | US1 | Sustainability |
| UB2 | Comparing economic outcomes with environmental impact | UN2 | Short term considerations | US2 | Specific sentient beings (eg humans, seals, birds) |
| UB2X | Arguing against, or being cynical about UB2 | UN3 | Simplified solutions, qualitative approach | | |
| | | UN4 | A particular species | | |

4.4.2 Deontological Discourse Groupings

Due to deontology’s focus on ethical decisions which can be applied universally, any reference to laws, regulations, government requirements, policy and enforceable duties were identified as representative of a deontological approach. This focus on duties reveals

deontology’s association with the social contract tradition (Larry & Moore 2008). In a social contractarian understanding, members of a society are obliged to cooperate with the wider social laws, both implicit and explicit (Hobbes 1998). This strategy acts as a defence in the face of public scrutiny, a pattern that reinforces the link between deontology and the social contract tradition. As such, any references to socially implied rules were also grouped under the deontology category.

Table 4.3 Deontological discourse groupings

| Universal Rules | | Socially Implied Rules | |
|-----------------|---------------------------------------|------------------------|-----------------------------|
| DU1 | Rules and regulations | DS1 | Socially acceptable actions |
| DU1X | Arguing against, or cynical about DU1 | DS2 | Social contract |
| DU2 | “the right thing to do” | DS3 | Social expectations |
| DU3 | “Above and beyond” regulations | | |

Below are two quotes taken from the interview transcripts, which demonstrate the DU3 subcategory of the deontology discourse grouping:

S1: *“Absolutely, absolutely. This company has a philosophy of ‘beyond compliance’ you know? So yes, we are compliant, occasionally we stuff up so we may have a tweak here or a tweak there that’s not, and that will be a stuff up, but the whole ethos of the company is beyond compliance so, yes, I believe it is important to follow regulations...”*

S2: *“The expectations of the public, in certain sectors of the public in particular, are far higher than those set out in government regulations.”*

4.4.3 Virtue Ethics Discourse Groupings

Utilitarianism and deontology grew from a tradition of reducing ethical considerations down to a key point. In contrast, virtue ethics focuses on ‘the big picture’, encompassing a wider field of consideration. As part of this holistic perspective, aspects such as relationships and interconnectedness have become key features of a virtue ethics approach (Mathews 1991; Plumwood 1995). Building also from virtue ethics’ foundation is a system of ethics which are particular to the individual, motivations which are personal or heartfelt, as well as solutions which emerge from the context. These were considered as central themes to distinguish virtue ethics, as in the following quote which falls under both the VEE1 and VEE2 subcategories of the virtue ethics discourse grouping:

S1: *“Because we are learning, you know. It’s a real learning as we go about what we are doing, and we don’t always get it right...we don’t always get it right...but there is a real heart desire to always keep improving.”*

Table 4.4 Virtue ethics discourse groupings

| Emerging from the self | | Relational focus | | Holistic Perspective | |
|------------------------|-------------------------------------|------------------|--|----------------------|--|
| VEE1 | Personal or heartfelt motivations | VER1 | Relational perspective | VEH1 | Wide outlooks, both chronologically and geographically |
| VEE2 | Solutions emerging from the context | VER2 | Upstream and downstream considerations | VEH2 | “Big Picture” thinking |
| | | VER3 | Interconnectedness | | |

The following quotes are indicative of this wider pattern, demonstrating the VER3 (S9 and S7), and the VEH1 (S7) subgroupings:

S9: *“I certainly would. I would like to see what they are doing to the sex of the mussels on the shoreline. I would like to see how they are changing the filter feeder numbers from the crustaceans. There is an enormous number of crabs that are killed on the beach. I have only seen that since the fish farm has been there. I have never seen a completely healthy penguin dead on the beach before the fish farms were there. I’ve never seen three seals inside of three years before the fish farms were there. See I am a long term resident of Roaring Beach, and...”*

S7: *“The impact of man, in inverted commas, ‘man’, on the environment is about as salient as you could ever get. We do not seriously take into consideration our impact on the planet.”*

4.5 Analysis of Tassal Annual Report 2010

In 2010, Tassal had not yet produced a sustainability report, although there was a discussion within the ‘Chairperson’s and CEO’s Report’ regarding plans to develop a sustainability report, and how sustainability fitted into the overall strategy of the Tassal Group. It should be noted that these discussions appeared for half a page on the eighth page of a nine-page report – a placement which may be representative of the importance placed on sustainability issues by Tassal at the time of publication. This assumption is supported by comments made by stakeholders regarding the growing level of importance Tassal has placed on sustainability and environmental issues over time.

S4: *“I think that it is their whole future. I mean, are they actually going to be able to...see in the early days I think they took the attitude ‘Jeez this is a good way to make*

money, you just throw nets in there and you just grow the fish.’ And they made a lot of money very quickly but then people came along and thought ‘If we’re going to do this longer we are going to have to start doing it differently.’”

S4: *“I personally think it’s changed a lot over the years.”*

S2: *“...30 years ago, the general public, well 30-whatever years you want to call it, the general public would even accept an industry if they almost met their regulatory compliance. They were willing to, to turn a bit of a blind eye that they were trying pretty hard, they’re almost there, they’ve had a few breaks of the rules, but that’s OK. Whereas now, the general public, through a whole range of reasons, their acceptance levels moved above that of regulatory requirements.”*

S5: *“But I think there’s also a huge shift in consumer attitudes these days, the public require companies, particularly ones like aquaculture industry where they actually have access to a public resource, to be able to actually clearly define what impact they’re having, what they’re doing about it, good, bad or otherwise. So they can actually judge them, performance-wise”*

The portion of the annual report that represents Tassal’s 2010 environmental disclosure begins by establishing Tassal as a solid business, with no specific environmental information mentioned except for very broad categories such as climate change and greenhouse gases, with no information specific to Tassal’s environmental actions. In the context of organisational discourse analysis, this representation establishes Tassal’s focus as a business enterprise, with environmental concerns kept safely at a distance. In an approach corresponding with O’Dwyer and Owens’ (2005) claim that sustainability reporting closes the organisation from questioning, the environmental discussion is framed in primarily deontological and utilitarian terms. Tassal refer to ‘the board’, policy and government departments in an attempt to frame environmental issues in an easily controllable, and controlled context which poses no threat to their normal business activities. This approach corresponds with Gray’s (2010) reflections that sustainability is a concept used to maintain conventional business practices.

Extending this controllable and controlled theme, the link between increased summer water temperatures and climate change is made. Rather than viewing climate change as a global and somewhat out of control issue, Tassal focuses on a selective breeding programme, breeding fish stock more able to withstand increased temperatures, to serve as risk mitigation in the face of climate change (Tassal 2010). In this way, even climate change is reduced to a

controllable issue. This is in accordance with Gray's (2010) discussion of sustainability reports which critiqued environmental reporting as representing how the corporation would prefer stakeholders to view environmental issues, as something contained and controllable.

The final statement of the sustainability section within the 'Chairperson's and CEO's Report' makes the claim that "The Board considers Tassal to be a sustainable aquaculture company from an environmental, operational and financial perspective" (Tassal 2010, p. 9), once again reducing the issue of sustainability to a manageable and contained practice, an approach corresponding with a utilitarian ontology.

4.6 Analysis of Tassal Annual Sustainability Report 2011 (Environment Section)

The year 2011 marks the first year that a standalone sustainability report was publicly released by Tassal. Within the fifty three page sustainability report, this project focuses on the twenty four pages which make up the environment section. The environment section of the sustainability report opens with statements which reinforce the perspective of Tassal as a strong business, once again avoiding placing the environment in a central position. This section continues to draw heavily from utilitarian and deontological approaches to environmental issues, but also incorporates a virtue ethics perspective in some areas.

The virtue ethics approach is used to discuss some issues in this report, however the theme is not brought together to form a cohesive narrative based on a holistic or interconnected view which would characterise a virtue ethics approach, but is left as four disparate pieces unconnected to any broader picture, indicating that the virtue ethics approach is not the underlying foundation.

Like the 2010 disclosure, utilitarianism and deontology provide the underpinning themes for the 2011 environmental section of Tassal's sustainability report. At two points within this report environmental issues are introduced by establishing that Tassal has complied with the appropriate regulations, followed by a statement that social or other expectations exceed regulatory standards:

"Our sustainability advisory committee and other stakeholders have clearly communicated to us that the continued humane destruction of seals in accordance with government protocols is not viewed as a sustainable or an acceptable management practice. In response to this feedback, from August, 2011, Tassal has ceased the use of all/any destruction protocols for wildlife in all its operations." (Tassal 2011, p. 30).

“Although recent studies show the environmental impact of copper based anti-foulants near farms to be relatively minor and manageable, Tassal recognises that there are potential cumulative impacts to the receiving environment.” (Tassal 2011, p. 30)

The first of these quotes demonstrates the DU1 deontology subcategory. In both of these instances Tassal adheres to the perceived social or other expectations rather than to the legal requirements. Despite stakeholders both internal and external to Tassal, as well as the disclosure itself claiming that environmental regulations and laws do not provide a high enough standard to ensure environmental impacts are kept to an acceptable level, Tassal’s 2011 environmental disclosure continues to frame environmental issues in a regulatory context.

This regulatory context signifies a deontological approach to environmental ethics. The utilitarian approach is also evident in the 2011 report, with a focus on site specific and anthropocentric concerns, as well as quantitative explanations. This approach reinforces the construction of Tassal’s environmental interactions as easily controllable and controlled by Tassal.

4.7 Analysis of Tassal Annual Sustainability Report 2012 (Environment Section)

In 2012, the environment section consisted of 2,268 words out of a total 5,172 words in Tassal’s sustainability report. The report for this year is available through a webpage which is not available as a stand-alone pdf or otherwise printable as a single document. The 2012 report begins by delineating and shrinking Tassal’s organisational boundaries, and therefore diminishing the extent of their environmental responsibilities. It is established from the initial paragraph that the fish farm sites are the limits to Tassal’s environmental concerns. In keeping with this narrow focus the report follows with a discussion of the very close issue of salmon health (which was in another section of the 2011 sustainability report but is included as part of ‘environment’ in 2012). The following quote demonstrates the DU1 subcategory of the deontological approach through mention of a marine farming license, the DU2 subcategory by mentioning “the right thing to do”, as well as the UN1 subcategory of the utilitarian approach through a site-specific focus.

“Managing the water quality and benthic health around our farms is not only a condition of our Marine Farming license but it’s simply the right thing to do, and it’s key to our fish performance and quality. Tassal is committed to sound environmental practices at our marine sites and we are currently working to better understand the

hydrodynamic profiles of our sites, and the organic inputs from our farming operations.”(Tassal 2012)

The socially constructed nature of organisational boundaries was illuminated by Hines (1988), when she described the arbitrary delineation of the organisation, and accountants' role in establishing the boundaries of the organisation. The approach in the environmental section of Tassal's 2012 sustainability report highlights Hines' assertions in the malleability in delineating its organisational boundaries.

The theme of salmon as a healthy consumer product is repeated in the 2012 environment section of the sustainability report in the 'Fish Health Management' section as well as the sections discussing antibiotic use and copper anti-foulant. This repeated reduction of the animals themselves into a consumer product reinforces the narrow focus established in the introductory paragraph.

The theme of restricted focus is continued throughout the report through the use of hyperlinks which lead the reader to external websites if they require further information, for example there is a link to a marine supplier's website for information regarding the development of copper-free nets; to a website about *astaxanthin* for information regarding the use of synthetic colouring; a link to Tassal's fish food supplier's website for further information regarding salmon food; a link to the Department of Primary Industries, Parks, Water and Environment for further information about the Australian fur seal; and a link to an article published by the Tasmanian Seafood Industry for further information about Tassal's strategies for deterring seals. These links to external sites further emphasise the restrained considerations of Tassal's environmental concerns, corresponding to a utilitarian ethical approach and a socially constructed organisational boundary.

The utilitarian approach is demonstrated further through the disproportionate focus on anthropocentric concerns such as the visual and noise impacts on local communities. Evidence of a virtue ethics approach, however, has decreased since the 2011 report, with only two virtue ethics framed themes mentioned in the 2012 report – Tassal's involvement with a larger area based environmental project, and the source of the salmon food.

The three examples of Tassal's public environmental disclosure demonstrate a bias towards reporting environmental issues in deontological and utilitarian terms. Through discourse analysis, it has also been established that each of these reports has also sought to diminish the

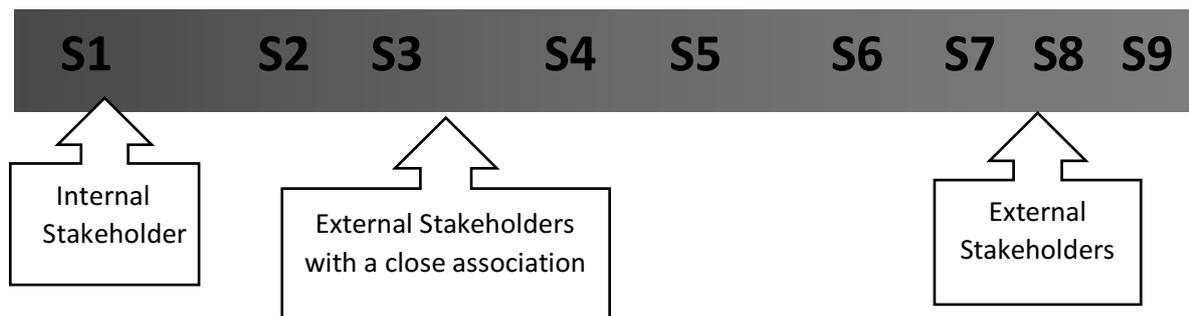
extent to which Tassal is responsible for environmental impact. The construction of the boundaries of an organisation reflects Hines' (1988) view of the socially constructed nature of organisational boundaries.

Through the lens of discourse analysis, the strategies of restricting organisational boundaries in the context of environmental reporting, as well as the use of deontological and utilitarian ethical approaches align with a more 'legitimate' outlook. Keeping environmental reporting restricted to established and easily justifiable terms endeavours to ensure that 'socially acceptable behaviour' is adhered to. In terms of social contract theory, these approaches are conventional and moderate, in this way adhering to social conventions (Hobbes 1998). This approach to environmental reporting accords with O'Dwyer and Owens' (2005) claim that sustainability reporting closes the organisation to questioning by stakeholders.

4.8 Stakeholder Interviews

The stakeholders are represented in Figure 4.1 in accordance with the researcher's perception of the stakeholder's relationship to Tassal, as obtained through the interviews. It must be noted that the diagram is purely for the purpose of comparison as the stakeholders present a spectrum of perspectives rather than neatly compartmentalised views.

Figure 4.1 Stakeholder Relationships



The ethical approaches used by interviewees reflected their position in relation to Tassal, with those with a professionally based relationship framing their discussion of Tassal's environmental impacts and subsequent reporting in more utilitarian and deontological terms than those who were more professionally distant to Tassal. The interviewees impacted by Tassal's environmental actions on a more personal level approached the reports and their impressions of Tassal's environmental impacts from positions corresponding with a virtue ethics perspective.

Although every interviewee used all three of the traditional environmental ethics frameworks in their discussions of Tassal's environmental reporting, the focus or main drive of their perspectives stemmed from a specific outlook.

4.8.1 Internal Stakeholder (S1)

The underlying pattern of the internal stakeholder's approach to environmental ethics was similar to that of Tassal's environmental disclosures. In relation to her perspective of Tassal's environmental management and subsequent disclosure, her view was framed in a predominantly deontological and utilitarian approach, as in the following quote which represents the UN1 subcategory.

S1: "So there are site specific nutrient impacts but I don't really have a personal problem with that because I know that when those sites are allowed they return to...so I don't have an issue about that."

However, the internal stakeholder's utilitarian approach was also balanced by a measure of cynicism about comparing economic outcomes with other impacts, which demonstrates the UB2X subcategory of utilitarianism.

S1: "...and then there is something funny about our society where that is a measure of good, you know, that economic growth is a measure of good... I play with that too because for me, I think, shouldn't it be a happiness scale?"

Colouring her approach to environmental issues, including Tassal's environmental interactions, was a virtue ethics based perspective, which seemed to be filtered out during the process of creating the environmental disclosures that form a part of Tassal's sustainability report. The first two of the following quotes demonstrate the VEE1 subcategory, while the third is an example of the VEE2 subcategory, all three of which are part of the virtue ethics discourse grouping.

S1: "So there is this really complex interplay between all of those three elements of business and I wouldn't work with Tassal if I didn't think...and you know, I am a girl and I am a very emotional person as you may have gathered, and I can feel this particular company making a big difference in corporate Australia."

S1: "...and it was very much from the heart, you know, we were all appalled that this had occurred and immediately after we did this, this and this to stop it from ever happening again."

S1: *“It’s a real learning as we go about what we are doing, and we don’t always get it right...we don’t always get it right...but there is a real heart desire to always keep improving.”*

This virtue ethics perspective was highlighted during the interview when this stakeholder was questioned about her personal environmental concerns. Like most of the interviewees, climate change was a primary concern, the relational and interconnected nature of which was reinforced through her explanation of oceanic currents and how the salt, the temperature, polar ice caps and flow of the currents were all interdependent and how in turn, the current state of the environment was dependent on this process. This response demonstrates the VER1, VER3 and VEH1 subcategories of the virtue ethics discourse grouping:

S1: *“...both my husband and I are science trained and marine science trained and have an understanding of how the oceans work and what drives the currents and, you know, the currents and nutrient and temperature profiles of the currents and what the world’s fisheries depend on and what the world’s ecosystems depend on and if something were to happen to one of those currents then the whole thing could just be completely rooted. And it is kind of...that’s a bit scary. You know, you could literally wake up and there’s soup on your doorstep, jellyfish soup. You know? Like one of the major drivers of the world’s currents is the freezing of the ice caps, when the water freezes it excludes salt and salt is heavy and so the water...there are currents that flow...the world’s oceans are just like these massive currents, kind of like some flow here, some flow there, but the driver, the primary driver is the freezing and the melting of the ice caps...”*

The pattern of approaching personal environmental concerns with a virtue ethics view is shared between all three groups of stakeholders. However this approach is notably contrasted with a deontological and utilitarian approach when discussing Tassal’s environmental management and reporting. This variation in approach may be explained by this stakeholder’s understanding of the regulatory framework within which Tassal operates. The pattern of approaching Tassal’s environmental management and reporting in deontological and utilitarian terms is repeated in the interviews with external stakeholders who view Tassal from an internal perspective due to their close professional relationship to the organisation.

4.8.2 External Stakeholders with an Internal Perspective (S2, S3, S4 & S5)

Of the interviewees, three hold positions external to Tassal, but fulfil a role which works in cohesion with Tassal. For instance, one works for an industry body of which Tassal is a member, one provides environmental monitoring and research to Tassal, and another holds a role in a body which endorses Tassal’s sustainability report. Although these stakeholders are

external, they work very closely to Tassal, and are considered to have an internal perspective. Another external stakeholder has also been grouped in this category as he works closely with Tassal through his role in local government, although it is noted that his role is not as close as the other three stakeholders in this group.

While discussing the environmental section of Tassal's sustainability report, these stakeholders predominantly spoke in deontological terms. For instance when questioned about regulations in relation to Tassal's environmental impact, these stakeholders answered with responses that correspond with the DU1 subcategory of the deontology discourse grouping:

S2: *"Obviously they're not going to be allowed to continue their operations if they're having a large negative impact on the environment around their farms. They're certainly controlled under tight regulation and tight requirements..."*

S2: *"Look I'd say, in general I'd say marine farms, or Tassal marine farms, all marine farms are neutral. They're under tight regulation and tight control to not have a devastating or a detrimental impact on the environment."*

S5: *"Yeah, well, absolutely, because they're there, usually, for a damn good reason. They are regulations, so if you have environmental regulations and you breach them...you are in breach of them, which is problematic..."*

S3: *"Obviously it's important that they're set at the right, at the right level. So environmental regulations in many cases become a minimum standard rather than necessarily best practice or where you need to be. So, in Australia we're not doing so bad, but if you were to say you were following environmental regulations in Thailand then that might not mean the same as what it means here."*

This group of stakeholders also relied heavily on using utilitarian approaches to justify actions which had a damaging environmental impact, in these cases corresponding with the UB1 subcategory of the utilitarian discourse grouping:

S4: *"There would be some degree of negative impact and it is just a matter of quantifying and balancing that out sustainably."*

S2: *"I suppose you need to balance all aspects, but weight them depending on what side of the fence you sit. Weight them relative to outcome."*

When the interview questions led the stakeholders to consider their own perspectives on environmental issues, their approach changed from the predominantly deontological and utilitarian view to a virtue ethics approach. For instance when asked

to identify environmental issues which were important to them personally, most responded with concerns about climate change. Climate change itself is an issue which encompasses wide outlooks both chronologically and geographically and focuses on the relational aspects of effects, presenting an issue that is framed in a virtue ethics approach, and represents the VEH1 subcategory of the virtue ethics discourse grouping, as do the following quotes:

S3: *“Oh, look, can I just, sound like I’m following the media and say climate change? [laughter]... You know that scares the daylights out of me that Australia’s current, kind of, position, both politically and generally within the public, it just seems to be a non-event at the moment and, you know, as a parent and as somebody who’s not that old [laughter]... almost, I’ve got at least another 40 years to go, yes, that bothers me that we’re not planning appropriately to deal with those issues.”*

S4: *“Well climate change is massive. Not that you would know it from the last election. But we are already seeing impacts...we’ve got significant coastal erosion already. So we are doing a lot of research into that. And, yeah, the impacts of all aspects of climate change are going to be huge and they are going to be huge to Tassal I think too. Changing water temperatures and things like this. They are already finding changes to toxic algal blooms, the frequency of those....I think climate change is going to be a huge impact.”*

S2: *“There’s also longer term environmental changes that suggest that the world’s gone through larger changes on a larger temporal scale, even a temporal scale that we might not have picked up on yet. Look, I think there’s no denying we’re having an impact on our environment as a human race. But yeah, how much is directly attributable to warming the waters. I’ve seen opposing arguments [laughter] but things are changing, you know, there’s no denying things are changing.”*

The only external stakeholder who did not directly mention climate change also framed her perspective in virtue ethics terms by highlighting the interconnected nature of environmental issues, an approach which corresponds with the VER3 subgrouping of the virtue ethics discourse grouping:

S5: *“...I suppose the one that does kick off with me is the fact that we have this quite strong understanding of the aquaculture industry, but it’s all the changes that are happening around it and how that is, and I’m getting, I suppose, more to that sense of how the environment impacts on the aquaculture industry, which then impacts on the aquaculture industry impacts, if that makes sense? Because if you look at things like the amount of urbanisation around a lot of*

the areas which used to be relatively remote from people. The land clearing, vineyards going in, orchards going in, changes in the forestry practices, will make huge differences to land runoff and catchment inputs, we're talking about major, ripping water out of the system for the irrigation of the midlands, this huge difference to environmental flows into the system."

In summary, the perspectives of this group of stakeholders is restricted to a primarily deontological approach in relation to Tassal and their environmental reporting practices, supported by utilitarian justifications. This bias towards deontology may be explained by these stakeholders' internal perspective which allows them some understanding of the regulatory environment within which Tassal operates. When these stakeholders are focused on their own views on environmental issues, the ethical approach is framed in a virtue ethics perspective. This pattern was also reflected by the internal stakeholder's approach.

4.8.3 External stakeholders (S6, S7, S8 & S9)

The four interviewees who view Tassal from an external position exhibited a different approach. These participants are considered external to Tassal as they are not performing any roles in conjunction with Tassal, nor does any of their work involve projects done on behalf of Tassal. The positions of these stakeholders in relation to Tassal vary from working on behalf of environmental groups whose work is impacted by Tassal's environmental management, to a member of the local community whose lifestyle and living environment is perceived to be impacted by Tassal's operations. The perspectives of these stakeholders differ from the previous category in that many are not privy to the detail, nor can they influence Tassal's environmental actions as directly as those with an internal perspective.

In contrast to the first two categories of interviewees, stakeholders in this group predominantly spoke of the environment in virtue ethics terms, regardless of whether they were discussing Tassal and its reports or their own personal concerns. The following quotes represent both the VEE1 and VEE2 subcategories (S7 and S9); and the VER1, VER2 and VER3 subcategories (S9 and S6):

S7: "Absolutely. If you're not living in harmony with things around you, how are you going to survive in that environment with any longevity? And how's that environment going to exist into longevity, is the short way of looking at that, I think. And look, it's as corny as it is, but 'live and let live' really is a fairly good adage in terms of ethics"

S9: *“That you are conscious when you eat something or when you drive somewhere or when you create a footprint or when you buy something new, that you think about how it’s made, where it’s made, by whom it’s made, how old they were – Nike for instance. In relation to fish farms how much water was used in its production, how much are people getting paid - is it a fair quid for the job? The long term waste management for that industry, the levels of the mercury or pollution that are increasing in the production of that industry ...are the sorts of things I think about.”*

S6: *“...but in terms of the baseline data, in order to assess the impact on the threatened species you needed more data in relation to water...movement of water and sediment in the harbour, because that would obviously impact on nutrients, nutrient load, how the nutrient loads from the fish farms were actually dispersing or whether they were remaining in the harbour and the impact that that in fact has on that species.”*

By couching their responses in predominantly virtue ethics terms, this group of stakeholders demonstrated that they engage in environmental issues, including Tassal’s impacts, with an approach which differs from the approach with which Tassal is communicating that impact. These findings indicate that there is a gap between the values expressed in Tassal’s environmental disclosure and the values of their external stakeholders, which corresponds with the gaps articulated by Adams (2004) and Rodrigue (2010).

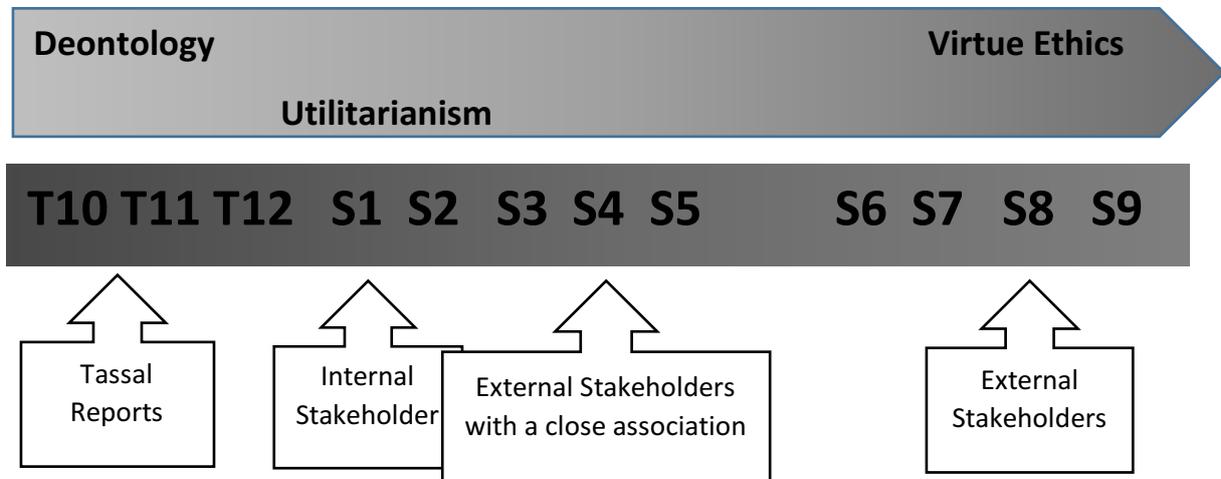
4.9 Diverging approaches

While each separate piece of discourse used in this research project demonstrated all three ethical approaches to varying degrees, an underlying pattern was exposed through the use of discourse analysis. This pattern illuminated a favouring of the deontological and utilitarian approaches in Tassal’s environmental disclosures. These two approaches were supported by the construction of organisational boundaries that reduced the scope of environmental responsibility and therefore reporting. The bias towards deontology and utilitarianism was reflected in the perspectives of stakeholders with close associations with Tassal, including the internal stakeholder. However when discussing their personal views towards the environment, a virtue ethics approach was adopted by all stakeholders.

The virtue ethics approach was used throughout interviews with the external stakeholders with a less direct relationship to Tassal. Regardless of whether these participants were discussing Tassal and its environmental reporting or other environmental issues, a broader, more relational and heartfelt response was given. An interesting exception to this pattern was S1, the internal stakeholder who expressed many of her views in virtue ethics terms.

Applying these approaches to the diagram which explains stakeholder relationships to Tassal (with Tassal’s environmental disclosures of 2010, 2011 and 2012 represented as T10, T11 and T12 respectively), the varying ethical approaches are illustrated, and a pattern emerges:

Figure 4.2 Ethical approaches and Stakeholder Relationships



4.10 Summary

A pattern has been revealed through the use of discourse analysis which demonstrates that Tassal’s environmental reports are couched in deontological and utilitarian environmental ethical approaches. With perspectives which reflect on the approaches of three years of Tassal’s environmental reporting, stakeholders with a close association to Tassal are also adopting these ethical frameworks when considering Tassal’s environmental management and subsequent reporting. However these same stakeholders are framing their personal views in a more virtue ethics approach. Stakeholders whose relationship with Tassal is not on a close professional level are viewing Tassal’s environmental management and disclosure through a virtue ethics ontology, as well as environmental issues in general.

Environmental reports require a common language to effectively communicate with stakeholders. The language with which stakeholders are considering environmental issues is framed in a virtue ethics approach, and as such it is suggested that the common language of stakeholders considering the environment is also framed in a virtue ethics approach. This diverges with the approach expressed in Tassal’s environmental reports.

Rather than setting up a binary approach to environmental ethics, it is acknowledged that all three of the traditional environmental ethical approaches are useful in considering environmental issues, however the underlying approach to these discourses reveals a way of

viewing the environment that diverges between the disclosure and the stakeholders to whom that disclosure is directed. A common approach would aid in creating an open dialogue between the case study firm and its stakeholders. In answering the research question which this study set out to answer, it has been demonstrated that the exploration of philosophical underpinnings through the application of environmental ethics can contribute to the understanding of stakeholders' engagement with corporate environmental disclosure.

Chapter 5

Conclusion

5.1 Introduction

This study was the first to explore philosophical underpinnings using environmental ethics as a method to understand stakeholders' engagement with environmental disclosure. The significance of the results found are considered in this chapter, with the implications for Tassal's environmental reporting practices identified. Opportunities for future research are also discussed and the limitations of this study are explained.

5.2 Environmental Disclosure and Ethics

Since Hines (1988) interpreted accounting as socially constructed and constructing (Hines 1988), the need was highlighted for an in depth re-evaluation and critique of current practices. This critique has subsequently nurtured perspectives which interpret accounting as a reflection of the patriarchal patterns of Western culture (Broadbent 1998; Hines 1992) and of the Cartesian split (Birkin 1997; 2000).

As a result of these insights, a space has opened to allow the voices of others to be heard in the narrative that has traditionally been occupied exclusively by the voice of the organisation (Broadbent 1998). Under the auspices of accountability, an understanding that the organisation is responsible to its stakeholders, for other than exclusively financial reasons, has been fostered (Gray 1987).

As an aspect of sustainability reporting, environmental disclosure is often part of the sustainability agenda of organisations. Sustainability itself is ambiguously defined and able to be manipulated to further the interests of business at the expense of the environment (Gray & Bebbington 2000). Alternative ways to account and report for the environment have been suggested, which place the environment at the centre of concern (Gray 2010). However current environmental reporting practices continue to draw from the Brundtland definition of sustainability, which reinforces the anthropocentric and business centred perception, an approach maintained by GRI guidelines (Moneva *et al* 2006).

In order to explore the philosophical approaches underpinning the practice of corporate environmental disclosure, and in the process, challenge the status quo of environmental reporting, this study employed environmental ethics as a framework to analyse the environment section of Tassal's sustainability reports, and compare this analysis with the

ethical approaches of key stakeholders. In this way, an aspect of stakeholder engagement has been highlighted, pointing to a new approach to examining the dialogue between the organisation and its stakeholders. Three environmental ethical frameworks were used in these analyses: utilitarianism, deontology and virtue ethics.

5.3 Findings

The research question guiding this study is:

Can an exploration of philosophical underpinnings through the application of environmental ethics contribute to the understanding of stakeholders' engagement with corporate environmental disclosure?

In exploring the philosophical approaches underpinning corporate environmental disclosure, using one company as an exploratory case study, this study focused on the environmental ethics demonstrated by Tassal in the environment section of their sustainability report. Through discourse analysis, it was found that these reports demonstrated a particularly deontological approach to communicating about environmental issues. The deontological approach was supported by a strong utilitarian ontology. While other aspects of Tassal's environmental reporting practices have changed over the three year period since the initial discussion within their 2010 annual report, the underlying ethical approaches have not varied.

Since these reports form part of a stakeholder engagement strategy, a mix of Tassal's stakeholders were interviewed for their perspectives on Tassal's environmental management and subsequent reporting. Questions were also asked which illustrated each interviewee's approach to environmental ethics. This was to ascertain the ontology guiding the stakeholders' views on environmental issues. Using discourse analysis, it was found that stakeholders with a direct professional association to Tassal shared a predominantly deontological view of Tassal's environmental management and impacts, in parallel with the approaches expressed in the environment section of Tassal's sustainability reports. This may be explained by this group of stakeholders' understanding of the regulatory environment within which Tassal operates. Like the reports themselves, this group of stakeholders also approached environmental issues in connection to Tassal with a utilitarian perspective. However environmental issues not directly related to Tassal were considered using a virtue ethics ontology.

Stakeholders whose relationship was less professionally direct to Tassal tended to view Tassal's environmental management and reporting practices with a degree of cynicism. This group of stakeholders expressed their concerns with a predominantly virtue ethics approach, whether focusing on Tassal's environmental interactions or on other environmental concerns.

Comparing the ethical approaches demonstrated in the environment section of Tassal's sustainability reports with stakeholder approaches illuminates a gap between the environmental ethics underpinning the two groups. This gap expanded as the stakeholders' relationship with Tassal became less direct. Since it is these more professionally distant stakeholders to whom Tassal attempts to engage through their environmental and sustainability reporting, the gap that has been illuminated in this research is of critical significance.

The importance of discerning the different environmental ethical approaches used by Tassal in the environment section of their sustainability report and by their stakeholders lies in the fundamental ontologies upon which they are founded. As such, a deontological approach, in the context of organisational discourse, may represent a defensive position which aligns with an attempt to maintain legitimacy within the society. This position correlates with the views expressed by S1, Tassal's internal stakeholder, that a key motivation to report on its environmental impact was the need to avoid conflict and maintain a legitimate position within the community. The ontology of discrete objects upon which deontology and utilitarianism are founded aligns closely to traditional economic theory upon which financial accounting is based, and in this way is also useful in maintaining legitimacy. In contrast, the ontology of virtue ethics is based on a relational and personal perspective which is often seen as subjective. Understanding the fundamental differences between these three approaches illuminates a potential problem in engaging with stakeholders through environmental reporting. Attempting to engage with stakeholders using a report based on an ontology that contradicts the stakeholders' view of the environment presents an obstruction to open engagement. As such, identifying this disparity offers significant insight into the use of environmental disclosure as a method of stakeholder engagement.

5.4 Significance of Findings

This study is based on environmental ethical approaches, which present a useful way to analyse the way stakeholders view the issues discussed in environmental disclosures. Since

the purpose of corporate environmental disclosures is to engage with stakeholders, a discovery that the environmental disclosures are not fulfilling this task is significant. Being able to explain why the disclosures are not fulfilling the task is even more significant.

The stakeholder internal to Tassal indicated in her interview that the primary motivation for Tassal to publicly disclose environmental information was to address the risk associated with Tassal's social license to operate and expand, and particularly to avoid conflict with community. As such, engaging with stakeholder groups that are not connected directly on a professional level remains an important objective for Tassal's environmental disclosures. Many of the stakeholders using the virtue ethics approach also expressed a cynicism regarding Tassal's environmental disclosure. A change in the underpinning approach to these reports which would align with stakeholders' perspectives offers a method of meaningfully communicating with this group of stakeholders, and thus providing a deeper level of engagement and community acceptance.

This study has contributed to accounting literature by responding to Gray's (2010) call for a critique of the dominant narrative of the organisational sustainability agenda. It has done this through deconstructing the approaches used in environmental reporting, and illuminating the differences between the dominant organisational approach used by Tassal, and the approaches of stakeholders who are effected by the firm's environmental interactions in a more personal way. By examining these approaches, alternative views have been highlighted and the dominant narrative provided in the report questioned.

Likewise, by considering the alternative ethical approaches to environmental issues, the socially constructed nature of environmental reports has been illuminated. Tassal's use of a predominantly deontological approach, supported by the utilitarianism showed the underpinning approach to Tassal's environmental reports have been constructed in such a way as to limit questioning and maintain legitimacy. This strategy corresponds with Broadbent (1998), O'Dwyer and Owen (2005), Gray (2010) and Hines (1992), who drew attention to the dominant narrative used by organisations and accounting which silences alternative views. This research highlighted alternative ways to approach these issues that might improve engagement with stakeholders and increase a sense of accountability. Acknowledging that these structures are socially constructed allows for other voices to be heard, to contribute to a rebuilding which is more inclusive and allows for more effective stakeholder engagement.

5.5 Limitations

This study is based on a single case study, which presents a constraint regarding the generalisability of findings, and therefore is unable to establish internal and external validity. Similarly, as with any single case study, the results found in this research may represent particular conditions that are not reflected on a broader scale.

Other constraints on this research include the possible subjectivity involved in the analysis. To reduce this risk, two independent experts have confirmed the classifications of ethical approaches set out in the discourse analysis groupings (see Appendix E).

While Tassal has disclosed environmental information since 2010, and this study has analysed the reports which have demonstrated change over this time, stakeholder interviews were not carried out over a similar timeframe. This represents a limitation for this study, as stakeholder perspectives may have also changed in reflection of the changes made by Tassal's environmental reporting practices. As such, the stakeholder approaches are considered to be reflective of Tassal's environmental disclosures over the three year period.

As many of the interviewees were suggested by Tassal, and under guidance by the HREC, all interviewees were approved by Tassal, this may represent a level of bias. However, the researcher had intended to include most of the stakeholders who were suggested by Tassal. To counter this potential bias, two interviewees were chosen who were not initially suggested, but were subsequently approved by Tassal. Interviewing a larger number of stakeholders may have provided a more diverse sample, however due to restrictions of time, the number of interviewees was limited. To counter this restriction, maximum diversity was sought within the limited number of interviewees.

5.6 Opportunities for Further Research

In order to address the constraints presented by a single case study, the methods in this research project may be expanded to a multiple case study which includes case study companies from diverse industries. Similarly, the ethical frameworks used in this study could be generalised so that broader versions of utilitarianism, deontology and virtue ethics are represented, which could then be applied to other types of disclosures, such as social or sustainability reports, rather than exclusively environmental disclosures.

Other research opportunities exist which focus on the philosophy of separation which underpins much of Western culture's relationship with the environment, and is reflected in the environmental ethics frameworks used in this study, and also in the intention of producing environmental accounts.

In following on from this study, research opportunities also exist in finding ways to account for the environment which correspond with the virtue ethics perspective. Methods might also draw from Birkin (1996; 2000), and the ontology of relations which he found reflected in the Cloverleaf Account of Sustainable Development model.

5.7 Concluding Comments

As this study is exploratory, it provides a platform for moving forward with this type of research. Recognising that environmental disclosures are socially constructed and their use as a form of accountability is open to interpretation, analysing the disclosures and exploring stakeholder perceptions is essential. This has been lacking in the accounting literature.

This research explored the philosophical approaches underpinning the practice of corporate environmental disclosure through the lens of environmental ethics. Using a single case study, it was found that the ethical approaches of the case study firm, as demonstrated through the environment section of their sustainability reports, and those of key stakeholders, were divergent.

In conclusion, this research has found that a gap exists between the ethical approaches demonstrated in the environment section of Tassal's sustainability reports, and those used by Tassal's stakeholders, particularly stakeholders not closely associated with the operations of the firm. This gap represents a disparity which may explain Tassal's difficulty in engaging stakeholder groups with whom it has no close association, and are cynical about the environmental management practices and subsequent reporting of these issues. Hence the exploration of philosophical underpinnings through the application of environmental ethics has been shown to contribute to the understanding of stakeholders' engagement with corporate environmental disclosure.

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APPENDICES

Appendix A: Interview Schedule

Semi-structured interview for stakeholders

It is expected that the interview will last for approximately 60 minutes. It is anticipated that responses to these questions will lead to further explorative questions related to the response given. It is anticipated that this may differ with the interviewee as responses are expected to differ given the different roles performed by each of the interviewees.

An information sheet will be provided to participants, participants will be asked if they have any questions and consent will be sought prior to the conduct of the interview.

1. Have you read any of Tassal's environmental reports?
 - a. Which ones?
2. Environmental effects:
 - a. How well do you think Tassal interacts with the environment? i.e. Does Tassal have a negative, neutral or positive environmental impact?
 - b. Does it appear that Tassal acts in response to perceived environmental impacts?
 - c. How did you become aware of the environmental impacts that Tassal has on the environment?
 - d. Is this impact sufficiently reflected in their environmental reports? Why/why not?
3. Tassal's Environmental Reporting:
 - a. What do you believe are the key motivations for Tassal to report on their environmental impact?
 - b. Do you believe these motivations are appropriate?
 - c. Do you think Tassal's environmental reports give a genuine appraisal of their actions? Why/Why not?
4. Environmental concerns:
 - a. Do you have concerns regarding the environmental actions of Tassal?
 - i. What are they?
 - ii. If not, why?
 - b. Are your concerns mentioned in their environmental reports?
 - i. Which issues are/are not covered?
 - ii. Why do you think they are/are not covered?
 - c. Do you think this is of concern? Why/Why not?
5. Environmental Ethics:
 - a. What do you understand by ethics?
 - b. What do you understand by environmental ethics in particular?
 - c. How widespread do you believe the effects of Tassal's actions regarding the environment are?
 - d. Do you think it is important to follow environmental regulations?

- i. Is following environmental regulations enough to ensure environmental impacts are kept to an acceptable level?
- e. What do you see as important environmental issues?
- f. Are these issues addressed in Tassal's environmental reports?
- g. Why are these issues important to you [or to other stakeholders in the community]?
- h. Why do you believe reporting on these issues is important?
- i. Should upstream and downstream impacts be reported on?

Appendix B: Information Sheet

Exploring the philosophical approaches underpinning the practice of corporate environmental reporting

Information sheet for interview participants

1. Invitation

You are invited to participate in an interview contributing to a research project designed to explore the philosophical approaches used in corporate environmental disclosure. The research involves collecting data on perceptions and attitudes towards environmental issues and impacts of Tassal from the perspective of Tassal as well as from external stakeholders such as community groups, organisations and individuals who are impacted by the environmental reporting of Tassal. The Chief Investigator of this study is Associate Professor Trevor Wilmshurst, Co-Head of the School of Accounting and Corporate Governance at the University of Tasmania. Dr Sonia Shimeld, Lecturer at the School of Accounting and Corporate Governance is Co-Investigator. Leanne Morrison is the student investigator who will be conducting the interviews in her capacity as an Honours candidate in the School of Accounting and Corporate Governance at the University of Tasmania.

2. What is the purpose of this study?

Corporate environmental reporting is a relatively recent development used by business to communicate environmental management issues to stakeholders. The issue has not been sufficiently explored from an environmental ethics perspective. By analysing environmental reports and the motivations for disclosure, along with the perspectives of external stakeholders, it is believed that our understanding of environmental disclosure will expand and deepen, and allow businesses to better understand stakeholder expectations.

3. Why have I been invited to participate?

A local aquaculture business (Tassal) has been identified as a corporation which has an environmental impact and prepares environmental disclosure documents which are publicly available. You (or your organisation) have been identified as a key stakeholder in the context of Tassal's environmental impact and disclosure of it. You have been invited to participate in this research in order to ascertain your perceptions of Tassal's environmental disclosure. Your involvement in the study is voluntary and there are no consequences if you decide not to participate.

4. What will I be asked to do?

You are being asked to participate in a maximum 60 minute semi-structured interview conducted by Leanne Morrison at a time and place convenient to you. The responses you provide in the interview are confidential. However given that you may be participating in the interview as a representative of a key stakeholder group, the information you provide may be identifiable as coming from your organisation. Given your position within the organisation this may result in you being identifiable, though every effort will be made to ensure this is not the case. The interview will be audio-recorded with your approval and transcribed by Leanne Morrison. A copy of the transcription will be provided to you before any of the information you have provided will be used in the research. You will have the opportunity to edit your transcript if you wish. If Leanne does not hear back from you within 14 days she shall presume that you are happy with the content of the transcript.

5. Are there any possible benefits from participation in this study?

The data provided by you and other participants in this research will benefit the development of environmental reporting practice in Australia. This research aims to improve understanding of environmental disclosure from the perspective of environmental ethics, and as such, stakeholder perceptions are a valuable contribution to this process.

6. Are there any possible risks from participation in this study?

There are no foreseeable risks of your participation in this research. However given that you may be participating in the interview as a representative of a key stakeholder group, the information you provide may be identifiable as coming from your organisation. Given your position within the organisation this may result in you being identifiable. Your name will not be used in the research. Pseudonyms and codes will be used and all identifiers removed from direct quotes. You will also be offered the opportunity to review any potentially identifying material prior to publication.

7. What if I change my mind during or after the study?

It is stressed that participation in this research is entirely voluntary. You may decline to answer any question, withdraw at any time without effect or explanation and should you so wish, also withdraw any data you supplied to date where it is identifiable, within 14 days of the receipt of the transcription of the interview. A consent form is attached and will need to be signed prior to participation.

7. What will happen to the information when this study is over?

Information procured from this study will be kept securely in the investigator's office, locked in a filing cabinet, and secured in a password protected computer, for a period of five years after the conclusion of the study. After this period, hard copies will be shredded and disposed of securely, and electronic copies will be permanently deleted.

8. How will the results of the study be published?

A summary of the findings will be provided to participants on request at the end of the year.

9. What if I have questions about this study?

Should you have any questions about your participation in this study please contact either Leanne Morrison (email Leanne.Morrison@utas.edu.au), Trevor Wilmshurst (Phone 6324 3570, email Trevor.Wilmshurst@utas.edu.au), or Sonia Shimeld (Phone 6226 7586, email Sonia.Shimeld@utas.edu.au)

"This study has been approved by the Tasmanian Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number H13416."

This information sheet and a copy of the informed consent form will be given to you to keep.

Appendix C: Consent Form

Exploring the philosophical approaches underpinning the practice of corporate environmental reporting

Participant Consent Form

As an interviewee, I consent to the following:

-
1. I agree to take part in the research study named above.
 2. I have read and understood the Information Sheet for this study.
 3. The nature and possible effects of the study have been explained to me.
 4. I understand that the study involves participating in a semi-structured interview for up to 60 minutes on my perceptions and attitudes to a number of environmental issues relevant to the environmental impacts and subsequent reporting by Tassal, which will be recorded and transcribed and I will be sent a copy of the transcription to ensure accuracy.
 5. I understand that my organisation will be identified in the research and because of my position within that organisation my role may be apparent, although my name will not be identified in the research. I understand that there are no other foreseeable risks.
 6. I understand that all research data will be securely stored on the University of Tasmania premises for five years from the publication of the study results, and will then be destroyed.
 7. Any questions that I have asked have been answered to my satisfaction.
 8. I understand that the researcher(s) will maintain confidentiality and that any information I supply to the researcher(s) will be used only for the purposes of the research.
 9. I understand that the results of the study will be published so that I cannot be identified as a participant.
 10. I understand that my participation is voluntary and if I so request, any data I have supplied may be withdrawn within 14 days of the receipt by me of the transcription of the interview.
 11. I understand that I will be given the opportunity to edit any identifying material prior to publication of the research

Participant's name: _____

Participant's signature: _____

Date: _____

Statement by Investigator

The participant has received the Information Sheet where my details have been provided so participants have had the opportunity to contact me prior to consenting to participate in this project.

Investigator's name: _____

Investigator's signature: _____

Date: _____

Appendix D: Interviewed Stakeholder Groups

1. Local Community
2. Kingborough Council
3. Tassal
4. Tasmanian Aquaculture Reform Alliance
5. Environmental Defenders Office (EDO)
6. Tasmanian Seafood Industry Council
7. Southern Coast Care Association of Tasmania (SCAT)
8. World Wildlife Fund (WWF)
9. Institute of Marine and Antarctic Studies (IMAS)

Appendix E: Discourse Groupings

Utilitarianism

Balancing

- UB1: Balancing negative and positive outcomes
- UB2: Comparing economic outcomes with environmental impact
 - UB2X: Arguing against, or being cynical about UB2

Narrow focus

- UN1: Site specific focus
- UN2: Short term considerations
- UN3: Simple calculations, simplified solutions or quantitative approach
- UN4: Particular species

Sentience

- US1: Sustainability
- US2: Specific sentient beings (eg humans, seals, birds)

Deontology

Universal Rules

- DU1: Reference to rules and regulations (inc gov't requirements, policy, guidelines)
 - DU1X: Arguing against, or being cynical about DU1
- DU2: "the right thing to do"
- DU3: "Above and beyond" regulations

Socially implied rules

- DS1: Socially acceptable actions
- DS2: Social contract
- DS3: Social expectations

Virtue Ethics

Emerging from the self

- VEE1: Personal or heartfelt motivations
- VEE2: Solutions emerging from the context

Relational Focus

- VER1: Relational perspective
- VER2: Upstream and downstream considerations
- VER3: Interconnectedness

Holistic Perspective

- VEH1: Wide outlooks, both chronologically and geographically
- VEH2: “Big Picture” thinking
- VEH3: Intrinsic value
- VEH4: Biodiversity

Utilitarianism – classifying quotes from interviews and Tassal’s environmental disclosures

Balancing

- UB1:Balancing negative and positive outcomes
 - S8: “It’s better than nothing [laughter]. You know, it’s better than nothing.”
 - S1: “...for me, ethics around this work is a really complex interplay between social good, economic benefit...”
 - S6: “I think environmental regulations are there because of some recognition of that- the need for laws to guide [laughter] to guide people in terms of how you go about balancing your impact.”
 - S6: “...is a lowest common denominator balancing act...”
 - S6: “Ok, so, environmental ethics, for me I guess, focuses more on the fairness...”
 - S4: “There would be some degree of negative impact and it is just a matter of quantifying and balancing that out sustainably.”
 - S2: “You know, marine debris for instance, the negative impact with the loss of equipment from farms and boats, but a positive impact ‘cause they have got a program to monitor the coastlines, the shorelines and clean the debris up. Likewise, you know, increase nutrient loading through the release of, some food through the cages but they’ve got systems in place to minimise that and through the fish themselves, but positive because they’ve got the systems in place to minimise those releases.”
 - S2: “I suppose you need to balance all aspects, but weight them depending on what side of the fence you sit. Weight them relative to outcome.”
 - S5: “you have to put it in the context of what you get for what you lose”
 - T10: “Behavioural change, innovation and technical progress are essential to achieve a balance in meeting natural resource and energy needs.”
- UB2:Comparing economic outcomes with environmental impact
 - S1: “Well it’s hard. I suppose, how do you play off environmental impact from economic gain, or social impact from economic gain...I don’t know.”
 - S1: “...the reason is that there is this balance, shareholder expectations, you don’t want to freak shareholders out by carrying on about how much climate change is going to impact Salmon farming and there is a whole lot of stuff in hand...”
 - S1: “...well there is fuel, obviously, and the price of fuel that will change for company...”
 - S6: “I think environmental regulations recognise that there will always be an economic driver in the decisions that are made and so the regulations are there to put some limits on that.”

- S6: “So I think there’s a recognition that, better for the environment potentially, but also economic- like, bottom line, if you could move to a cooler climate than the West coast.”
- S6: “I think economically if we don’t have more regard for that it will become more and more difficult and therefore more and more expensive to deal with these things in the future, so avoiding loss of biodiversity, rather than having to try to recreate biodiversity in the future, is just, just makes economic sense.”
- S6: “So they are definitely being driven to higher standards whether that is through consumer complaints or the economic imperative I don’t know, and I don’t really care because the outcome is all the same! [Laughter].”
- S3: “So being not unfairly undervaluing environmental values as opposed to developmental values for instance in making decisions.”
- S3: “It’s not about areas locked up, it’s about achieving this, you know, state of balance between sustainable use and conservation and society...”
- S3: “Ok, so, environmental ethics, for me I guess, focuses more on the fairness, and the, of the impact between a facility of some kind or development and the environment. I think it still encompasses the human element heavily, because we’re all using the environment in different ways, so having to separate that out, but I guess issues like how you value a marine ecosystem, a port facility...”
- S4: “...they are a key employer, a key economic driver to the whole state and they are in our municipality so we have to facilitate keeping them here but also balancing their environmental impact and working with them on trying to minimise that.”
- S4: “Like the development application I am doing right now is a subdivision and there are buffer zones around industries that are adjacent to it and I have to balance out industries that are critically important but this is a huge subdivision and you have just got to strike a balance between the two, and I don’t think anyone is particularly happy – if you know what I mean?”
- S4: “And a lot of it makes sense because if they were hugely overfeeding the fish, well, they were wasting money anyway. So I think it has been an exercise...there has been two drivers...three...environment, image and economics...has really been the drivers.”
- S4: “And they did, and the study cost 3 million dollars but it saved them 5 million dollars, but their net outcome was still just as good.”
- S4: “I think for years they thought about going outside the Channel offshore but it’s just too hard and too expensive and too wild out there to be able to do it meaningfully.”
- S2: “Yeah, look, um, general water health is reflected in their reporting, obviously – you know, the end of the day the seafood industry as a whole can’t afford for poor water quality ‘cause we won’t have an industry.”
- S2: “Tassal provide a very important economic input, employment in regional areas of Tasmania, and even social and health benefits to Australia. Unlike a lot of fisheries the product’s sold in Australia. It’s available at a reasonable price to everyone, unlike rock lobster or abalone. So, you know, you need to be able to trade off - all businesses have an impact.”

- S5: “So they can actually judge them, performance-wise, and I think even in terms, often that hasn’t been the case because even if its shareholders, shareholders are more interested in the dollar, I think that shifted a good bit, people want to invest ethically. So it does actually help to have those credentials. And it also, I think, it also, that market edge, it’s good business strategy to actually position themselves as, you know, product or company of choice. If you have to make a distinction, and often the market between companies these days are pretty small, so anything that gives them that little bit more leverage in the public domain can make a big, so I, I mean I think they’re doing all the right things, for a lot of reasons.”
- S5: “...but I’m pragmatic, I know that it’s a corporate entity. They’ve got to provide the outputs that the shareholders need. Unless the shareholders are engaged, for whatever reason, if they’re engaged then it’s got to be a good thing from an environmental perspective.”
- T11: “However, while demand from continuously expanding aquaculture production grows, the annual production of fish meal is limited to ensure wild fish stocks remain viable. An additional uncertainty in recent years has been the price volatility of fish meal.”
- T11: “Food producers such as Tassal are under increasing pressure to provide for a growing population that is demanding good quality, nutritious foods with a minimal environmental footprint.”
- UB2X: arguing against, or cynical about comparing economic outcomes with environmental impact
 - S8: “And the government will support it because the government wants jobs and the jobs aren’t going to last and, you know, it will be another forestry in 10-15 years time. We’ll see the same stuff and they’ll be being bailed out”
 - S8: “But they’re just going to milk it for as much as they can make while it lasts. I’m very cynical.”
 - S8: “they’re aware of the issues that people are concerned about but they’re not necessarily addressing them because there’s no driver, only market forces will force them to look at those things...”
 - S8: “...but all this other stuff that’s being raised, won’t be raised, won’t be addressed properly unless market forces actually force them to do something about them.”
 - S8: “You know it’s, well there is a reason why they need to, because it’s money because they won’t spend the money to do the changes in technology that could put them on the land and then have that actually, have more of a closed system.”
 - S8: “But that costs money, so they won’t do it. You know, they want the biggest bang for their buck, as they say and they can produce a nice little report and tick the legal box- the legislat- permit requirements and that’s it.”
 - S1: “and then there is something funny about our society where that is a measure of good, you know, that economic growth is a measure of good. So you know, I play with that too because for me, I think, shouldn’t it be a happiness scale?”

- S7: “Yet they quite willingly enter the cultural landscape for its pristine consideration which benefits their product and them.”
- S9: “But I think it would probably be to satisfy shareholders more than anything. Shareholder curiosity about where their money is going, and what is happening to their money.”
- S9: “Because the bottom line is profit to maintain sustainability in an economic environment, so, you know, people are human and they rationalise their dishonesty and rationalise their unfortunate behaviour and they become blind to areas where they can improve”
- S9: “Except in terms of, you know, good stuff...they are probably doing lots of bad stuff, except for their shareholders.”
- S9: “...as part of an interest group looking at natural values and diversity as opposed to economic sustainability and greed.”

Narrow focus

- UN1: Site specific focus
 - S1: “So there are site specific nutrient impacts but I don’t really have a personal problem with that because I know that when those sites are fallowed they return to...so I don’t have an issue about that.”
 - S1: “We used to...so all of our sites, for example, every circle that you see on the water underneath, that would be monitored at least once a year, we would have samples taken up...probably more actually...it would have samples taken, it would have a dive – underwater vehicle going visually observing the bottom”
 - S1: “I would say that it’s more farm or local specific than regionally specific.”
 - S6: “Again, that’s sort of hard to say on the, on an individual farm basis I think there, the impacts are broader than their farm footprint but they’re not significantly wider”
 - S3: “I would, I would say there’s, I would say they’re site specific... things like nutrient management and impact on benthic environment is, is more of a site specific issue, rather than a broad scale regional effect.”
 - S4: “but the actual impact of what they are doing out there I think they are reducing the footprint of that quite considerably.”
 - S4: “I would be surprised if their impact – water quality wise for example – is much beyond the footprint of where they’re working.”
 - S4: “I think that the most recent science suggests that their footprint is fairly localised.”
 - S2: “...I mean some are very localised...”
 - S2: “...I think 2 pens have received very small doses of antibiotic in the last 2 years.”
 - S5: “So, yes, there’s definitely site level impacts. My personal research has shown that, there’s very localised effects, but that they’re manageable”
 - T12: “we are currently working to better understand the hydrodynamic profiles of our sites”
 - T12: “Managing the water quality and benthic health around our farms”

- T11: “Managing the water quality and benthic health around Tassal farms”
- T11: “We are committed to sound environmental practices at our marine sites”
- T11: “Tassal is working within this framework by first taking a localised site level approach by better understanding and managing our inputs (both direct and indirect inputs).”
- UN2:Short term considerations
 - S1: “We talk about the clean ups that we do...but, yeah, no they’re not mentioned to my level of what I would like to do.”
- UN2X
 - S6: “that was one of the concerns that we had, that there was a bit of a, it seemed a little bit reckless to be pushing ahead without more information about what the impacts would be on a threatened species.”
- UN3:Simple calculations, simplified solutions or quantitative approach
 - S5: “I’ve been involved in a lot of government reporting of environmental outcomes and monitoring and that tends to be entirely about the environmental pluses and minuses...”
 - S1: “Probably before I worked for X I had this very clear, you know for me, being environmentally friendly or not was a very thin, clear, straight line, black and white, easy peesy...it was very easy..”
 - S2: “...couple of the farms have got it down to less than 1 kilo of fish oil and fish meal to produce 1 kilo of fish, with a lot of plant supplements on top...”
 - S2: “...47 terrestrial species become extinct as a direct result of European impact, there’s been zero marine species become extinct.”
 - S2: “You know, marine debris for instance, the negative impact with the loss of equipment from farms and boats, but a positive impact ‘cause they have got a program to monitor the coastlines, the shorelines and clean the debris up.”
 - T10: “Tassal has calculated its carbon footprint and energy consumption”
 - T11: “Identify and assess environmental risk and act to eliminate or minimise environmental impacts that arise from our production, services and operations Establish measurable objectives and targets aimed at preventing pollution and improving environmental performance”
 - T11: “Control the use of chemicals to a level that does not result in significant adverse impacts”
 - T11: “It is our objective to become a ‘net fish’ producer, in other words, produce more fish for human consumption than we use for feed.”
 - T11: “To produce one kilogram (kg) of Tassal Salmon, we need around 123 grams (g) ($9.1\% \times 1.35 \text{ FCR}^* = 12.3 \text{ g}$) of fish oil. To extract 123 g of fish oil, we need 2.46 kg of forage fish ($123/0.05 = 2.46 \text{ kg}$). From this 2.46 kg, we also get approx. 546 g of fish meal, of which 306 g ($22.7\% \times 1.35 \text{ FCR} = 30.6 \text{ g}$) goes into the fish feed.”
 - T11: “By using Microbalance™, we have been able to reduce fish meal content without affecting the performance of our fish.”

- T11: “Seal Interactions

| | FY2010 | FY2011 |
|---------------------------------|--------|--------|
| Relocation events | 356 | 183 |
| Euthanised | 0 | 8 |
| Accidental death (relocation) | 2 | 3 |
| Accidental death (entanglement) | 3 | 1” |

- T11: “At the end of FY2011, we had deployed 40% non-antifouled nets in our operations. The target is to increase use of these nets to approximately 60% in FY2012, 80% in FY2013 and 100% by FY2014.”
- T11: “For FY2011, Tassal used 82,287.9 GJ across all sites, not including the corporate office in Melbourne. 75% of power used at Tassal is hydro-electricity.”
- T11: “

| Fuel Usage | | | |
|---------------|---------|---------|---------|
| | 2008/09 | 2009/10 | 2010/11 |
| Diesel (ML) | 1.33 | 2.16 | 2.22 |
| Unleaded (ML) | 0.48 | 0.63 | 0.65 |
| Total (ML) | 1.81 | 2.79 | 2.87 |

- T11: “By utilising these innovative trailers, maximum harvest payload has increased by 61% and each journey to Strahan to pick up fish allows a full load of fish feed to be transported as a backload. Two and a half truck loads using the old method of transportation has become one truck load with the new trailer, resulting in a reduction of around 250 truck movements between Strahan and Devonport.”
- T11: “Leading up to the next reporting period, Tassal aims to quantify all of the freshwater usage across the various sites. In most instances this will be by installing metered flow recorders, whilst in other cases, an assessment of operations will be conducted to estimate the volumes that are used. Once the volumes of freshwater usage are established, Tassal will be in a position to review the usage data and look for opportunities to improve water savings. Findings will be published in our FY2012 Sustainability Report.”
- T12: “Recent studies show the environmental impact near farms to be relatively minor and manageable; however we recognise that there are potential impacts to the receiving environment and we want to reduce those impacts.”
- T11: “Over the last two financial years (2009/10 and 2010/11) Tassal has logged 356 and 183 seal relocation events respectively.”
- UN3X: arguing against, or cynical about using simple calculations, simplified solutions or quantitative approach
 - S4: “I mean it is a bit like...buying the hybrid car for the sake of it being hybrid and you’re saving on fuel, but in actual fact unless you buy the right one the carbon footprint of how it has been produced...you have actually gone backwards in the overall impact.”

- UN4:Particular Species
 - S6: "...the impact on the threatened species, so that the Maugean Skate, there wasn't a lot of information available about it and to us that suggested that more information needed to be gathered before you approved a development..."
 - S9: "I would like to see what they are doing to the sex of the mussels on the shoreline. I would like to see how they are changing the filter feeder numbers from the crustaceans. There is an enormous number of crabs that are killed on the beach. I have only seen that since the fish farm has been there."
 - S5: "the community values, what everybody cares about, a lot of people, it, say things like they want to be able to catch fish where they wanted to catch fish, they wanted to catch crays so they want to catch crays."

Sentience

- US1:Sustainability
 - S4: "I always thought of it...it was going to be, it was going to be about the ultimate in sustainability. Just...yeah...doing things in a manner that...you are following a path to sustainability."
 - T10: "Tassal is focussed on ways to drive business opportunity through improved sustainability practices. Developing a framework to support the release of an annual sustainability report will remain a focus for Tassal in the upcoming year."
 - T10: "The Board considers Tassal to be a sustainable aquaculture company from an environmental, operational and financial perspective."
 - T11: "Maintaining and improving environmentally robust business practices is a high priority for Tassal and is a fundamental platform of our sustainability strategy."
 - T11: "Ensure the long term sustainability of the Tasmanian Salmon industry, the environment we operate within and all community and commercial partnerships."
- US2:Specific sentient beings (eg humans, seals, birds)
 - S8: "We're affected by light, we're affected by noise. Particularly with people on Bruny Island, they're really badly affected by noise and light."
 - S8: "which means that there's major health implications because people who are eating those fish are receiving low dose antibiotics, which isn't the way antibiotics are supposed to be prescribed, they're meant to be prescribed high dose, short period of time."
 - S8: "Because it's going to have major impacts on every aspect of life; on food security, on water security, on immigration, on the way we do our business, the way we live our lives on a daily basis, access to medicine, access to health care, access to education, yeah."
 - S8: "You know like, we used to get massive, massive rafts of mutton birds, mmm, feeding the channel, remember when, you know, J was this high we used to sit and watch thousands and they..."
 - S1: "About the planet that my son will inherit. So it is important to me."

- S1: “The Earth will be fine. It’s like that value stuff we place on things as people, as human beings.”
- S1: “I don’t have any issues with our interactions with seals. We commissioned a couple of studies on that and there are no problems. I don’t have any problems with our interactions around birds.”
- S1: “You don’t inherit the planet from your parents you borrow it from your children...it’s like that.”
- S6: “and I guess from an ethical point of view as well, making sure that those communities which will be most affected by rising sea levels, lack of water, excess of water, flood situations, all of those things are appropriately planned for and we can ensure that no one is disproportionately disadvantaged.”
- S6: “Their work in relation to seals and the way that they interact with seals, that’s an issue.”
- S6: “but I think birds is another issue that they need to make sure they’re addressing because they’re obviously attracting birds by virtue of the fish being there...”
- S6: “people’s experience changes when they go recreational fishing and they can no longer catch what they used to catch.”
- S6: “the individual site...those people affected by an individual site.”
- S3: “Yeah, you know, I think really, the human answer is, it’s my children, you know, my children’s children.”
- S3: “...things like, you know, sea lions are tricky for them as well...”
- S4: “Because the infrastructure they have out on the water, you can see it for miles...so it does have a big community impact...”
- S2: “...salmon don’t like warm water.”
- S7: “Well it’s quality of life for one. I don’t particularly don’t want to get sick from being poisoned by arsenic or copper, for example’s sake. And I want to be able to roam along, a free range roam along, beaches and coastline without being tripped over by netting and rope and watching birdlife and sea life being strangled to death by these things. Nah, that’s not a good look.”
- S9: “I would like to know what is going in my gut. I would like to know that the whale’s bellies aren’t full of plastic rope that has come from the fishing industry. Sad isn’t it?”
- S9: “I don’t like swimming in it, it’s not as nice as it used to be.”
- S9: “Or how many seagulls, or seal, or shark, or penguins are being affected by their industry?”
- T11: “Our environmental management framework ... contributes to the wellbeing of the communities in which we operate.”
- T11: “Provide assurance on environmental issues to external stakeholders such as consumers, the community and regulatory agencies”
- T11: “Minimise impacts on wildlife through entanglement interactions and farming activities”
- T11: “Control marine operations conditions to maintain fish health”
- T11: “Ensure that appropriate site management controls are in place to minimise visual effects on the environment”

- T11: “It is our objective to become a ‘net fish’ producer, in other words, produce more fish for human consumption than we use for feed.”
- T11: “Although they are ecologically important, not all forage fisheries are suitable for human consumption and due to the small, bony and oily nature of the fish not as much of the fish is actually edible from most consumers’ point of view”
- T11: “Seal interactions are an extremely important environmental and social issue for Tassal and our stakeholders.”
- T11: “Australian fur seals are relocated to Pardoe Beach on the north coast of Tasmania and New Zealand fur seals are relocated to either Rheban on Tasmania’s south east coast, or Cockle Creek in southern Tasmania, depending on the location of capture. Over the last two financial years (2009/10 and 2010/11) Tassal has logged 356 and 183 seal relocation events respectively.”
- T11: “Seals are attracted to Salmon farms because of food availability and commonly directly interact with our farms by chewing through nets, jumping over handrails and entering the sea pens.”
- T11: “Effective management of this issue is a matter of critical importance to Tassal, as seal interactions with our farms has the potential to impact on employee safety, our environmental management practices, seals and fish welfare. A new Wildlife Management Officer position, created in 2009, has significantly reduced the number of seal interactions and relocations.”
- T11: “Tassal is confident that through a focus on further reducing interactions between marine farms and seals, that the impact on both employees and the seal populations wellbeing will be minimised.”
- T12: “Tassal is committed to the welfare of our salmon and excellent fish health is a top welfare priority. That is why Tassal have two dedicated fish health professionals on staff, including a fish veterinarian. For a salmon farmer to be successful, their first priority must be the health of their salmon. Salmon, like other animals, need the right conditions in order to be healthy. Salmon have a three year lifecycle from egg to harvest, so salmon farmers must choose farm sites that provide excellent growing conditions, and they must obtain or develop good quality fish stocks that are adapted to their environment. Farmers must provide nutritious food to their fish, reduce potential sources of stress, and employ good staff that are attentive to the needs and conditions of the salmon. Finally, to maintain healthy fish the farmers must work closely with professional fish veterinarians, fish researchers and implement preventative fish health practices.”
- T12: “In addition to their role as pigments, there is evidence to show that storing these pigments confers health benefits on salmonid fish.”
- T12: “Astaxanthin is not just a pigment, but is closely related to beta-carotene (the precursor of vitamin A), and plays a role in the fishes’ immune system and acts as an antioxidant, promoting the good health of the fish.”
- T12: “We feed our fish for the first couple months of life canthaxanthin in their diet and then for the last 12 months or so we move to 100% astaxanthin

until harvest; the astaxanthin is synthetically derived and is nature identical, providing health benefits to the fish and a superior looking and tasting product for our customers.”

- T12: “Australian and New Zealand Fur Seals are protected wildlife, and are the natural and rightful inhabitants of the marine environment in which we operate. At Tassal we are committed to operating sustainably, and so the need to effectively share waterways with seals is a priority for us. Our focus is to reduce interactions with seals at our marine farms, while at the same time minimising any impacts on the well being of seals.
The most effective way to reduce interactions with seals is to prevent them from entering our sea pens, and Tassal use a number of passive strategies in this area including highly tensioned nets on our sea pens and newly developed aerial bird and seal netting to prevent seals from jumping in to the pens. We work constantly with researchers, and international experts to find better ways of prevention, and have committed significant resources in to passive seal exclusion upgrades in recent times.”
- T12: “This is a win-win scenario, reducing bottom line losses to our company while also reducing any stress that may be caused to seals through removal and relocation.”
- T12: “Our farms do share the marine environment with other users and in many cases they are located near residential areas. We are sensitive to the impacts our farms may have and we make every effort to be open and transparent in our operations and communications in order to better address any potential conflicts.
We are working with local tourism operators wherever possible to enhance the Tasmanian experience for visitors to our beautiful State.”
- T12: “Some of Tassal’s farms are quite close to residential areas, and this can give rise to noise disturbance.”
- T12: “Our aim is to continue to develop our understanding of how and when noise emissions result in noise nuisance. And then reduce these noise emissions to avoid or minimise any such nuisance.”

Deontology – classifying quotes from interviews and Tassal’s environmental disclosures

Universal Rules

- DU1:Reference to rules and regulations, gov’t requirements, policy or guidelines
 - S5: “But am I particularly worried about that? Probably not, because they have got regulation around them, both in their internal management structures and in the government management around them, that to my experience is probably way more than most other inputs. So, so long as we’re keeping an eye on all of those things I’m not unduly concerned.”
 - S5: “Yeah, well, absolutely, because they’re there, usually, for a damn good reason. They are regulations, so if you have environmental regulations and you breach them, you are not, you are in breach of them, which is problematic...”

- S5: “But it’s fairly challenging for government because that takes it across different departments and, you know, as we found in the project we’re doing, when you actually look at the legislation that underpins the management of the marine environment we’ve got 127 pieces of different legislation that manages that. It’s huge. And very complex.”
- S8: “I think it’s very tunnel-visioned. So they’re basically looking at the things that they need to measure, which are true legislative requirements and permit requirements through the EPA and DPIPW.”
- S8: “...because they’re not required to under their permit arrangements or under the legislation. So they’re doing the stuff that they legally have to very well...”
- S1: “Absolutely, absolutely. This company has a philosophy of ‘beyond compliance’ you know? So yes, we are compliant, occasionally we stuff up so we may have a tweak here or a tweak there that’s not, and that will be a stuff up, but the whole ethos of the company is beyond compliance so, yes, I believe it is important to follow regulations...”
- S1: “We have 672 marine farming regulations with which we must comply.”
- S6: “Again, it’s really largely a governance issue, in that Tassal were doing everything that was required of them by the law. The question that we had is whether or not that was enough and whether the law should in fact be requiring more information to be provided about baselines to begin with...”
- S6: “...again enforcement in terms of whether or not the nutrient loads are being monitored adequately and those sorts of things.”
- S6: “And there’s a lot more monitoring and enforcement work that needs to be done by the government...”
- S3: “Obviously it’s important that they’re set at the right, at the right level. So environmental regulations in many cases become a minimum standard rather than necessarily best practice or where you need to be. So, in Australia we’re not doing so bad, but if you were to say you were following environmental regulations in Thailand then that might not mean the same as what it means here.”
- S2: “...there are regulatory structure and management structures in place that will never outfish a species in Australia...”
- S2: “Obviously they’re not going to be allowed to continue their operations if they’re having a large negative impact on the environment around their farms. They’re certainly controlled under tight regulation and tight requirements...”
- S2: “Look I’d say, in general I’d say marine farms, or Tassal marine farms, all marine farms are neutral. They’re under tight regulation and tight control to not have a devastating or a detrimental impact on the environment.”
- S7: “It’s good first start, let’s say that. I would put it into a probation and parole tag of behaviour modification, and that’s exactly what they do need, is behaviour modification.”
- T10: “The Board is accountable for the development, establishment and review of appropriate policy in these areas. The Board requires a best practice approach in these areas and has implemented appropriate management

objectives and structures, and a regular reporting process to ensure that this objective is achieved.”

- T10: “Tassal has calculated its carbon footprint and energy consumption to establish the requirement to register with the National Greenhouse and Energy Reporting Act as managed by the Commonwealth Department of Climate Change (DCC). According to the threshold limits established by the DCC, Tassal is significantly below the limits required for registration”
- T10: “Tassal has a Climate Change Policy which gives consideration and commitment to lowering the operational greenhouse gas emissions and overall energy consumption of the operations.”
- T11: “Our environmental management framework is in place to support compliance with all applicable environmental legislation and standards”
- T11: “Develop, implement and maintain our ISO14001 compliant EMS”
- T11: “Our Environmental Management System Tassal has developed and implemented an ISO 14001 EMS...”
- T11: “Provide a framework to demonstrate conformity to environmental standards via the supply chain; Track and support environmental compliance”
- T11: “Minimise noise to comply with regulatory requirements”
- T11: “Minimise adverse air quality impacts to continue to comply with regulatory requirements; Target zero complaints from the community and to respond to legislative Greenhouse Gas Emission requirements”
- T11: “Maintain marine operation activities within approved areas”
- T11: “This reporting year we submitted our first Action Plan under the Australian Packaging Covenant (APC) framework covering the period from July 2010 to June 2015“
- T11: “Managing the water quality and benthic health around Tassal farms is not only a condition of our marine farming licenses...”
- T11: “Tassal has in-house expertise in remote operated vehicle (ROV) deployment which allows the benthic environment beneath and around marine farms to be visually analysed and assessed for compliance...”
- T11: “Annual Compliance Surveys are conducted in accordance with strict protocols stipulated in marine farming licences and are frequently audited by governmental bodies.”
- T11: “In FY2011 Tassal undertook a total of 90 compliance dives. 100% compliance was achieved.”
- T11: “Tasmania’s Department of Primary Industries, Parks, Water and Environment (DPIPWE) prepares Marine Farming Development Plans for major marine farming areas in the state using the process set down in the Marine Farming Planning Act 1995 (see: www.thelaw.tas.gov.au). All marine farming operations must be licensed under the Living Marine Resources Management Act 1995 (see: www.austlii.edu.au). Licenses include environmental conditions to ensure that marine farming operations are sustainable and do not have an unacceptable impact on the marine environment.”
- T11: “As per the requirements of the Living Marine Resources Management Act 1995 and the Marine Farming Planning Act 1995, an environmental

monitoring program has been implemented by the Tasmanian government to monitor environmental conditions under and around finfish marine farms as specified in the Marine Farm Development plans and each individual license.”

- T11: “Australian and New Zealand fur seals are protected wildlife and are the natural and rightful inhabitants of the marine environment.”
- T11: “One method we use is to trap and relocate seals under strict protocols administered by DPIPWE.”
- T11: “Under the DPIPWE relocation protocols, Salmon farmers may apply to DPIPWE to relocate or in extreme cases, humanely destroy problem seals. In FY2011, there were eight clearly identified problem seals humanely euthanised from Tassal sites under the protocol. All euthanised seals were identified through micro-chipping or marking. These actions were permitted and supervised by DPIPWE.”
- T11: “In the rare instance that a seal actively attacks an employee, Tassal will work with DPIPWE’s Wildlife Management Branch to assess and manage the situation in relation to OH&S obligations.”
- T11: “Water supplies are sourced under licensed extraction from the Tasmanian government”
- T11: “Compliance with Regulations: As a large vertically integrated company, with a large number of leases, licences and permits, Tassal has 672 Marine Farming Conditions with which it needs to comply. TIMS allows us to track compliance across all relevant environmental regulations. In the FY2010 and FY2011 reporting years we achieved 99.9% and 98.8% compliance respectively, across our marine operations. In FY2011, Tassal had five notifiable incidents reported to the EPA. This is an increase of three incidents from FY2010, and is primarily a result of the waste water treatment plant for the Dover processing facility requiring an upgrade. No monetary fines were incurred. The work for the upgrade of the waste water treatment plan has been budgeted for and scheduled for FY2012 and FY2013.”
- T12: “This will produce Industry best practice guidelines...”
- T12: “Australian and New Zealand Fur Seals are protected wildlife, and are the natural and rightful inhabitants of the marine environment in which we operate”
- T12: “Salmon farmers must comply with state regulations and management controls associated with their marine leases. One of these management controls takes into account visual impact. All fish cages, buoys, netting and other floating marine farming structures must be grey to black in colour and low in profile and uniform in size and shape. Tassal also has an obligation to meet the protocols put in place to reduce nuisance due to lights at the farm.”
- T12: “Within the framework of our EMS this will be consistent with the "continual review and improvement philosophy" of ISO 14001.”
- DU1X
 - S8: “No. They need to be much more stringent. A lot more stringent. And there needs to be more accountability and more public access to reporting.”
 - S8: “...and they can produce a nice little report and tick the legal box- the legislat- permit requirements and that’s it.”

- S6: "...but again it's what's required of the law and Tassal went, Tassal and the other companies, met and exceeded, in a lot of situations, the information requirements. So they were doing nothing wrong, but I guess that was one of the concerns that we had, that there was a bit of a, it seemed a little bit reckless to be pushing ahead..."
- S3: "So, you know, no would be the answer. Ultimately, ultimately legislation is developed and implemented by politicians, and we all should play a role in making sure that when that development process happens that they are the most robust that they can be, but that's not always the case, so that, and the way that regulations and legislation is written means that there is often a lot of room to move in them and not a lot of accountability for decision makers, should they not, should they choose to not implement it within, you know, at its most stringent or its most environmentally conservative."
- S4: "No. Not necessarily. The regulations can be out of date. They can be under-enforced, which they routinely are. Like we used to...when we used to have sewage treatment plants before they went to Southern Tas Water...we'd do the monitoring that was required but I don't know if it was genuinely checked up on and things like this, so you know what I mean? Sometimes it can be lip service. Compliance.."
- S7: "Well, look, to answer that simply: when you've got legislation that allows for industry of state significance to be a priority and take precedence over anything else, what's the point in having anything else?"
- DU2: "the right thing to do"
 - S8: "For me, being ethical in an environmental sense is leaving the planet as you found it. So, yeah, leaving it as you found it. So not polluting it, not causing habitat and species destruction..."
 - S1: "Ethics...well, doing unto others as you would have unto yourself. You know? It's behaving in a manner which most people would assume is good, or right or...for me it is doing unto others as you would do unto yourself."
 - S1: "...you need to be seen, or to be doing, the right thing in that regard and be leading the way."
 - S3: "...the principles that help me decide what's right and what's wrong beyond what might be legally or otherwise written down as right or wrong."
 - S2: "...I probably personally live under the premise of do unto others as you'd like to do unto you..."
 - S9: "...but that only takes a decision at the top to say 'This is the wrong thing to do, we are going to stop it' and once you make that decision those other things flow on as a result of that."
 - T12: "Managing the water quality and benthic health around our farms is not only a condition of our Marine Farming license but it's simply the right thing to do..."
 - T12: "Like any farmer we are morally obligated to look after our livestock when they get sick..."
 - T12: "Australian and New Zealand Fur Seals are protected wildlife, and are the natural and rightful inhabitants of the marine environment in which we operate."

- DU3: “Above and beyond” regulations
 - S1: “This company has a philosophy of ‘beyond compliance’ ...”
 - S1: “Clearly they are still relevant, but we are going beyond that, yeah. Which is...cool.”
 - S1: “Yeah, I...we go beyond them. No, actually I don’t think following them to the letter...not enough.”
 - S6: “...but again it’s what’s required of the law and Tassal went, Tassal and the other companies, met and exceeded, in a lot of situations, the information requirements.”
 - S3: “So environmental regulations in many cases become a minimum standard rather than necessarily best practice or where you need to be.”
 - S2: “So there is a need for your Tassals and other companies to go above and beyond the requirements. And in a way, I suppose, by doing that and having a track record that they do that, means they don’t have to have those requirements set in regulations. There can be an understanding that they are being done anyway.”

Socially implied rules

- DS1: Socially acceptable actions
 - S1: “It’s behaving in a manner which most people would assume is good, or right...”
 - S4: “Well it is actually...doing activities in a manner that is socially acceptable.”
 - S2: “So, you know, they’ve set themselves a task of reporting on it and they’ve selected almost a watchdog to monitor them, to ensure that they’re performing in a manner that’s acceptable to the public, and that’s, I think that’s a huge step for an industry to make.”
 - S2: “I suppose from a personal decision making point of view, it would be probably based on a judgement of what my family and, direct family and friends would think of the outcome or the decision.”
 - S2: “...making a decision based on what other stakeholders will accept or allow you to do.”
 - S2: “...30 years ago, the general public, well 30-whatever years you want to call it, the general public would even accept an industry if they almost met their regulatory compliance. They were willing to, to turn a bit of a blind eye that they were trying pretty hard, they’re almost there, they’ve had a few breaks of the rules, but that’s OK. Whereas now, the general public, through a whole range of reasons, their acceptance levels moved above that of regulatory requirements.”
 - S9: “To appear that they are doing the right thing. I might choose my words carefully: to *appear* they are doing the right thing. To appear to be above reproach.”
 - S5: “Is that effect manageable and acceptable? Well manageable I think yes, at some level it probably is acceptable, that’s a societal, a political decision I

think, ultimately. But if you can be confident that people understand it and think, it probably is acceptable.”

- T11: “Target zero complaints from the community”
- T11: “Our sustainability advisory committee and other stakeholders have clearly communicated to us that the continued humane destruction of seals in accordance with government protocols is not viewed as a sustainable or an acceptable management practice.”
- DS2: Social contract
 - S5 “...whereas I think Tassal are very aware that their, in terms of their corporate responsibility’s and their social responsibilities, they have to actually acknowledge things and deal with them.”
 - S8: “And again, Tassal can say we’ve done this environmental planning, we’ve released it to the community, you know, can tick that box, but who in the community has actually read it if they don’t have a vested interest in it, you know, they do bugger all really.”
 - S1: “And also meeting people in the community who are so grateful for the company and what it has provided for them, their family, their children and not...you know, it goes beyond providing a wage. It’s an opportunity for their children to stay in the area rather than leave to go and find work. Those kinds of things are of immeasurable value to the community.”
 - S1: “I think for Tassal it would be important to report on those issues from a reputational perspective and, you know, the company wants to be seen, the company wants to be seen, as a leader in that sustainability space and I don’t think you can ignore global warming in that space and you need to be seen, or to be doing, the right thing in that regard and be leading the way.”
 - S6: “And in terms of other concerns it’s really just those qualitative thing; the noise and disc- community discontent type issues, which aren’t necessarily reflected but are also very hard to reflect.”
 - S6: “...you have to ensure that whatever impacts you’re having aren’t adversely impacting someone else’s ability to enjoy their environment and use it the way that they’re entitled to. And equally, they then have to make sure that whatever they’re doing doesn’t impact on others.”
 - S6: “Tassal contributes this amount of money to these communities and they’ve built, you know, football- they’ve established a football field or whatever, I think all of that, all of that, has to feed into the picture of Tassal as a corporate citizen, a good corporate citizen.”
 - S3: “And I think more generally operations that are using what is a common resource, which is the marine environment, and certainly in Australia it is, you know, it is a common property, have a obligation to declare the nature in which they’re using that environment and explain to us, as the public, how they are using that in the most sustainable and appropriate way.”
 - S3: “I think they understand, they understand that the public, which includes those that coexist in the area where their operations are, through to those that buy their resultant product, are far more aware of environmental impact, environmental management and the need and the ability, probably, for those things to be managed, that they aren’t just a fait accompli, and I think what

they're responding to is the demand and the desire from those broader groups in society who know that they're eating a product that hasn't had a, significant damage to the environment."

- S4: "Yes, I think that they have found they have to. They came to the realisation that what they were doing just really wasn't sustainable and they were being watched too closely as well. It was just not like the old days, they had to react. Yes."
- S4: "I think they wanted to improve their image...which they needed to do. I think they want to emphasize that they are here for the long haul and they are an important player and they can work together with the community because it is a community asset that they are based in. I just think they want to demonstrate that they can be a good corporate citizen and an important part of the community."
- S2: "Tassal, through their structure and through their board and through their hierarchy have acknowledged that social acceptance will become an integral component of their work in Tasmania and their capacity to expand and develop in Tasmania. So, you know, they've been forward thinking and acknowledged the need to release, be open and transparent and release information about their operations in order to gain social license. And in the large part, you know, all businesses have got to prove their social responsibility and environmental responsibilities."
- S2: "...the only way that you can stay on top of that is to address your social licence, to operate and get your point of view out and ensure that you're performing in an environmentally sustainable manner, because, you know, social license is about the public, general public's change in perception about what people do."
- S7: "They've got to play the public, in inverted commas; 'community responsibility game'. And that's what they're doing."
- T10: "As a responsible corporate member of the community..."
- T12: "We are sensitive to the impacts our farms may have and we make every effort to be open and transparent in our operations and communications in order to better address any potential conflicts."
- T12: "Some of Tassal's farms are quite close to residential areas, and this can give rise to noise disturbance. Tassal is committed to being a good neighbour and has made noise mitigation its number one social license priority."
- DS3: Social expectations
 - S8: "Well they're just trying to sway public opinion and have the public believe that they're not having an impact on the environment. I think there's also pressure from, I don't know about shareholders, but certainly pressure from the community to clean up their act. You know, they're strategic in the sense of making partnerships with different organisations to get their panda, panda badge and all this sort of stuff."
 - S6: "I don't know what their motivations are but certainly there is an economic driver in that consumer's generally are demanding higher performance standards from their food producers."

- S6: “that you’re doing the job that you’re supposed to be doing as effectively as you can and to the level that other people expect you to be doing it at.”
- S4: “But yeah, I mean, in accordance with community expectations.”
- S2: “...you know again, depending on what side of the fence you sit on, some people will always criticise and always say things can be done better.”
- S2: “I mean the general public are going to have gripes over a whole range of different issues depending on who they are and where they are. You know there’s some people that complain about the noise of salmon farms, there’s some people that complain about the boats going past their houses to get to the salmon farms, there’s some people who complain about the use of antibiotics.”
- S2: “The expectations of the public, in certain sectors of the public in particular, are far higher than those set out in government regulations.”
- S2: “They’re doing it anyway, keeping the public happy then the government can keep ticking the boxes as business as usual.”
- S7: “...but they’ve got to deal with a sustainable community and if they’ve got a community completely offside everywhere they go, that’s negative energy that they don’t really need to deal with. This is why I believe they’re playing the game.”
- S7: “And the only, the only way in which they’ve had to engage is by public scrutiny and practices that are far from conducive to natural asset before people like the environmental protection authority and others, this is the only reason that they’ve even bothered to come up with something that I would put into a window dressing category.”
- S7: “Responds, probably is not the appropriate word. React to a cattle prod, yes.”
- S9: “If companies know that those things are hurting people they have an obligation to change their packaging. And I think it will have a spin off in that more people want that product because they will be seen to be ethically sound, it will have got a ticked box if you like on the basis of ‘ethically sustainable product. I would like to see that on food products.”
- S5: “But I think there’s also a huge shift in consumer attitudes these days, the public require companies, particularly ones like aquaculture industry where they actually have access to a public resource, to be able to actually clearly define what impact they’re having, what they’re doing about it, good, bad or otherwise. So they can actually judge them, performance-wise”
- S5: “Oh yeah. Yeah, no, there’s a whole range, like, it’s just so important for the industry itself, because the community engagement and understanding. And warts and all, they need to know what’s going on so they can judge, you know, in an unbiased fashion, the performance. And so the industry and government can make changes where it’s most appropriate to make them.”

Virtue Ethics – classifying quotes from interviews and Tassal’s environmental disclosures

Emerging from the self

- VEE1: Personal or heartfelt motivations

- S8: "...but whilst I think Linda Sams is quite genuine in her passion for environmental management, I think she's constrained in what she can do because of the bottom line of money and shareholder accountability."
- S8: "You know like, we used to get massive, massive rafts of mutton birds, mmm, feeding the channel, remember when, you know, X was this high we used to sit and watch thousands and they..."
- S1: "So there is this really complex interplay between all of those three elements of business and I wouldn't work with Tassal if I didn't think...and you know, I am a girl and I am a very emotional person as you may have gathered, and I can feel this particular company making a big difference in corporate Australia."
- S1: "About the planet that my son will inherit. So it is important to me."
- S1: "And everybody was just a mess. Everyone was just a mess"
- S1: "...and it was very much from the heart, you know, we were all appalled that this had occurred and immediately after we did this, this and this to stop it from ever happening again."
- S1: "...but there is a real heart desire to always keep improving. So I am personally appreciative of research that gives us an opportunity to get an external perspective on what we are doing"
- S3: "You know that scares the daylights out of me that Australia's current, kind of, position, both politically and generally within the public, it just seems to be a non-event at the moment"
- S3: "...maintaining the health of Australia's marine resource is, you know, is a passion of mine"
- S3: "I've, yeah, grown up loving fish and the beach and scuba diving and all those kinds of things..."
- S3: "...I guess, in part because of the relationships that I have, you know, with the, it has a really, a very human side as well as a beautiful environmental side."
- S2: "As I said I've always been on and around the water; always dived, always fished, always swum, snorkelled, always spent time on the East coast down at Eaglehawk Neck and in more recent years up at Orford. I've always had a love of everything marine, so really important to me"
- S7: "Absolutely. If you're not living in harmony with things around you, how are you going to survive in that environment with any longevity? And how's that environment going to exist into longevity, is the short way of looking at that, I think. And look, it's as corny as it is, but 'live and let live' really is a fairly good adage in terms of ethics"
- S7: "The impact of man, in inverted commas, 'man', on the environment is about as salient as you could ever get. We do not seriously take into consideration our impact on the planet."
- S7: "Absolutely. Absolutely. If they want to be sustainable, genuinely sustainable, on this planet, they need to embrace these fundamentals like right now. Or they're not going to have an industry."
- S9: "I would like to know my almonds aren't sprayed with cyanide or my apricots aren't whitened or purified with sulphur. You know?"

- S9: “I swim in the water, I breathe the air, I drive on the roads in the area where the fish farm is being produced and fish farming is going on, I risk my life on the roads because the boys are doing 12 hour shifts...how else would I become aware of them? I’ve eaten the fish so I know they are there because they provide fish to community groups -- one would say an attempt to co-opt us. I see them...so visual impact on me is negative. I hear them. I have to suffer their lights at night. So they are visually polluting, they are in a pristine area that you would think you could save it from industry but no, sorry, it isn’t being.”
- S9: “Which are the people who have lived here long term and have seen the changes and who have also experienced what the oceans and the beaches used to look like before they came.”
- S9: “That you are conscious when you eat something or when you drive somewhere or when you create a footprint or when you buy something new, that you think about how it’s made, where it’s made, by whom its made, how old they were – Nike for instance. In relation to fish farms how much water was used in its production, how much are people getting paid - is it a fair quid for the job? The long term waste management for that industry, the levels of the mercury or pollution that are increasing in the production of that industry ...are the sorts of things I think about.”
- S9: “Because I value organic food, I value effort – human effort, I value beauty and I value the planet and the diversity of species and the beauty of this planet and I believe that there is a tipping point where human beings have dominated the other species and I feel a sense of shame as a member of the species.”
- S5: “Who, why do people- because you have to put it in, say this is a proportion, why would people care? And then once you get ‘why would people care’, well what are we doing about this in any way, shape or form?”
- T10: “Behavioural change, innovation and technical progress are essential to achieve a balance in meeting natural resource and energy needs.”
- VEE2: Focus on the context, solutions emerging from the context
 - S1: “One, because it has the respect of corporate Australia because it is economically successful, but it isn’t doing that at the cost of everything and I find that very impressive, and that our board is, you know, that is how they are generating the conversation that is our company. And I think we can make a huge difference. It’s quite...I think we can make a huge difference”
 - S1: “We used to...so all of our sites, for example, every circle that you see on the water underneath, that would be monitored at least once a year, we would have samples taken up...probably more actually...it would have samples taken, it would have a dive – underwater vehicle going visually observing the bottom because there are indicator species if conditions are becoming too nutrient rich then there are indicator species that tell us ‘Oh, there is a problem developing’. So there is one guy who operates that equipment across all our sites and he has a real feel for...in the old days it used to be ‘well we will just sit there and wait until we got into trouble if you know what I mean, so we would just wait until we got into trouble, whereas now that is being

proactively managed so that the guy who does all of that says, 'Shit I think this site is heading for a bit of an issue,' so he will contact Marine Farming and say 'Oh this is happening here... what do you reckon' 'Yeah tweak this, tweak that... all fine.'"

- S1: "Because we are learning, you know. It's a real learning as we go about what we are doing, and we don't always get it right... we don't always get it right... but there is a real heart desire to always keep improving."
- S6: "And I guess that's a concern that we have, that even if individual farms are reporting and reporting accurately, it's information without a context, yep."
- S6: "There are different sorts of models of how you could look at more regional impacts more regularly and just sort of adapt the powers available to amend what each of the companies is authorised to do on the basis of new information (whether temporarily or permanently)."
- S6: "They do that with I guess the best example is probably water flows, so the water branch, they would manage like, see what people, how much people are taking and if they can see that the water that's flowing through a creek in a particular year isn't enough to satisfy everybody they can ask everybody to reduce their loads by 10% and that kind of thing."
- S3: "So, you know, as I say to my kids all the time, you can't change what happens to you, you can only change how you respond. So,... we really need to be responding to those pressures in a way that means that we have a different outcome than others and, you know, maintaining a really viable seafood industry, that's my definition of success."
- S5: "...but you do have to be able to provide the context for what does it mean, as numbers."
- S5: "...if I did find something that I was very worried about, I could actually go and say 'this is a problem', and then we would start a conversation to deal with it, as opposed to a shut door. So I'm very optimistic about the way the management is going at the moment."
- S5: "There's still a lot of to-ing and fro-ing and research, for instance Mac Harbour, there's a few unknowns about it, I'm perhaps not as worried as some about it, you know, all going pear-shaped, because I think the conversations they're have- are, and they're keeping a watch on it. One of the nice things I think about management that we have now is that it is, they're trying to make it adaptive. So it's based on the information that comes in, they respond appropriately, rather than just, here's your set of rules and regulations and you have to live within them. It is quite flexible and I think the government is more flexible now than it was 10 years ago and the industry is certainly more flexible now than it was 10 years ago. So they're working together better."
- S5: "...I think ok, we're, the solutions that are currently on the table are one, may not be the best solution, is kind of what I'm getting to, but I don't think as they're up they're actually cast in stone. I think there is that capacity to adjust what you do, and I know Tassal in particular are very reflective to this, that they actually have several strategies in place, they can differentially allocate weight to,"

- S5: "...some of the biological indices that they use in the Northern hemisphere, I have quite a lot of experience with them, and they are not relevant. They have actually become fallible here and yet if you trans- people can say, oh well we require them to be done, and you're going, but that doesn't make sense, that's not logical."
- S5: "Again it's interesting in that, because it comes back down to, don't just blindly follow it. It is understanding why. Why are you doing it? To what end?"

Relational focus

- VER1:Relational perspective
 - S8: "And have watched the degradation of the Channel as a result of fish farms expanding and particularly the impact they are having on endangered species"
 - S1: "...for me, ethics around this work is a really complex interplay between social good, economic benefit"
 - S1: "...both my husband and I are science trained and marine science trained and have an understanding of how the oceans work and what drives the currents and, you know, the currents and nutrient and temperature profiles of the currents and what the world's fisheries depend on and what the world's ecosystems depend on and if something were to happen to one of those currents then the whole thing could just be completely rooted."
 - S1: "Well, there are plastics in the ocean, there is stuff washing around in the water, it's plastics on the beaches, it's, you know, visual amenity, it's the impact on wild life – should they ingest that? The impact on birds"
 - S6: "...they're obviously attracting birds by virtue of the fish being there and so that's potentially a biodiversity issue, because if they're all attracted to a particular location, can't get to the fish because they've introduced, you know, better netting systems, but they're all now looking for feed in a particular area and that may have negative impacts for other species that are resident in that area."
 - S6: "...relevant stakeholders together to see where there was commonality and where there were things that could be fixed but where everyone had a shared understanding of how they should be fixed and the direction that should be headed in."
 - S6: "But since the conference there has actually been a better kind of ongoing conversation between environmental groups, and not the EDO specifically, but Environment Tasmania, Tasmanian Conservation Trust, and some local community members, with the Tasmanian Salmon Growers Association"
 - S6: "I think that the motivation to have a better social relationship is really impressive and important and I think that does show a kind of sophisticated understanding of how you have to interact with the community."
 - S6: "...but in terms of the baseline data, in order to assess the impact on the threatened species you needed more data in relation to water mod- movement of water and sediment in the harbour, because that would obviously impact on

nutrients, nutrient load, how the nutrient loads from the fish farms were actually dispersing or whether they were remaining in the harbour and the impact that that in fact has on that species.”

- S6: “...there and then looking at water modelling and then to see how the nutrients would actually circulate and be dispersed...”
- S6: “There just might not be as much coordination [laughter] as there should be.”
- S6: “Yes, I guess in that sense environmental ethics is about recognising that everything you do has an impact on the environment and that everybody else enjoys that environment in different ways, so you have to ensure that whatever impacts you’re having aren’t adversely impacting someone else’s ability to enjoy their environment and use it the way that they’re entitled to. And equally, they then have to make sure that whatever they’re doing doesn’t impact on others.”
- S6: “...but also involving the community and improving the ongoing interaction of everybody that is effecting a particular environment.”
- S3: “Having said that, you know, in parts of their growing areas, they’re part of a conglomerate of companies farming in an area, so there’s, you know, there’s cumulative effect. It’s, it’s to some extent difficult and out of their control”
- T11: “This technology has been shared with the rest of the Tasmanian Salmon industry and has created much interest internationally (see: www.micmarine.com.au). We are also leading a collaborative research project that will support the effective and responsible implementation of this new technology.”
- T11: “...and contributes to the wellbeing of the communities in which we operate.”
- T11: “Encourage equivalent environmental commitment from our suppliers and contractors; Consult with and engage internal and external stakeholders, including local communities...”
- T11: “The relationship between the two is largely driven by temperature and pH. The wastes may be dispersed by current flow and utilised by plankton for growth. The impacts of dissolved nutrient wastes such as ammonia, nitrates, nitrites and phosphorous depends on the ability of the surrounding environment to assimilate the wastes.”
- T11: “As part of our risk management strategy, it is important that Tassal understands the potential impacts and interaction of nutrients on the environments in which we operate.”
- T12: “...we are doing this through cooperative efforts with the feed supply companies...”
- T12: “...however we recognise that there are potential impacts to the receiving environment and we want to reduce those impacts.”
- VER2:Upstream and downstream considerations
 - S8: “Ok, so there’s, well starting with the fisheries, the fact that they’re using raw fish and chicken waste, that there’s no transparent reporting of the food that’s going in.”

- S8: “The impact of waste, impact on, the marine debris impact, impact on silt, impact on seabed, impact on benthic fauna and flora, the impact on boating and navigation, light, noise, they’re building dams and stopping environmental flows in fresh water rivers because they have to flush the gills of the fish, they’re – antibiotic levels are being picked up in wild fisheries in D’Entrecasteaux Channel which means that there’s major health implications because people who are eating those fish are receiving low dose antibiotics, which isn’t the way antibiotics are supposed to be prescribed, they’re meant to be prescribed high dose, short period of time. There’s the risk of disease getting out into wild fisheries.”
- S8: “Yeah, most definitely. You know, if you want to go and get organic certification then you have to actually be able to certify a, and this is proper organic certification, you have to be able to actually certify every step of the production line. You know, from planting the seed to what you put on the paddocks to how you harvest it to where it’s stored to how its transported. Totally, yeah, they should.”
- S8: “Particularly disposal of waste and packaging because, you know, you’re talking about plastics that are going into the water and ropes and, yeah. And waste, you know, waste feed that’s toxic.”
- S8: “There’s a salmon farmer up on the North coast who goes to, takes water out to the river and it goes back into the river cleaner than it leaves, you know, they grow ginseng as a secondary crop”
- S8: “Down the food chain...”
- S1: “...we did a life cycle assessment, so a cradle-to-grave assessment of our product, in the FY 2012 report...”
- S1: “And also because I know our practices in regard to feed there could be a potentially global issue because we do source fish from South America but because I know those fish are presently sourced from...responsible fisheries...and within the next 12 months they will be resourced from MSC certified fisheries...”
- S1: “...but it’s important for a company to be responsible for a product that it accepts into its production process as much as the product at the end and how it is packaged and transported.”
- S6: “Yeah look, I think the whole of life or, whatever you call it, but yes, having that regard, I think it’s very important in terms of consumer information. You know, it’s like food miles and all of those things that are increasingly influencing the decisions people make and if they can see the cradle to grave of whatever the buzz word [laughter] at the moment, but I do think it’s very important so that people have a very clear understanding of exactly what the impact of their decision to buy Tassal salmon is. And it’s not just how it was caught at, or, and how it was farmed at this particular site, it’s the fact that Tassal uses packaging in this way, Tassal sources it’s food from this source...”
- S3: “Yeah, look, it is, and probably what I should add is that the highlight issue for me and for us at WWF, would be the issue of diets. And I know that, and I don’t need to say that because Tassal isn’t working on it, they are, but

that's the most difficult issue, I would imagine, for... it's a difficult issue from their perspective... diet's where they're in a position of, you know, really having to use themselves as a market power and rely on major feed manufacturers being motivated to resolve those issues."

- S3: "Not just for them but for the whole of the, the whole of the, you know, aquaculture industry that relies on the, you know, diet."
- S3: "I think that ... that's part of the natural progression, isn't it, to recognise that any organisation isn't, doesn't have hard boundaries around it and it's actually part of a network of feeder industries and post-harvest and post-production industries as well and I think reporting on those kind of things will be the precursor to the kind of thing that Tassal does, you know, report at a very high level, it will be the precursor to associated industries adopting those same standards as well."
- S4: "Now I think they are trying to balance it out so they don't overfeed and there's not too much build up of fish waste down there."
- S4: "Yeah, it's the whole story on the impact and the benefits."
- S4: "I just think it is important too to...it gives the community the full picture."
- S4: "But even in a simple sense it could be a fantastic poster for Tassal, couldn't it? Starts here, goes here...you know, it's just the whole start to finish of the whole thing. It's just...it could be fantastic."
- S2: "They're, and again, the waste product they've got nothing to hide there, I'm not sure if Tassal do report on that, but you know, there's a whole range of, it just doesn't go to landfill, it's not being dumped, it's not going to landfill, it's getting used in, well some of it traditionally in pet food, some of it in production of fish oil, sorry, human grade fish oil. So you know, they're an industry that are trying to minimise, for want of a better word, their environmental footprint. They're trying to minimise their impact they're having at all tiers of upstream and downstream..."
- S2: "So yes, food, waste, it's all being used in a good way, they should report on it."
- S7: "In absolute anal detail. In absolute anal detail. So that, from a governance, compliance, duty of care, they are accountable absolutely at the board level to the shareholder."
- S9: "the way that they accumulate their feed for the fish, the effect of their engagement with boats on the waterways, their use of fresh water which is a valuable and limited resource, their pitching of their product to the rich, their...which I haven't mentioned before...their negation of the wild species at the expense of the fish product that they are growing."
- S9: "Plus the product...I think that when they use products that are dangerous to the environment for cleaning, for management of the fish farming processes, whether they are antibiotics to keep down the lice or whatever it is that they are using. I mean, what are they using?"
- S9: "That you are conscious when you eat something or when you drive somewhere or when you create a footprint or when you buy something new, that you think about how it's made, where it's made, by whom its made, how

old they were – Nike for instance. In relation to fish farms how much water was used in its production, how much are people getting paid - is it a fair quid for the job? The long term waste management for that industry, the levels of the mercury or pollution that are increasing in the production of that industry ...are the sorts of things I think about.”

- S9: “...the upstream and the downstream are all adversely being affected at the moment because all those people are involved in a particular way as a result of this industry, of being...”
- T11: “...a framework to demonstrate conformity to environmental standards via the supply chain”
- T11: “Establish procedures and operating mechanisms that focus on waste reduction and reuse, as well as recycling strategies”
- T11: “Limit the discharge of sediments, wastes, process chemicals or untreated effluent to the storm water system”
- T11: “Tassal is committed to finding innovative ways to reduce, reuse and recycle waste across our operations. We achieve this through various initiatives. Tassal has waste segregation facilities at all sites to facilitate recycling of all waste including fish waste, packaging related waste (including metals, cardboards, plastics, polystyrene and paper), and copper waste. 87% of all waste generated at Tassal is recycled.
As part of our fish waste initiative, wastes such as mortalities, offcuts, trims, frames, heads and guts are sent to a third party for rendering. All sites generating organic waste have appropriate collection and storage facilities. Packaging waste is collected by waste service providers under an ongoing commercial arrangement. We are committed to the ongoing maintenance of recycling initiatives while looking for opportunities to continuously improve recycling across all activities. The preference to purchase recycled materials extends across all operations including corporate stationery and packaging. We will formalise procedures for purchasing materials by implementing a ‘Buy Recycled’ Policy in the next reporting year.”
- T11: “Tassal has entered into partnership with Replas and the Redgroup to recycle rigid plastic and feed bags at two of our southern processing sites. What was previously considered waste and sent to landfill can now be transformed into beautiful outdoor seating. Our first seat came off the production line in 2011 and has been donated to a local school.”
- T11: “The use of wild caught, forage fish for fish meal and fish oil is often discussed as a key sustainability issue for the global Salmon farming industry. Most of the fish meal and fish oil used in Salmon feeds comes from reduction fisheries of pelagic (forage) species. The main reduction fisheries are in the Pacific, off the coasts of Peru and Chile and in the northeast Atlantic”
- T11: “Land and vegetable ingredients in our feeds are all sourced from responsible suppliers with a focus on traceability, sustainability and quality.”
- T12: “We are gaining a better understanding, and managing our inputs, we are doing this through cooperative efforts with the feed supply companies...”
- VER3:Interconnectedness, indicator species

- S8: “They’re going to destroy Macquarie Harbour. You know, they’re, one of the motivations for them to move to Macquarie Harbour was that the Channel was becoming warmer and the acid levels in the water has become too acidic for the fish, which means that there’s an increased risk of disease with amoebic illness, there’s another diseases which means that, you know, they’re going to have to start using more antibiotics and they’re going to have to start flushing the gills with fresh water and if by moving over to the West coast they’ve got the benefits of the deep, dark water, which is cooler and the flushing coming through from the Gordon and the Franklin and the King rivers and they can do all the polluting they’d like over there...”
- S8: “So the Channel, we’re getting this very fine film of algae all over the benthos now that we used not to get, we get algal blooms on the shore in Peppermint Bay that we used not to get and they only happen under certain prevailing wind directions which happen to be transporting sediments and waste from the farm.”
- S8: “So yeah, obviously climate change is the big thing. Yeah. It sort of encompasses everything doesn’t it?”
- S8: “Because it’s going to have major impacts on every aspect of life...”
- S1: “...research into salmon farming, and in fact when I was at the AMC I did a...it was like a Graduate Diploma, and I did a thesis on wild fish attracted to salmonoid sea cages...”
- S1: “...because there are indicator species if conditions are becoming too nutrient rich then there are indicator species that tell us ‘Oh, there is a problem developing’”
- S1: “both my husband and I are science trained and marine science trained and have an understanding of how the oceans work and what drives the currents and, you know, the currents and nutrient and temperature profiles of the currents and what the world’s fisheries depend on and what the world’s ecosystems depend on and if something were to happen to one of those currents then the whole thing could just be completely rooted. And it is kind of...that’s a bit scary. You know, you could literally wake up and there’s soup on your doorstep, jellyfish soup. You know? Like one of the major drivers of the world’s currents is the freezing of the ice caps, when the water freezes it excludes salt and salt is heavy and so the water...there are currents that flow...the world’s oceans are just like these massive currents, kind of like some flow here, some flow there, but the driver, the primary driver is the freezing and the melting of the ice caps...”
- S6: “...basically because they form the backbone of everything that we do. So loss of biodiversity will lead to very significant economic changes, it will lead to health issues, it will mean that, even things as simple as visual amenity and landscapes and the way that we actually see ourselves and Tasmania will change as there’s a loss of biodiversity, and you can’t- people’s experience changes when they go recreational fishing and they can no longer catch what they used to catch. When, yes, so I think the obvious answer is that biodivers- we all rely on a healthy, thriving ecosystem in order for everything that we do to be maintained.”

- S6: “Well the threatened species was the significant impact, I suppose, but in terms of the baseline data, in order to assess the impact on the threatened species you needed more data in relation to water movement of water and sediment in the harbour, because that would obviously impact on nutrients, nutrient load, how the nutrient loads from the fish farms were actually dispersing or whether they were remaining in the harbour and the impact that that in fact has on that species.”
- S6: “...but collectively all the aquaculture that happens in the Channel for example, it all contributes to nutrients in the Channel, which contributes, which potentially has impacts on a whole range of ecosystem issues. So I think you have to consider all of the marine farming collectively even if it’s not all Tassal.”
- S6: “Yes, I guess in that sense environmental ethics is about recognising that everything you do has an impact on the environment and that everybody else enjoys that environment in different ways, so you have to ensure that whatever impacts you’re having aren’t adversely impacting someone else’s ability to enjoy their environment and use it the way that they’re entitled to. And equally, they then have to make sure that whatever they’re doing doesn’t impact on others. So there’s that sense of environmental ethics, I guess the other aspect of environmental ethics is that idea that humans aren’t necessarily the primary source of what is deserved in terms of the use of land and that, you know, animals and the ecosystem generally have as much right to a healthy, continued existence as we do, so we shouldn’t be advancing ourselves at the expense of other systems.”
- S6: “And I think climate change also has obvious impacts for aquaculture and marine management generally, because rising sea temperatures absolutely affect the ecosystems and they will lead to the introduction of pests which haven’t been in Tasmania before because the climate hasn’t been warm enough. So climate change as a general issue brings with it a myriad of issues which will need to be dealt with. Other environmental issues – I mean, I think marine issues in terms of marine reserves and I think we don’t have nearly sophisticated enough understanding of marine management and spatial planning stuff as we do for terrestrial...”
- S6: “Look, again it would be great if they did. I think it’s almost impossible to do in isolation, so the only way they could do that is if every other marine aquaculture company was also reporting to that same level. Because I think: A, it’s not meaningless, but it lacks the broader context if only one of them is doing that reporting; but also, if that information is not being provided even to Tassal by the other companies then they can’t really make an assessment of their own contribution or the benefits of their, of any reduction that they’re making, without the information of how that compares with the more regional impacts.”
- S2: “I mean the general public, through housing developments in coastal areas have a huge impact on marine environment, but it gets lost in, it’s just development of a new house being built, whereas the trade off, is it being poked at, in someone building a house that hasn’t got sufficient sewage

capacity and means in – you know, ... it's occurring more and more where raw sewage is leaking into our marine, coastline environment, because the capacity of sewage systems and higher rainfall don't fit."

- S2: "Then you get to marine debris and then you're talking more regional impact, where tides and winds and swell will remove either away from the direct farm location elsewhere. And then look, some issues, I suppose, become almost more of an international scale to some extent."
- S2: "Whether you want to believe it or not the marine environment on the East coast is changing. A lot warmer water, we've got new species, we've got, in particular, below average recruitment of some key commercial species as well as the invasion of *Centrostephanus*, the sea urchin down the East coast, changing our marine environment. That's going to have some major implications for our fisheries and our general water users and our marine environment, for..."
- S7: "Look, just to add further, and thank you for that, a bird will not shit in its own nest and I think they may well have got the point, that if they want to have a pristine product in a pristine environment, they've got to be part of the equation. Everything else around them isn't just necessarily going to fall into place. And I think maybe that might be a highly motivating factor as well."
- S7: "I'm not an oceanographer, but I'm sure there would be huge impacts in terms of further discharge of nutrients and carcinogens into currents that may well end up in the great Southern Ocean. I don't have that field of expertise. But this is national and international, this is not just regional."
- S7: "The impact of man, in inverted commas, 'man', on the environment is about as salient as you could ever get. We do not seriously take into consideration our impact on the planet."
- S9: "I have been trying to do that with the rope, so that they will colour their rope, so that we know which company is responsible for leaving it available to the whale's stomachs"
- S9: "I certainly would. I would like to see what they are doing to the sex of the mussels on the shoreline. I would like to see how they are changing the filter feeder numbers from the crustaceans. There is an enormous number of crabs that are killed on the beach. I have only seen that since the fish farm has been there. I have never seen a completely healthy penguin dead on the beach before the fish farms were there. I've never seen three seals inside of three years before the fish farms were there. See I am a long term resident of Roaring Beach, and..."
- S9: "Well, yes, they are not doing enough to protect diversity of species in the areas they are engaging in, the coastline, the air, the way that they accumulate their feed for the fish, the effect of their engagement with boats on the waterways, their use of fresh water which is a valuable and limited resource, their pitching of their product to the rich, their...which I haven't mentioned before...their negation of the wild species at the expense of the fish product that they are growing. You know you have local people who are poor and trying to feed themselves and they are ripping out the small fish, the variety of fish or the...for the fish food. So that is a problem in terms of sustainability.

They are in the ocean which I don't think is a long term sustainable situation for them either."

- S9: "I think it is international because there is a huge demand for their product. They have already gone from here to Macquarrie Island, I don't know if Tassal is involved in breeding at Macquarrie Island as well, but the hand in glove relationship they have with Huon Aquaculture makes me suspect that they have. So...I would say that the implications...see I don't see that Tasmania is separate island from all the dilemmas that are happening in the Czech Republic in terms of the management of industry or in Europe, or in Canada, or in America. I think that we can lead the world in the way that we develop food for the poor and then the rich...because the rich will always be able to feed themselves...mainly for the poor and what is done here is actually able to be reflected on as a sustainable industry overseas. So I think the damage is also reflected onto the world because this is our planet. We should be custodians, not greedy capitalist bastards..."
- S9: "Diversity, maintaining diversity, collecting baseline data so we know what's there to protect, and not assuming that there is nothing there just because we haven't actually tested for it. Like the limestone cave areas or what happened with the mangroves that were developed on...what's happening in Manhattan where huge areas of swampland have been reclaimed and bridges and roads are going straight through...and in Canada...straight through wetland areas. Pollution of rivers, and the toxicity and the disgusting way that the sea is being seen as a garbage dump. They are the environmental issues that I think we all have to embrace in very...how we deal with our rubbish, what value we put on recycling, what value we put on our clean air, how much are we massaging our values to make sure that our councils are held accountable for what they approve and what they don't approve when they are doing the planning, when they are doing the development of waste dumps...you know, I mean human beings are want to be lazy about all those matters and you can't do everything when you are trying to have a life as well."
- S5: "I'm actually quite, I suppose the one that does kick off with me is the fact that we have this quite strong understanding of the aquaculture industry, but it's all the changes that are happening around it and how that is, and I'm getting, I suppose, more to that sense of how the environment impacts on the aquaculture industry, which then impacts on the aquaculture industry impacts, if that makes sense? Because if you look at things like the amount of urbanisation around a lot of the areas which used to be relatively remote from people. The land clearing, vineyards going in, orchards going in, changes in the forestry practices, will make huge differences to land runoff and catchment inputs, we're talking about major, ripping water out of the system for the irrigation of the midlands, this huge difference to environmental flows into the system. All of those have quite a big, and actually the interesting sites, this is possibly more stupid sounding than other environmental stuff I do, is all the actions people are taking to manage against climate change, particularly in estuarine systems, which is where a lot of this stuff happens, in themselves are

having a huge impact on the environment. And, you know, we're looking at changing where people live in relation to the coast, how close they can get to it, what that means for the land management. I think that interaction is really going to be quite telling coming, going forward. And we don't really have a handle on that at the moment."

- S5: "But you know our increasing tourism, a lot of those tourism boats, there's no control over the sewage effluent straight out of that, so it's straight into the systems around. We just had the shellfish conference, which is oyster farming, and they found in one thing where there was evidence of, that's actually in Europe, that one boat went past where there was one release and the whole farm, the whole area closed down with, it was actually, had a gastro thing, one person on the boat that went through the whole thing. And so I don't, I hadn't registered how big an impact that kind of thing can have. So that's just, like if you were asking where, I think if the industry plans to scale up the way their talking to, we'd have to really look at how and where that's done. And that's not a case of me saying I don't think the industry should, I'm very happy to see, because it's good jobs for people in Tassie, I say we don't, tourism's got one side of things but not everybody wants to wash up and clean up after other people. [laughter] Some people want, you know, and what are they going to feed these other people that come in, because they're all the tourism industry want the premium product, so there's got to be the interaction of the whole, but it will present some much greater problems or issues for the industry because it can't intensify much more in some, like the southern systems, is going to be hard, unless they can come up with some very innovative technological solutions, which they are looking at. So I'm intrigued more than worried, because I want to see how it develops, but I think it will create some very clever thinking. Because I think they'll have to."
- S5: "The, well not the broader interconnected systems stuff, that would be hard for them to do. I think that's something, what they would, might want to look at is trying to look at ways, and it's certainly on the cards, like the channel project's doing it, the Derwent estuary problem is doing it to an extent, it's much more about, it's a buzz word at the moment, but the integrated catchment management, bringing together the aquaculture industry into the whole, and Tassal's been a bit of a, I suppose has been a bit of a driver. Tassal and HAQ have had to get onto this now. We're saying we want to see how it fits into the system as a whole. And there was a long time where it was like just leave us alone, we want to operate quietly on our own. But now it's starting to recognise, well if you're going to manage us you've got to manage the whole and trying to fit that in."
- S5: "Because there's a lot of data coming in about salmon escape they can't catch them and say, well that bloody salmon farming, you know, moved in and we can't do anything. There's a whole range of other influences in there and it would be lovely to be able to say to them well actually, it's not, it's this other, and if we change that a little bit here or change that a little bit there then yes you can catch that cray where you used to, or you can, yeah."

- T11: “Prevent significant adverse impacts on sea grasses, micro-algal and invertebrate communities”
- T11: “Tassal recognises that there are potential cumulative impacts to the receiving environment. We are currently participating in a collaborative study, with the University of Tasmania, on the benthic effects of copper accumulation.”
- T12: “...these sources are recognised globally as being limited. It is in our industries best interest to demand that fish stocks used for fish meal and fish oil is sustainability managed.”
- T12: “There are more than 600 naturally occurring carotenoids and, for example, they produce the colours of autumn leaves.”

Holistic Perspective

- VEH1: Wide outlooks, both chronologically and geographically
 - S8: “They do their assessments in an area that’s prescribed and there’s impacts outside of that area. It’s as simple as that. You know, there’s shore based infrastructure, there’s impacts on the roads, there’s noise, there’s lights.”
 - S8: “So the Channel, we’re getting this very fine film of algae all over the benthos now that we used not to get, we get algal blooms on the shore in Peppermint Bay that we used not to get and they only happen under certain prevailing wind directions which happen to be transporting sediments and waste from the farm.”
 - S8: “Oh, global. Totally global. I mean they’re using wild fisheries for pellets, so you know they’re depleting a common property resource. So it’s global.”
 - S8: “So yeah, obviously climate change is the big thing. Yeah. It sort of encompasses everything doesn’t it?”
 - S8: “It’s really changed. And the thing is that the monitoring that’s been done hasn’t monitored the right species, you know, and so it’s then classed as anecdotal evidence which doesn’t stand up.”
 - S8: “And also live in Woodbridge, and so have been a keen observer of the marine environment since we moved to Woodbridge which is seventeen years ago. And have watched the degradation of the Channel as a result of fish farms expanding and particularly the impact they are having on endangered species and I have a 17 year old daughter and an 18 year old son who can say to you that the marine life that they observed as 2, 3, 4, 5, 6, 7, 8, 9, 10 year olds is not there anymore, it’s gone.”
 - S1: “So people wanted to know about interactions with wildlife and antibiotic use and copper anti-foulant [6:32] and broad scale environmental monitoring...”
 - S1: “We reported, we did a life cycle assessment, so a cradle-to-grave assessment of our product, in the FY 2012 report...and so for us that was about the broader climate change, greenhouse gas emission, fresh water use”
 - S1: “But I also see that as changing over time, do you know I think it is a commercial imperative in the beginning but I see that evolving and changing over time...”

- S1: "...it's a natural evolution of where the company has come from and to where it is going."
- S1: "I know that there are broad scale impacts of nutrients and stuff but there has been a lot of research done on that. Recently research released...Broad scale Environmental Monitoring Program Assessment in the channel and that is all fine, it's all as predicted or less than predicted."
- S1: "And also because I know our practices in regard to feed there could be a potentially global issue because we do source fish from South America..."
- S1: "Well global warming is an important environmental issue."
- S1: "...both my husband and I are science trained and marine science trained and have an understanding of how the oceans work and what drives the currents and, you know, the currents and nutrient and temperature profiles of the currents and what the world's fisheries depend on and what the world's ecosystems depend on and if something were to happen to one of those currents then the whole thing could just be completely rooted. And it is kind of...that's a bit scary. You know, you could literally wake up and there's soup on your doorstep, jellyfish soup. You know? Like one of the major drivers of the world's currents is the freezing of the ice caps, when the water freezes it excludes salt and salt is heavy and so the water...there are currents that flow...the world's oceans are just like these massive currents, kind of like some flow here, some flow there, but the driver, the primary driver is the freezing and the melting of the ice caps..."
- S1: "Yeah, but Mother Earth will be fine, she'll be fine. And all those other species, but she'll be fine."
- S1: "Well, because it is about the future of the planet. About the planet that my son will inherit. So it is important to me."
- S6: "The issue that, I guess, again, as a governance issue we have is that there hasn't really been a kind of Channel-wide or region-wide, whichever region you look at, assessment of how much nutrients is too much, like a cap to say, alright, well, this is how much the Channel can stand, Tassal's putting in this much, sewerage outfalls are putting in this much, so we've got this much left, therefore we can't approve any more farms, or each farm has to reduce by this much. But because there's not that overall cap, or any kind of consistent, region wide monitoring it's very difficult to assess how much is too much. And I guess that's a concern that we have, that even if individual farms are reporting and reporting accurately, it's information without a context, yep."
- S6: "...the Channel, the 'State of the Channel' report that was done recently, went some way towards identifying all of the different inputs and trying to put some figures on that there hasn't, to my knowledge, been work done on how much- on that how much is too much question. But there is significantly more work going into actually collaborating and compiling all of the information so that you can work out collectively how much nutrients are we talking about, and what's the dispersal rates and how are they diluted, and – so from our perspective there's a lot more work that needs to be done at a regional level."
- S6: "Again, that's sort of hard to say on the, on an individual farm basis I think there, the impacts are broader than their farm footprint but they're not

significantly wider, but collectively all the aquaculture that happens in the Channel for example, it all contributes to nutrients in the Channel, which contributes, which potentially has impacts on a whole range of ecosystem issues. So I think you have to consider all of the marine farming collectively even if it's not all Tassal. So geographically I, you know, I don't really know how you say what the extent of it is, but it's certainly broader than the footprint of an individual farm."

- S6: "But I guess ethics is just, to me, about having a broader perspective on the impact of your activities."
- S6: "Yeah, I mean look, I'm obviously in a position where I think almost every environmental issue [laughter] is an issue that's important. I think climate change is undeniably one of the most important issues that we're facing, both in terms of mitigation, so reducing our emissions, but also adapting to what is now unfortunately unavoidable in a lot of situations. So making sure, and I guess from an ethical point of view as well, making sure that those communities which will be most affected by rising sea levels, lack of water, excess of water, flood situations, all of those things are appropriately planned for and we can ensure that no one is disproportionately disadvantaged. So I think climate change, adaptation to climate change is: A, one of the most important and; B, one of the most difficult things that we will be facing."
- S6: "...they're much broader issues, obviously, to some extent, as I said the climate, climate change, and my understanding is that's part of the reason to the move to the West coast and the Macquarie Harbour expanse, is the recognition that warming temperatures on the East coast will mean that aquaculture is less viable."
- S6: "Look, again it would be great if they did. I think it's almost impossible to do in isolation, so the only way they could do that is if every other mari-aquaculture company was also reporting to that same level. Because I think: A, it's not meaningless, but it lacks the broader context if only one of them is doing that reporting; but also, if that information is not being provided even to Tassal by the other companies then they can't really make an assessment of their own contribution or the benefits of their, of any reduction that they're making, without the information of how that compares with the more regional impacts. So, I think, ideally every company should have a broader outlook, but in terms of how useful that information would be in isolation? Probably not very. So it's more something that IMAS should be reporting on at a regional level rather than Tassal."
- S3: "Oh, look, can I just, sound like I'm following the media and say climate change? [laughter]... You know that scares the daylights out of me that Australia's current, kind of, position, both politically and generally within the public, it just seems to be a non-event at the moment and, you know, as a parent and as somebody who's not that old [laughter]... almost, I've got at least another 40 years to go, yes, that bothers me that we're not planning appropriately to deal with those issues."
- S3: "Yeah, you know, I think really, the human answer is, it's my children, you know, my children's children. I'm not sure that, I'm not sure that any

other generation, I guess, you know, in some ways we've been lucky, you know, the generation I grew up in hasn't really experienced war, so maybe to other generations that was their thing, so maybe it's unfair to say what I was about to say, which is I don't think any other generation has faced such a big change, that's you know, right on our doorstep. It's too far away for those that are 70 or 80 to, look, but they might experience, but, or even contemplate that their children might experience something like that, but this is, you know, this is something that seems very, very real to me, that the environment in which my children are raising their children in might be starkly different and poorer than what we've got at the moment..."

- S3: "...when you invest 20 years in something then that in itself makes it important to get a good outcomes."
- S4: "I personally think it's changed a lot over the years."
- S4: "I think they want to emphasize that they are here for the long haul..."
- S4: "So it is an important data set, and it is a big project, and we have only just got it. What that means in terms of what the impact has been and what future monitoring strategies might be we will get our head around that in the next couple of months I reckon."
- S4: "Because the infrastructure they have out on the water, you can see it for miles...so it does have a big community impact"
- S4: "But in terms of, you know, down the Huon, in the mouth of the Huon, they have a big impact. There is a lot of nets out there and there is a lot of visual side of things and there is a lot of noise. So...yeah, I think they do have an overall, quite a significant sort of presence."
- S4: "Well climate change is massive. Not that you would know it from the last election. But we are already seeing impacts...we've got significant coastal erosion already. So we are doing a lot of research into that. And, yeah, the impacts of all aspects of climate change are going to be huge and they are going to be huge to Tassal I think too. Changing water temperatures and things like this. They are already finding changes to toxic algal blooms, the frequency of those. This kind of thing...I notice that the shellfish industry had a monitoring budget of, say it was ½ a million and suddenly it has gone to 1.2 million. Just because they are concerned I think about the changes in these algal blooms and how they have to do more monitoring. I think climate change is going to be a huge impact. Down our area, things like storm water quality and stuff like that. Effluent quality from treatment plants is a problem but it is gradually being upgraded and getting better. They're the two...And vegetation loss...coastal vegetation loss particularly... the trashing of the coastal areas. The lack of good regulation and policy by the state government in coastal area generally is a real problem. We are going backwards at the rate of knots."
- S4: "I think that it is their whole future. I mean, are they actually going to be able to...see in the early days I think they took the attitude 'Jeez this is a good way to make money, you just throwing nets in there and you just grow the fish.' And they made a lot of money very quickly but then people came along and thought 'If we're going to do this longer we are going to have to start doing it differently.'"

- S2: “Then you get to marine debris and then you’re talking more regional impact, where tides and winds and swell will remove either away from the direct farm location elsewhere. And then look, some issues, I suppose, become almost more of an international scale to some extent.”
- S2: “There’s also longer term environmental changes that suggest that the world’s gone through larger changes on a larger temporal scale, even a temporal scale that we might not have picked up on yet. Look, I think there’s no denying we’re having an impact on our environment as a human race. But yeah, how much is directly attributable to warming the waters. I’ve seen opposing arguments [laughter] but things are changing, you know, there’s no denying things are changing.”
- S2: “I know it’s certainly a major component of their forward planning and changing warming, salmon don’t like warm water.”
- S7: “Cultural landscape is an indigenous consideration, but us whities need to know about it quickly, big time, because we’ve only been here for 20, 200,000, beg your pardon, 200 years as opposed to the collapse of the land bridge which is 57,000 years these people have been looking after this environment that we’ve just taken over, that’s what I mean. Cultural landscape. The consideration of everything that’s there that’s been before us is what I’m referring to.”
- S7: “Let’s take one, let’s take the Macquarie Harbour WA. That ends up in Port Davey one way or another. No matter what you think, in terms of the bio-diverse habitat, through a pristine wilderness, that naturally will flow from Macquarie Harbour down. It’ll end up in Macquar- in Bathurst Harbour in one shape or form. So why would you discharge or leave [1:00:41] into a world heritage area?”
- S7: “I’m not an oceanographer, but I’m sure there would be huge impacts in terms of further discharge of nutrients and carcinogens into currents that may well end up in the great Southern Ocean. I don’t have that field of expertise. But this is national and international, this is not just regional.”
- S9: “...the shore line is changing, so I can’t differentiate between one industry and the other, so I can’t actually say if it’s Tassal or Huon Aquaculture who are changing the shore line in terms of the shell fish down there now as compared to 30 years ago, before then they were there.”
- S9: “,,small oil slicks, to my mind, is like death by one thousand cuts because the oil slicks that have to be reported to the EPA are big ones, they are only big ones. So this company is escaping notice by not having big slicks. Daily slicks of 50 litres. I don’t like swimming in it, it’s not as nice as it used to be. So my answer is...Tassal? I only have to say the fish farming industry.”
- S9: “Changing the water quality. Long term unsupervised assessment of the water quality. The change in the diversity of species, and also animal and pest control I don’t know how they are doing that...”
- S9: “See I am a long term resident of Roaring Beach, and...”
- S9: “Which are the people who have lived here long term and have seen the changes and who have also experienced what the oceans and the beaches used to look like before they came.”

- S9: “I think it is international because there is a huge demand for their product. They have already gone from here to Macquarrie Island, I don’t know if Tassal is involved in breeding at Macquarrie Island as well, but the hand in glove relationship they have with Huon Aquaculture makes me suspect that they have. So...I would say that the implications...see I don’t see that Tasmania is separate island from all the dilemmas that are happening in the Czech Republic in terms of the management of industry or in Europe, or in Canada, or in America. I think that we can lead the world in the way that we develop food for the poor and then the rich...because the rich will always be able to feed themselves...mainly for the poor and what is done here is actually able to be reflected on as a sustainable industry overseas. So I think the damage is also reflected onto the world because this is our planet. We should be custodians, not greedy capitalist bastards...”
- S9: “Diversity, maintaining diversity, collecting baseline data so we know what’s there to protect, and not assuming that there is nothing there just because we haven’t actually tested for it. Like the limestone cave areas or what happened with the mangroves that were developed on...what’s happening in Manhattan where huge areas of swampland have been reclaimed and bridges and roads are going straight through...and in Canada...straight through wetland areas. Pollution of rivers, and the toxicity and the disgusting way that the sea is being seen as a garbage dump. They are the environmental issues that I think we all have to embrace in very...how we deal with our rubbish, what value we put on recycling, what value we put on our clean air, how much are we massaging our values to make sure that our councils are held accountable for what they approve and what they don’t approve when they are doing the planning, when they are doing the development of waste dumps...you know, I mean human beings are want to be lazy about all those matters and you can’t do everything when you are trying to have a life as well.”
- S5: “...that’s useful, but what does that mean in terms of how much has that changed over time?”
- S5: “...sometimes people lose track, they’ll go; ‘oh look, there’s a minus there’, that they lose track of the whole.”
- S5: “I often find that quite interesting because cages, small, intense groupings, I mean the classic one to me was Northwest Bay, when they were talking about the cages in there. Admittedly it’s not the best place to farm, possibly, because of the hydrogen-[??? amoxin 15:47] in the system. But then you look up on the shore and they’ve stripped the land off to put in this huge development, Peggy’s Beach, or whatever it is up there, and nobody is looking at, as far as I can see, looking at any major inputs of all of that into the water quality.”
- S5: “Well, it, one of the big ones is that we’re often asked to report on the environmental credentials, and so, for instance, a colleague and I have just finished a report on a broad-scale environmental monitoring program which is one paid for by the salmon industry to monitor the broader scale impacts of the industry in the environment it’s in and one of the things we got there was a lot

of people wanted to know the state of the system out of that report, now it actually doesn't do that. It's talking about how is the salmon industry and there's a mismatch there, because people say, well, state of the system, if the report says there's any, it's salmon, it's aquaculture..."

- S5: "Be really nice to bring that together and then you actually have a much better view of how, and the sad, not sad, good thing I suppose, is the salmon industry, some extent, because they have a need and want to look for more areas top farm and expand and whatever, they're having to do it, on behalf of everybody else. Provide this information."
- T10: "Tassal considers that increasing greenhouse gas concentrations in the atmosphere and associated climate change risks need to be addressed at both a global and local level."
- T11: "Ensure the long term sustainability of the Tasmanian Salmon industry, the environment we operate within and all community and commercial partnerships."
- T11: "Tassal is also cooperating in a larger area based environmental project which provides an ecosystem based approach to support sustainable aquaculture management, ensuring the long-term health of marine biodiversity."
- T12: "Salmon farming is an industry and as such does create noise during its operations, as this noise is created on the water it has the ability to travel large distances."
- T12: "That is why this will be a long term project with a measured improvement across the company, over time."
- VEH2: "Big picture" thinking
 - S1: "...and I can feel this particular company making a big difference in corporate Australia."
 - S1: "Yeah, but Mother Earth will be fine, she'll be fine. And all those other species, but she'll be fine."
 - S6: "...there may still be site specific issues that it is entirely appropriate for the community to continue to raise even though the bigger picture is that Tassal is doing really well."
 - S4: "I just think it is important too to...it gives the community the full picture."
 - S5: "And the great thing about it is it'll leverage all the other companies to perform the same."
 - S5: "Actually, one other thing I do actually like with this is, it allows, when the companies do it it also allows to put the perspective on it that it's not, there is a balance, and often you'll find people want it, industries that are in our marine context are using natural resources to have zero impact and often that's not very realistic in the whole sense of society. So it's actually, I've found the Tassal one is quite useful because it puts it in the context of the other aspects of the business. So you could actually get a really good idea. It's not just, if you do the environmental in its own, you don't always get this sense of, well, what they're committing to by doing it. And I found that was a really nice point of, the whole... yeah."

- S5: ““Cause the other one regulation too is, don’t underestimate, it’s not just about providing the community reassurance or the government offered reassurance that everything’s ticking along nicely, it’s also good for the industry, because that can feed back very quickly to, environment is not separate to all of the other operations and that’s one thing that Tassal’s sustainability report, I think, does quite nicely, is tie-in environment links to all of their, they’re not just talking about the marine environment, they’re talking about the work environment, the, it links to the whole of what they’re doing.”
- S5: “Oh, just the understanding that we’re looking at the whole and trying to give, there is a value in looking at the whole, and understanding the whole. Because you do want to expand, whatever it is, whether it’s a tourism operation, whether it’s ongoing, what you’re dealing with, makes a huge difference.”
- VEH3:Valuing biodiversity for its own sake/ intrinsic value of nature
 - S5: “I think genuinely, I would, you would love to think somebody does it just purely altruistically for the benefit of the environment, and I think there is elements of that in there...”
 - S5: “...monitors the system for the system’s sake, as a whole.”
 - S8: “not causing habitat and species destruction, living gently on the earth.”
 - S4: “Certainly the people I work with here, like Bush Care and Natural Resource Management, I would frame them in the terms of ultimate environmental ethicists because they are always coming from the point of view of sustainability regardless of what pressures they are under in terms of development approvals and stuff like this, they never waver, they aren’t fanatics, but they never waver from a fundamental philosophy of what they are trying to achieve.”
 - S4: “What does it actually mean to...because, you know, the community values the Channel and things like this.”
 - S2: “...you know, environment is part of our stakeholder group, in this day and age...”
 - S7: “Let’s take one, let’s take the Macquarie Harbour WA. That ends up in Port Davey one way or another. No matter what you think, in terms of the bio-diverse habitat, through a pristine wilderness, that naturally will flow from Macquarie Harbour down. It’ll end up in Macquar- in Bathurst Harbour in one shape or form. So why would you discharge or leave [??? 1:00:41] into a world heritage area?”
- VEH4:Biodiversity
 - S8: “Yeah, species loss.”
 - S6: “And I guess species mana- or loss of biodiversity, they address that in, I think they talk about fish stocks and ensuring that, or managing escapes, that’s an issue for biodiversity management.”
 - S6: “...but I think birds is another issue that they need to make sure they’re addressing because they’re obviously attracting birds by virtue of the fish being there and so that’s potentially a biodiversity issue, because if they’re all

attracted to a particular location, can't get to the fish because they've introduced, you know, better netting systems, but they're all now looking for feed in a particular area and that may have negative impacts for other species that are resident in that area. So I think the loss of biodiversity generally is dealt with through the various things that Tassal's doing. I don't know that there's that kind of broader indicator of biodiversity because I doubt that they would monitor, they would monitor the health of the species within their farms, and they'll know obviously the impact on seals and potentially birds and things but a broader assessment of the impact on other fish species, I doubt that they would be doing that..."

- S6: "Tasmania will change as there's a loss of biodiversity, and you can't- people's experience changes when they go recreational fishing and they can no longer catch what they used to catch. When, yes, so I think the obvious answer is that biodivers- we all rely on a healthy, thriving ecosystem in order for everything that we do to be maintained. I think economically if we don't have more regard for that it will become more and more difficult and therefore more and more expensive to deal with these things in the future, so avoiding loss of biodiversity, rather than having to try to recreate biodiversity in the future, is just, just makes economic sense."
- S7: "No matter what you think, in terms of the bio-diverse habitat, through a pristine wilderness, that naturally will flow from Macquarie Harbour down..."
- S9: "Diversity, maintaining diversity, collecting baseline data so we know what's there to protect, and not assuming that there is nothing there just because we haven't actually tested for it."
- S9: "...as part of an interest group looking at natural values and diversity as opposed to economic sustainability and greed. So without the information people are powerless."
- S9: "The change in the diversity of species..."
- S9: "Well, yes, they are not doing enough to protect diversity of species in the areas they are engaging in..."
- S9: "...their negation of the wild species at the expense of the fish product that they are growing..."
- T11: "Environment and Biodiversity"
- T11: "Tassal is also cooperating in a larger area based environmental project which provides an ecosystem based approach to support sustainable aquaculture management, ensuring the long-term health of marine biodiversity."