THE NATURAL ENVIRONMENT AS AN INTEGRAL PART OF THE TRIPLE BOTTOM LINE

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MINI-DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

MAGISTER SCIENTAE

IN
ENVIRONMENTAL MANAGEMENT

IN THE

FACULTY OF SCIENCE

AT THE

RAND AFRIKAANS UNIVERSITY

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MAY 2004
ACKNOWLEDGEMENTS

- I would like to thank Mrs E. Enslin for her technical support.

- I would like to thank Dr. J. Meeuwis for her professional guidance and support throughout my Masters course. It was a privilege to be guided by such a proficient lecturer and to gain experience in the process.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMARY</td>
<td>5</td>
</tr>
<tr>
<td>OPSOMMING</td>
<td>7</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>8</td>
</tr>
<tr>
<td>2. PROBLEM STATEMENT</td>
<td>12</td>
</tr>
<tr>
<td>3. Explanation of principles and concepts relating to the Triple Bottom Line</td>
<td>18</td>
</tr>
<tr>
<td>3.1. Triple Bottom Line</td>
<td>18</td>
</tr>
<tr>
<td>3.1.1. Shortcomings of the Triple Bottom Line</td>
<td>21</td>
</tr>
<tr>
<td>3.2. The Financial Benefits of the Triple Bottom Line</td>
<td>22</td>
</tr>
<tr>
<td>3.2.1. Shortcomings of the financial benefits of the Triple Bottom Line</td>
<td>22</td>
</tr>
<tr>
<td>3.3. Market Competition</td>
<td>23</td>
</tr>
<tr>
<td>3.3.1. Shortcomings of a competitive market</td>
<td>25</td>
</tr>
<tr>
<td>3.4. Green Marketing - Environmental Awareness</td>
<td>25</td>
</tr>
<tr>
<td>3.4.1. Shortcomings of the green marketing and environmental awareness</td>
<td>27</td>
</tr>
<tr>
<td>3.5. Polluter Pays Principle</td>
<td>28</td>
</tr>
<tr>
<td>3.5.1. Shortcomings of the Polluter Pays Principle</td>
<td>28</td>
</tr>
<tr>
<td>3.6. The “cradle to grave” concept</td>
<td>29</td>
</tr>
<tr>
<td>3.6.1. Shortcomings of the “cradle to grave” concept</td>
<td>30</td>
</tr>
<tr>
<td>4. DATA COLLECTION AND METHODOLOGY</td>
<td>31</td>
</tr>
<tr>
<td>4.1. What data needs to be collected?</td>
<td>31</td>
</tr>
<tr>
<td>4.2. Method of Data Collection</td>
<td>32</td>
</tr>
<tr>
<td>5. FINDINGS FROM THE ANALYSIS OF THE QUESTIONNAIRE</td>
<td>34</td>
</tr>
<tr>
<td>5.1. Issue 1: Financial Benefits</td>
<td>34</td>
</tr>
<tr>
<td>5.2. Issue 2: The Competitive Market</td>
<td>40</td>
</tr>
<tr>
<td>5.3. Issue 3: Environmental Awareness through green marketing</td>
<td>47</td>
</tr>
<tr>
<td>5.4. Issue 4: The Polluter Pays Principle</td>
<td>50</td>
</tr>
<tr>
<td>5.5. Issue 5: The “Cradle to Grave” Concept</td>
<td>53</td>
</tr>
<tr>
<td>6. CONCLUSIONS</td>
<td>56</td>
</tr>
<tr>
<td>7. REFERENCES</td>
<td>58</td>
</tr>
</tbody>
</table>

Appendix A: Questionnaire template .............................................................. 64
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>The environment as an integral part of the Triple Bottom Line</td>
<td>11</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Business Objective</td>
<td>35</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Environmental Branding</td>
<td>36</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Process of Production</td>
<td>37</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Product Origin</td>
<td>38</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Multiple Brands</td>
<td>40</td>
</tr>
<tr>
<td>Figure 7</td>
<td>Difficult Choice</td>
<td>41</td>
</tr>
<tr>
<td>Figure 8</td>
<td>Easier Environmental Purchase</td>
<td>42</td>
</tr>
<tr>
<td>Figure 9</td>
<td>Bio-degradable Packaging</td>
<td>44</td>
</tr>
<tr>
<td>Figure 10</td>
<td>Phosphate free</td>
<td>45</td>
</tr>
<tr>
<td>Figure 11</td>
<td>CFC free</td>
<td>46</td>
</tr>
<tr>
<td>Figure 12</td>
<td>Environmental Concerns</td>
<td>48</td>
</tr>
<tr>
<td>Figure 13</td>
<td>Environmental Awareness</td>
<td>49</td>
</tr>
<tr>
<td>Figure 14</td>
<td>Increased Product Price</td>
<td>51</td>
</tr>
<tr>
<td>Figure 15</td>
<td>Polluter Pays Principle</td>
<td>52</td>
</tr>
<tr>
<td>Figure 16</td>
<td>Sustainable Forests</td>
<td>54</td>
</tr>
<tr>
<td>Figure 17</td>
<td>Public Environmental Concerns</td>
<td>55</td>
</tr>
</tbody>
</table>
SUMMARY

Corporations are beginning to realize that they are members of the wider community and must therefore behave in an environmentally responsible fashion. This translates into corporations that believe that they must fulfill environmental objectives in conjunction with profit related objectives. The recognition that a corporation is embedded within its surrounding environment has profound implications for the way that its business operations are conducted. No longer are the actions taken within the corporation considered to be separate from the external environment, and no longer are events unfolding outside the corporation considered to have no impact on the internal structure and functioning of the company. According to this mode of thought, everything is linked and interconnected. In recognition, smart corporations have initiated social, economic and environmental practices (Anon, 2002a) and incorporated these three components in to the Triple Bottom Line (TBL). The Triple Bottom Line was designed to promote the objectives of sustainable development (Elkington, 2003) by considering a holistic approach to business. Because sustainable development involves the simultaneous pursuit of economic prosperity, environmental quality and social equity, organisations that aim for sustainability need to perform not against a single, financial bottom line but against the triple bottom line i.e. economy, society and the environment. It is also true that a corporation, which is not socially or environmentally sustainable in the long term, is unlikely to be financially sustainable in the long term (Elkington, 2003).

The main aim of this study is to investigate how the natural environment can play an integral role in the implementation of the TBL. Five main issues relevant to the TBL are investigated in the problem statement, to determine how the environment can possibly form an integral part of the TBL and thus justify the implementation of the TBL in a corporation’s business strategy. Each main issue is then broken down into a number of specific support questions for analysis. The 16 support questions were then individually analysed to determine whether or not the environment could in fact play an integral role in the implementation of the TBL. The five main issues of investigation and the 16
sub-questions showed that the environment could play an integral role in the implementation of the TBL in any corporation.
OPSOMMING

Korporasies begin nou besef hulle is lede van die wyer gemeenskap en dus moet hulle meer verantwoordelik teenoor die omgewing optree. Dit beteken dat korporasies, in die behoeftes van ekonomiese-sowel as omgewingsdoelwitte moet glo. Die manier waarop ‘n korporasie sy omgewings bestuur hanteer, het ‘n groot invloed op die wyse hoe hulle besigheid doen. In die konteks neem organisasies nie meer interne besluite sonder om die eksterne in ag te neem nie. Gebeurtenisse wat buite die korporasie plaasvind, word nie meer as onbelangrik beskou nie. Volgens die wyse van denke s is alles verbind en geïntegreerd. In erkennings, het “slim” korporasies begin met die instelling van sosiale, ekonomiese sowel as gewoontes omgewings, (Anon, 2002a) genoem die TBL. Die TBL is ontwerp om die doel van onderhoubare ontwikkeling te bevorder (Elkington, 2003) deurdat ‘n holistiese benadering gevolg word deur die ontwikkeling die gelyktydige nastrewing van ekonomiese vooruitgang, kwaliteit omgewings en sosiale gelykheid. Organisasies wat strewe vir onderhoubaarheid moet verplig wees om te sreef nie net na ‘n enkele bodem-lyn nie, maar na ‘n drievoudige bodem-lyn d.w.s. ekonomies, sosiale en omgewings. Dit is ook waar dat ‘n korporasie wat nie sosiaal of onderhoubaar omgewings in die lang termyn is nie, ook nie finansieel onderhoubaar in die lang termyn sal wees nie (Elkington 2003).

Die doelwit van die studie is om te ondersoek hoe die natuurlike omgewing ‘n integrale rol kan speel in die toepassing van die TBL. Vyf hoofkwessies van navorsing word gebruik in die probleemstelling. Elk van die vyf hoofkwessies word verdeel in 16 spesifieke sub vrae vir analise. Die 16 sub-vrae is individueel geanalyseer om te bepaal of die omgewing ‘n integrale rol in die implimentasie van die TBL kan speel. Die vyf hoofkwessies van die navorsing en die 16 sub-vrae het ‘n sentrale neiging om aan te dui dat die omgewing wel ‘n integrale rol in die implimentasie van die TBL kan speel.
1. INTRODUCTION

The Triple Bottom Line (TBL) is used to identify issues (e.g. industrial effluent discharge pollution) that corporations must address in order to minimize the harm to the environment that results from their activities, and to test these impacts in terms of their economic, social and environmental value systems. The Triple Bottom Line (TBL) can be viewed as both a reporting device (e.g. information presented in annual reports) and/or an approach to decision-making (e.g. the use of decision-making and reporting tools to present the economic, environmental and social implications of decisions) (Anon, 2000). However, for the purpose of this study, the Triple Bottom Line (TBL) is used as a framework for measuring and reporting on corporate performance against economic, social and environmental parameters. For the purpose of this study, corporations can be viewed as including the following: companies, organisations and businesses. Corporations are thus synonymous with these terms.

The TBL involves taking into consideration the needs of all the corporations’ stakeholders, customers, employees, business partners, governments, local communities and the public. The TBL approach deals with all aspects of a corporation’s performance and not merely with its meeting of financial targets. At the heart of the TBL is the acknowledgment that a corporation has impacts on society and the environment as well as financially on its stakeholders (Anon, 2003b). Such impacts may be exerted directly by the corporation itself, or by way of the corporation’s influence upon others.

The TBL approach explains the interdependencies between a corporation and the outside world (Elkington, 2003). Corporations need to be held accountable for their actions through the dissemination of economic, environmental and social information because they form an integral part of the society in which they operate. No longer are actions taken within the corporation considered separate from the external environment and no longer are the events that are unfolding outside the corporation considered to be unimportant internally (Anon, 2003c). Corporations have initiated social and environmental practices such as stakeholder dialogue, social, ethical and environmental
accounting, auditing and reporting, and corporate codes of conduct. Corporations recognise that there is tangible value in their enhanced relations with their stakeholders, in their image as protectors of the environment, in their strengthened brand image and reputation, and in the healthy physical environment in which they operate.

The prevailing systems for financial decision-making in many countries tend to separate the economic, social and environmental factors on the policy, planning and management levels owing to the fact that some corporations do not realise the benefits of considering these three aspects of financial, social and environmental reporting (Bryman, 1998). Such omissions influence the actions of all groups in society, including the government, industry and respondents, and have important repercussions for the efficiency and sustainability of development programmes. Sustainable development is a strategy by which communities seek economic development approaches that also benefit the local environment and quality of life (Marsh & Grossa, 1996). Sustainable development demands far-sighted vision that goes beyond economics. It requires the balancing of a broad range of social and environmental issues and therefore considers all aspects of the market environment (i.e.: economic, social and environmental aspects).

By isolating economic prosperity from social and environmental issues corporations could bring about negative environmental and social impacts directly upon themselves or indirectly as these impacts impinge upon others. Therefore, for the TBL to be effective, society, the environment and the economy concerning those aspects of a corporation should be given equal consideration.

One way that this can be achieved is by identifying the products of a corporation and reviewing them against society’s expectations in terms of the natural environment. In other words, what should the ingredients and attributes of a product be if it is to meet the expectations of society for being environmentally friendly (e.g. CFC free). Once these expectations have been identified, the product can be reviewed, in terms of how it could fulfil such expectations. A product can be reviewed in terms of what it looks like and how it is made (i.e. its appearance and the process involved in its production). A product
can be physically marketed as being “green” (i.e. environmentally friendly), and its production process can be considerate of the environment from the cradle to the grave. This is how the natural environment can play an integral role as one of the components of the TBL.

**The main aim of this study** is to use a pilot study to investigate how the natural environment can play an integral role in the implementation of the TBL. This pilot study took place in Boskruin, a residential and industrial suburb in Gauteng.

**The pilot study is important** as it emphasises the need for corporations to explore more than their financial bottom line when conducting business. Figure 1 illustrates that corporations engage in activities that affect the environment in which they operate. In order to operate successfully, corporations must also consider economic, social and environmental factors and operate according to the TBL by reporting these three considered facets to their shareholders (The environment as an integral part of the TBL). Figure 1 also shows that corporations considering the natural environment as well as society’s needs would implement the “Cradle to Grave” concept and green marketing. Such corporations have the potential to benefit on a financial, social and environmental level. These benefits, including amongst others, increased consumer interest and the protection of the natural environment would hugely benefit a corporation.

The following section investigates how the problem statement can be analysed by identifying and analysing the five main issues pertinent to the TBL that need to be investigated.
Figure 1: The environment as an integral part of the TBL.
2. PROBLEM STATEMENT

The traditional way, worldwide, of assessing the viability of business ventures was to examine the financial bottom line, based purely on profit earnings, with very little regard for the corporation’s environmental and social responsibilities. Little, if any thought, was given to the long-term environmental and social costs and benefits of a project and how these might affect the financial bottom line (Walmsley, 2002). However, for a business to be financially successful, the management of environmental and social responsibilities must simultaneously contribute to increased earnings per share and satisfy a diverse set of stakeholders, while enhancing economic sustainability and public safety (Anon, 2002d). In order to achieve this, a balance must be found between the financial viability, the environmental acceptability and the social desirability of a project.

The question that, therefore, needs to be posed is whether this balance can be achieved by investigating whether the natural environment can be included as an important component in the TBL, which would justify the implementation of the TBL in a corporation’s business strategy. This balance may, perhaps, be achieved by reviewing and adapting a product to support the needs of society while congruently considering the needs of the natural environment. The effectiveness of the TBL is dependent on achieving a balance between the social, environmental and economic aspects of a corporation. In other words, which attributes should a society expect a product to reveal if it is to benefit the natural environment? Once these needs have been identified, the product can be reviewed to satisfy such needs. A product can be reviewed in terms of its appearance to which it must be subjected and process of production. A product could, in physical terms, be labeled as being environmentally friendly, and the production to which it is subjected show consideration for the environment from the cradle to the grave. For example, some paper suppliers sell their product by advertising that the wood used in manufacturing paper is from sustainable forests and that the paper can be recycled.

This study investigated whether the environment can be regarded as an integral part of the TBL by identifying a corporation’s products and reviewing and altering them against
The main aim of the study is to show how the environment can form an integral part of the TBL by focusing on:

- the way in which a product is displayed, from an environmental perspective, to the consumer. The reason for this, is that if a product that is labeled as environmentally friendly is sold on account of its labeling then this product has a competitive advantage over alternately labelled products. As such, it will positively affect the financial bottom line and will, at the same time satisfy the needs of the consumer. These needs may be to protect the environment or perhaps to create a safer environment.

- the process whereby a product is produced, by giving consideration to the environment from the cradle to the grave. The reason for this is that if the consumer favours a product whose life cycle favours the environment, then this product may have a competitive advantage over and also products produced in other ways. Thus the product will influence the financial bottom line and also satisfy the needs of the consumer. These needs may again be for protecting the environment or perhaps for creating a safer environment.

The aim was achieved by investigating five issues. It should be noted that each main issue has a number of objectives.

**Issue 1 – Financial Benefits**

Will a corporation benefit financially from changing a product’s identity and the processes that it goes through in production to favour the environment and customer needs? An example of favouring the environment in the production process would be in producing a product which is biodegradable or CFC free. If a product is CFC free, and clearly labeled as such, this may satisfy one of the needs of a consumer (e.g. to protect
the ozone layer) thereby benefiting the financial bottom line as the customer will in all probability continue to purchase such a product. Four main objectives need to be researched in order to explain and elaborate on issue 1. These include the following:

1. What should a corporation base its objectives and decisions upon: economic prosperity or social equity or environmental protection or a combination of all three?
2. Would a potential customer find that when purchasing a product, that the customer is faced with numerous brand options? If so, would a brand labelled as being environmentally-friendly sway a customers decision to purchase that product over the rest?
3. When purchasing a single product and being faced with numerous brands, would a consumer decide to purchase a product produced through an environmentally-friendly process above others excluded from this category?
4. Would a potential customer be swayed to purchase a single product over the rest when he/she knows the origin and that all the ingredients and the packaging of the products are from an environmentally accredited corporation?

**Issue 2 – Competition**

Would a product be promoted in a competitive market if its appearance and its production process were to be changed? For example, if it is claimed that a product is CFC free, this action may fulfil a need in the consumer, thereby increasing the product’s competitive advantage within the market.

Six main objectives need to be researched in order to explain and elaborate on Issue 2. These include the following:

1. Would a potential customer find that when purchasing a single product there are multiple brands for that single product?
2. If “Yes” was the answer to the previous question, does this make it more difficult to finally choose which product to purchase?
3. If “Yes” was the answer to the previous question, would it be easier to purchase a product if it stood out as being environmentally sound?

4. When purchasing a single product and being faced with numerous brands, would a customer be swayed to purchase a product with packaging that is more bio-degradable than the rest, over the rest?

5. When purchasing a single product and being faced with numerous brands, would a customer be swayed to purchase a product that is phosphate free, over the rest?

6. When purchasing a single product and being faced with numerous brands, would a customer be swayed to purchase a product that is CFC free, over the rest?

**Issue 3 – Green Marketing**

Will marketing a product as being green (Green Marketing) promote environmental awareness about that product thereby increasing the demand for the product through heightened awareness? Green or Environmental Marketing incorporates all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the fulfilment of these needs and wants occurs, with minimal detrimental impact on the natural environment (Polonsky 1994a). A product that is being visually promoted as an environmentally sustainable product, could, for instance, fulfil social or public needs in terms of environmental responsibility. The consumer could become aware of improved methods of production and of product supply, thereby raising, his/her environmental quality expectations for that range of products. A company printing paper that is being marketed as paper from sustainable forests would benefit from the competitive edge it would then gain in the paper industry by increasing the demand for its product through heightened awareness. Two main objectives need to be researched in order to explain and elaborate on Issue 3. These include the following:
1. Would a potential customer be concerned with the environment when purchasing a product?
2. A banner placed in a shopping centre explains that if a potential customer were to purchase tuna that was not labeled “dolphin friendly”, there would be a good chance that the tuna could possibly contain traces of dolphin caught through unsatisfactory fishing methods. Would a potential customer immediately become aware of a new criterion when purchasing tuna and the more preferable opt for dolphin friendly tuna?

**Issue 4 – Polluter Pays Principle**

Would the implementation of the “Polluter-Pays” principle justify the implementation of the TBL? The “Polluter-Pays” principle is the requirement that the person responsible for polluting should bear the costs for causing the pollution and the associated consequential costs (Moutando, 1999). The implementation of the “Polluter Pays” principle could influence a society’s viewpoint on environmental responsibility. The TBL would be implemented by corporations if humans could become conceptually aware of their responsibilities in terms of pollution. The new legislation enforcing South Africans to pay for plastic shopping bags is such an example. In this case, the environment is protected from excessive pollution; the economy is able to save on the cost of producing excessive bags; and societal needs are met in that a cleaner environment is made possible.

Two main objectives were researched in order to explain and elaborate on Issue 4. These include the following:

1. Would a potential customer be willing to pay slightly more for a product if the customer knew the product was environmentally friendly?
2. Would a potential customer be in favour of the new government legislation enforcing South Africans to pay for their plastic shopping bags?
Issue 5 – Cradle to Grave Concept

Could the “cradle to grave” concept justify the implementation of the TBL? The “cradle to grave” concept determines the environmental impacts of products, processes or services, through the stages of production, usage, and disposal. It is a systematic set of procedures for compiling and examining the inputs and outputs of materials and energy, and the associated environmental impacts directly attributable to the functioning of a product or service system throughout its life cycle (Anon, 2003a). The “cradle to grave” concept could possibly influence society’s viewpoint about environmental responsibility. The TBL would be partially implemented by corporations if people could become conceptually aware of the long chain of events that a single product endures through its life cycle.

Two main objectives need to be researched in order to explain and elaborate on Issue five. These include the following:

1. When purchasing a single product and being faced with numerous brands, would a customer be swayed to purchase a product wrapped in paper packaging derived from sustainable forests, over the rest?
2. Would a potential customer such as a corporation consider the life cycle of a product and how it might impact on society, the environment and the financial sector?

All of the above-mentioned objectives emanating from the five main issues were ascertained by means of a questionnaire, the format of which is discussed and analysed in section 4 (Refer to Appendix A: Questionnaire). The results of the questionnaire are discussed in section 5 (from page 11). The following section is a comprehensive explanation of the principles and concepts relating to the TBL. It also elaborates on the shortcomings of such concepts.
3. **Explanation of principles and concepts relating to the Triple Bottom Line**

The general literature reviews how the TBL is related to various principles and concepts. This clarified the relationship between the previously mentioned five issues and the TBL (Section 2 page 11-15). The principles and concepts that need to be elaborated upon include the following:

- *The Financial Benefits of the TBL*
- *Market Competition*
- *Green Marketing*
- *The “Polluter Pays” principle*
- *The “Cradle to Grave”*

The environment and the TBL have a common similarity, and that is integration (Cameron, 2001). The TBL concept operates only if social, environmental and financial requirements are integrated with each other and all are considered equally. This integrated approach forms the basis for environmental management. Integrated environmental management is designed to ensure that the environmental consequences of development proposals are understood and adequately considered in the planning process. The term “environmental” is used in its broad sense, encompassing bio-physical and socio-economic components. Thus the environment and the TBL are closely related.

3.1. **Triple Bottom Line**

The TBL considers not just the economic value a corporation creates, but also how it impacts on society and the environment (Elkington, 2003). At its narrowest, the concept TBL is used for measuring and reporting corporate performance against economic, social and environmental parameters. An example of this is perhaps the pH levels of effluent discharged from an industrial activity. At its broadest, the concept is used to capture issues, such as pollution and environmental damage, that corporations must address in
order to minimise any harm to the environment that could result from their activities. This involves being clear about the corporation's purpose and taking into consideration the needs of all the corporation's shareholders, customers, employees, business partners, governments, local communities and the public (Anon, 2002c).

At the heart of the TBL philosophy is an acknowledgment that a corporation has impacts on society and the environment, such as air pollution. A corporation also impacts financially on its stakeholders when it comes to waste discharge fines (Anon, 2002c). Such impacts may be positive or negative (e.g. a negative impact may be high levels of pollution emanating from an industrial stack). By adopting the TBL philosophy, a corporation takes a position on the three core areas of business: economic prosperity, environmental quality, and social justice (Anon, 2002c). If a corporation cannot bear the costs of protecting the environment or of safeguarding the health of affected communities, it should be questioned whether that corporation should proceed because it is clearly not sustainable in the long-term (Zammitt, 2002).

The recognition that corporations are embedded within their surrounding environment has profound implications for the way that operations are conducted. No longer are actions performed within the corporation considered to be separate from the external environment, and no longer are events unfolding outside of the corporation considered to be unimportant internally. In recognition, smart corporations have initiated social and environmental practices (Anon, 2002a). By implementing the TBL, which extends the modern tradition of the economic bottom line to now includes the social and environmental bottom lines as well, corporations are showing that they recognise the importance of all three of these components and their effects are upon the other.

The TBL is designed to promote the objectives of sustainable development (Anon, 2002b). Because sustainable development involves the simultaneous pursuit of economic prosperity, environmental quality and social equity. Corporations that aim for sustainability need to perform not against a single, financial bottom line but against the TBL (Makara, 2001). It is also true that a corporation, which is not socially or
environmentally sustainable in the long term, is unlikely to be financially sustainable in the long term (Anon, 2000).

The TBL involves shifts in corporate thinking around the following (Anon, 2000):

- **Markets**: Corporations will have to shift to sustainable business practices, which will have a competitive advantage in the 21st century, and sustainability itself will increasingly be delivered by the market. (eg. The Body Shop enjoys a market advantage through such positioning and by being a pioneer in reporting against the TBL).

- **Values**: A shift from a focus on the "hard" value of profitability to the "soft" values of integrity, community trust, respect for employees and sustainability.

- **Transparency**: Corporations will have to shift towards a transparent reporting structure to the public and authorities. Greater transparency in stakeholder communication is required by corporations, which can no longer afford to be closed due to shareholder and public pressure for the "right to know", increased reporting requirements by governments and the risk of involuntary disclosure by a globalised media.

- **Life cycle**: Considerations of life cycle issues will require a shift from product to function and the inclusion of the impacts and behaviours of supply chain companies (i.e. corporate responsibility does not start or end at the factory gate).

- **Partnerships**: Corporations will need to shift to new and symbiotic partnerships to help detect change, foresee problems and achieve outcomes. By engaging with non-government corporations and environment groups, corporations are more able to discern changing public concerns.

- **Time**: Most corporations and individuals conceptualise the width of time, that is, more and more demands are made and more events happen in one minute that ever
before. Sustainable development requires a mind shift of time that is longer as environmental change occurs over a geological time scale.

- **Governance**: The exercise of corporate governance will have to shift to become more inclusive by developing dialogues with a diverse range of stakeholders. Directors of a sustainable corporation will devote greater attention to prioritising, monitoring and understanding sustainability issues. In essence, TBL is really the achievement of good governance.

The concepts of the TBL and its associated systems and reporting mechanisms have been chiefly embraced by the private sector owing to a number of parallel international and national forces (Green, 2000). Australian corporations are subject to environmental regulations and voluntary agreements, which require public reporting on environmental performance (Anon, 2000). For example, the corporation’s law has recently been amended and now requires corporations to publicly report on their environmental performance. Transnational corporations have pressure to secure public trust due to the nature of their core business or environmental or social incidents such as Shell’s performance in Nigeria or Nike’s use of child labour (Anon, 2001a).

### 3.1.1. Shortcomings of the Triple Bottom Line

A potential shortcoming of the TBL could be that it aims at integrating social, environmental and economic factors in equal proportions into the corporate environment, yet corporate decisions are often dominated by the financial bottom line. However, corporations are now recognising that social and environmental factors have to be considered as equally important on the bottom line. This is important because all three facets of the TBL are intertwined. The TBL could possibly be an effective tool for sustainability, but in order to be successful and effective it requires that equal consideration be given to the environment, economic and social aspects.
Sustainability is the ability to build land-use systems that are environmentally enduring and balanced (Marsh & Grossa, 1996). Sustainability is achieved when all three facets of the TBL intersect at a point of sustainable equilibrium (Anon, 1998a). i.e. when all three facets are equally considered sustainability can prevail. This equal consideration of the economic, social and environmental parameters of a corporation is a definite weakness in terms of the effective implementation of TBL as too often one of the three facets is favoured. Generally, the financial bottom line is favoured while the social and environmental needs are neglected. This could have a negative effect on the intertwined business cycle.

3.2. The Financial Benefits of the Triple Bottom Line

The primary target or goal of setting up a business or corporation is to make money. However the TBL shows that a corporation can grow sustainably and financially if it gives equal consideration to the environment, society and the financial aspects of the corporation in its short and long-term business planning. Corporations should be concerned with environmental management for one fundamental reason: poor environmental results will eventually decrease the value of the business activity and undermine competitive advantage (Hawken, 1993).

3.2.1. Shortcomings of the financial benefits of the Triple Bottom Line

Equal consideration of the economic, social and environmental parameters of a corporation is a definite weakness in terms of the effective implementation of the TBL, as too often, one of these three facets is favoured. Generally, the financial bottom line is favoured while the social and environmental needs are neglected. This could have a negative effect on the intertwined business cycle.
3.3. Market Competition

In economic terms, market competition is the buying or selling of goods and services by corporations competing in the same open market (Anon, 2002a). The TBL and market competition are closely intertwined concepts, if a corporation implements the TBL for all of its products, this powerful marketing tool could possibly increase the competitive advantage for certain products. For example, if paper is marketed as being sourced from sustainable forests (forests that are not depleted in area with time during logging periods), then this could heighten the product’s competitive advantage over equivalent products from unsustainable forests (forests that are depleted in area with time during logging periods). In this example, the social and environmental aspects of the TBL are addressed, and with an increase in competitive advantage, this will positively affect the financial bottom line.

Meeting the demands of the customer is generally based on satisfying the requirements of a corporation’s stakeholders (e.g. employees, creditors and the society in which it exists) (Advertising Age, 1991). However, corporations also need to consider what is necessary for the environment when they produce products. Such aspects would include the recycling of a product, such as paper, so that the continuous sourcing of this raw material from the natural environment would not be necessary. Products were initially sold to meet the direct needs of the consumer. However, today products have to take cognisance of a new indirect need of a potential customer, which is the environment (De Souza, 2000). The environment has become a new segment within marketing and corporations such as the “Body Shop” base part of their marketing strategies on protecting the environment and using only natural products which are less harmful to the environment. The market segments are not fixed but instead continual opportunities for creating new profitable segments are being opened by changes in the environment and new knowledge (Doyle, 1992). A new segment that is being developed in the market place is one where corporations are being forced by social pressure to consider the environment in which the consumer lives. This can be illustrated in terms of the honey producer. In the past they would lose considerable amounts of honey owing to the feeding habits of badgers in their
hives. In retaliation, they would poison or trap the creatures, thereby protecting their produce. However, since producers have realised that their needs have resulted in such cruel actions, they have created a new market segment for “badger safe” honey.

The purpose of a corporation is to meet the demands of a customer. A corporation that fails to comply with this, in a competitive market, may not survive because customers will source alternative means of service or product (Doyle, 1992). Corporations that are effective in satisfying their customer needs have the best opportunities to grow and prosper. Therefore, to be competitive in the honey business, a corporation would have to show consideration for the environment (the safety of the badgers), which would fulfil society’s needs. By doing this, corporations would be showing consideration for the environment and social values associated with honey production. Thus they would gain a competitive advantage and in turn fulfil financial requirements. They would have proved themselves successful in the implementation of the TBL. In other words, if a product identity is altered, by placing a badger-friendly sticker which favours the environment, on the label, this could increase its competitive advantage. Such adaptations would also have to be done in conjunction with an alteration in the production process. Honey hives would now be placed out of reach, on raised platforms.

The movement toward green procurement is rising in Scandinavia and European Union (EU) countries as well as in Japan and North America. The idea that gives a priority to purchase products with less environmental impact from corporations practicing environmental conservation activities has emerged and led to the creation of laws in each country which increases market competition between products. In Japan, the Law Concerning the Promotion of the Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Law on Promoting Green Purchasing) came into effect in April 2001. Canada established a tender system called the Environmental Choice Program, in which winners are given up to a 10% premium if they enthusiastically take an environmental approach in procurement for government organisations.
3.3.1. Shortcomings of a competitive market

All market needs cannot systematically create new market segments considering the issues such as money. It may not always be viable to react to a consumer or environmental needs. Thus corporations will not opt to meet such needs, unless the alteration of a product’s identity or production process is financially viable. If financial viability is ignored, this could limit the purchasing power of the product. The purchasing power is defined as the value of money, as measured by the quantity and quality of products and services that it can buy.

Another problem corporations face is that those who modify their products in line with increased consumer concern must contend with the fact that consumers' perceptions are not always correct. Take for example the McDonald's case where it has replaced its polystyrene clamshells with plastic coated paper (Gifford, 1991). Some scientific evidence suggests that when taking a cradle-to-grave approach, polystyrene is less environmentally harmful. If this is the case McDonald's bowed to consumer pressure, yet has chosen the more environmentally harmful option (Polonsky,1994a).

3.4. Green Marketing - Environmental Awareness

As society becomes more concerned with the natural environment, corporations have begun to modify their behavior in an attempt to address society's "new" concerns (Davis, 1992). One such concern might be that the ozone hole is increasing in size owing to certain factors such as CFCs from aerosol cans. Some corporations have been quick to adopt concepts such as environmental management systems and waste minimisation, and have integrated environmental principles into all their organisational activities.

One business area where environmental issues have been discussed a great deal in the popular and professional press is marketing. Terms like "Green Marketing" and "Environmental Marketing" appear frequently in the popular press. Green or Environmental Marketing involves all activities designed to generate and facilitate any
exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment [Rothstein, 1997].

Effective green marketing can increase consumer awareness pertaining to specific environmental protection trends (e.g. for a product to be CFC-free). Environmental awareness campaigns can be used to explain how the generation of CFCs can have a detrimental effect on the ozone layer and in turn negatively affect the consumer. If the consumer is made aware of such issues they may consider purchasing alternative options. (i.e. such as CFC deodorant). Therefore if environmental awareness effectively raises the standards required for producing a specific product safely, this could satisfy society’s new needs. At the same time, it would protect the environment, in this case the ozone layer, and also increase the competitive advantage of the product over sub-standard products. This example could be applied in numerous other cases. In the past decade, Americans have displayed an increasing concern for the environment as they begin to realize it is slowly deteriorating. More than 70 percent of the 180 million tons of trash disposed each year in the United States is buried in landfills, and the landfills are reaching capacity. On top of this, the hole in the ozone layer continues to grow, threatening people with skin cancer (Anon, 2003b). In response, corporations must begin to make changes to their products, their claims, packaging, and manufacturing processes in order to offer consumers a cleaner and safer environment.

Some corporations have already started to engage in "green marketing activities." For example, Procter and Gamble is now packaging Tide, Cheer, Era, and Dash in bottles made of twenty five percent recycled plastic and has introduced the first ever concentrated fabric softener refill package (Anon, 2003b). Thus green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising (Polonsky 1994).
Thus mankind has limited natural resources, such as minerals, with which humans must attempt to provide for the world's unlimited wants. (Zikmund, 2000). In market societies where there is "freedom of choice", it has generally been accepted that individuals and organisations have the right to attempt to have their wants satisfied (Doyle, 1992). As corporations are faced with limited natural resources, they must develop new or alternative ways to satisfy these unlimited wants. Ultimately, green marketing looks at how marketing activities utilize these limited resources while satisfying consumer wants, both those of individuals and industry, and at the same time also achieve the selling organisation's objectives (Polonsky, 1994).

It appears that all types of consumers, both individual and industrial are becoming more concerned and aware about the natural environment (Ottman, 1993a). In a 1992 study of 16 countries, more than 50% of consumers in each country, other than Singapore, indicated that they were concerned about the environment (Ottman, 1995b). A 1994 study in Australia found that 84.6% of the sample believed all individuals had a responsibility to care for the environment. A further 80% of this sample indicated that they had modified their behavior, including their purchasing behavior, due to environmental reasons (Simmonds, 2001). As demands change, corporations see these changes as an opportunity to be exploited.

3.4.1. Shortcomings of the green marketing and environmental awareness

For environmental awareness to be effective, the consumer needs to have an understanding of what is being marketed. A consumer cannot understand complex environmental benefits (e.g. lead free printing on product packaging) if he/she does not understand the basic chemistry behind it or the implications of heavy metal water pollution. Therefore, environmental awareness programmes must be in line with the consumer's general knowledge base, otherwise the awareness programme may not be effective in educating the consumer.
3.5. Polluter Pays Principle

According to literature, the polluter-pays principle is the requirement that the corporation responsible for the production of a product should bear the costs of pollution for causing the pollution and the consequential costs (Moutando, 1999). However, the meaning of the polluter-pays principle and its application to various cases and situations is subject to interpretations; particularly regarding the nature and extent of costs involved and the circumstances in which the principle can be subject to exceptions. The principle states that those who cause industrial pollution should offset its effects by compensating for the damage incurred. Alternatively the polluters should take the precautionary measures to avoid creating pollution. According to the principle as interpreted by decision-makers, the polluters must pay for:

- the cost of pollution abatement,
- the costs of environment recovery and,
- the compensation costs for victims of damages if any, due to pollution.

Just as it applies for many other principles, the practical implications of the polluter-pays principle are remarkable in its allocation of economic obligations as for environmental damaging activities, particularly regarding various aspects of liability. The polluter-pays principle can also inspire the use of economic instruments, and the application of rules relating to competition and subsidy (Moutondo, 1999). The polluter pays principle can effectively reduce impacts to the environment by ensuring that costs needed to cleanup, for example pollution, have been previously accounted for. This could satisfy society’s needs by ensuring that the environment is protected and that the compensation costs for victims suffering damages, are accounted for.

3.5.1. Shortcomings of the Polluter Pays Principle

The polluter pays principle is effective only if the costs of pollution abatement, environment recovery and the cost for victims of damages if any, due to pollution are low
enough to keep the product within a competitive price range. If the price of the product is pushed above its competitive price range then few consumers will support the polluter pays principle.

3.6. The “cradle to grave” concept.

The “cradle to grave” symbolizes the life cycle of a product from raw material extraction, through the manufacturing, use, and ending at the recycling or disposal. It serves as a means of analysing a product’s impact on the environment and indicates areas where pollution prevention opportunities are called for and should be investigated.

Products have been produced with little or no concern for the source of the raw materials and where they finally end up. The full cost of a product, from raw material extraction to eventual disposal as waste, should be reflected in its market price, although in practice the ‘cradle to grave’ approach may prove troublesome (Freeman & Liedtka, 1991). The cradle to grave is a concept that is used to determine the environmental impacts of products, processes or services, through production, usage, and disposal. Many economists contend that a root cause of environmental degradation is the simple fact that many aspects of the environment are not properly valued in economic terms (Middleton, 1996). The cradle to grave concept takes into consideration the impacts a product may have on society and the environment throughout the products life cycle. It also has to consider the costs involved throughout the product lifecycle. If, for instance, paper is produced, and from sustainable forests, in a factory that complies with local environmental legislation and this paper is then sold and recycled after use, then consideration would have been shown for the environment throughout the life cycle of this product.

Therefore if a products life cycle is based on the cradle to grave concept it will take into consideration present and future societal and environmental needs thereby reducing the liability of future financial, social and environmental problems (Hawken, 1993). For
example the production of asbestos boards has resulted in huge financial losses due to the fact that all facets of the TBL were not considered during the life cycle of the product.

3.6.1. Shortcomings of the “cradle to grave” concept

The “cradle to the grave” concept is also able to encompass additional costs during the production and the sale of a product. Therefore the financial viability of producing a product must be considered in order to determine whether the market and the consumer knowledge will favour the additional costs. Even if the market is able to, and will in fact favour additional costs, the marketing campaign stressing the benefit of the exercise to the consumer must be unambiguous and direct otherwise the competitive advantage of such a concept would be futile.
4. DATA COLLECTION AND METHODOLOGY

4.1. What data needs to be collected?

For the five main issues, as well as all the associated questions posed in the problem statement, to be answered, various data were needed. These data were collected from defined questions that were presented in the form of a questionnaire (Refer to Annexure A). The main objective of this feedback of information was to provide insight into the questions posed in the problem statement (Refer to section 2, page 11). The information was collated from the following sources:

1. Questionnaires – It was necessary to pose numerous questions to the select group chosen for the sample to determine the options that would conform with the problem statement (Appendix A).
2. Literature survey – to gain insight into basic principles relevant to the problem statement.
3. Internet
4. Books
5. Journals

The shortcomings of the above mentioned data sets may be in the reliability or accuracy of the results obtained in the questionnaire. This would be for the fact that the questionnaire may give a general trend analysis and not an exact prediction. Another problem may be that the TBL is also a new concept and therefore historical data may be scarce. In other words people completing the questionnaire were not fully aware of concepts and issues discussed in this study.

The advantage of using questionnaires is that it enables the researcher to collect data before analysis and to convert it into numerical values, which are then manipulated in order to discover patterns or relationships (Ragon, 1994). The researcher decided to make use of sampling as it cuts costs, reduces labour requirements and gathers vital information quickly (Bryman, 1998).
4.2. Method of Data Collection

When doing research, one always draws a distinction between the population, referring to all the objects or units under consideration, and the sample, referring to the subset of the population (Bless, 1993). For this mini-dissertation, the size of the population of potential customers in the study area is approximately 500. Because the data collection was restricted to only a section of the population, this mini-dissertation must be regarded only as a pilot study. Accordingly, the information from this pilot study is not 100% complete and is thus known as an empirical sampling distribution, the type occurring most often in research (Bless, 1993). Future studies based on this mini-dissertation may make use of an ideal theoretical sampling distribution, which is built on the basis of all possible samples which can be drawn from the total population.

To research the five main issues from the problem statement, data were collected by means of a questionnaire (Annexure A). In this pilot study, the sample distribution was 250 of which 187 were returned for statistical analysis. There was a high return because personally interviewed and waited until questions had been completed. The sample of 250 was taken from a population of approximately 500 potential consumers in Boskruin, a residential and industrial suburb in Gauteng. Therefore, the responses of 40% of this population were analysed. Ideally, the responses of a larger percentage of the population should be analysed because the probability of occurrence of a certain event can be evaluated more precisely as the number of collected data increases (Bless, 1993).

A questionnaire was used to collect the data that were analysed. According to Neuman (2000), a questionnaire is a written document in quantitative research that has a set of questions directed at respondents. It is used by an interviewer to pose questions to respondents and to record the answers. These are questions in which all possible answers are identified and the respondent is asked to choose one of the answers (Anon, 2003d). The questionnaire was designed to answer the questions identified in the problem statement (Refer to section, 2 page 11).
The advantage of closed questions is that it is easier and quicker for respondents to answer. Furthermore, the answers of different respondents are easier to compare, code and statistically analyse. There are also fewer irrelevant or confused answers and replication is easier. Closed questions are an appropriate means of asking questions that have a finite set of answers of a clear-cut nature. Sometimes this is factual information, but closed questions are also used for obtaining data on attitudes and opinions (Anon, 2003d).

The questionnaire, for this mini-dissertation included questions that were relevant to the study and followed a logical sequence to ensure that accurate answers would be given and that misunderstandings would be avoided (Gilbert, 1993). The questionnaire was based on a quantitative method of data collection. This method presents hard facts or hard data, which proved useful in determining how the natural environment forms an integral part of the TBL. The advantage of this method is that the researcher was able to collect all the data before analysis and to convert it into numerical values, which were then manipulated in order to discover patterns or relationships (Respini, 2000).

In the following section, the results obtained from the questionnaire are discussed in order to find answers to the five main issues mentioned in the problem statement (Refer to section 2, page 11).
5. FINDINGS FROM THE ANALYSIS OF THE QUESTIONNAIRE

Findings relating to the five main issues discussed in the problem statement (Section 2, page 11) and the relevant individual questions (Refer to annexure A) sent out in the questionnaire will now be discussed and analysed. These issues relate primarily to determining whether the TBL is relevant to social, environmental and financial needs. For the purpose of this mini-dissertation and the discussion to follow, these needs refer to the following:

- Societal Needs – Which refer to specific needs that a society expects for its surrounding immediate environment. For example, a society may expect that their immediate and surrounding natural environment be protected against impacts emanating from, for example, industrial processes.

- Environmental Needs – Which refer to specific needs that a natural environmental system requires in order to minimize anthropogenic impacts. For example, in order to have the ozone layer protected the natural environment requires or needs humans to minimize their use of CFC’s.

- Financial Needs – Which refer to the financial needs of a corporation as all corporations, are started with the primary intent to make money. Corporations have to take into consideration their financial needs when operating any business. These financial needs may include, for example, meeting annual budget constraints.

5.1. Issue 1: Financial Benefits

The first issue to be investigated (Refer to section 2, page 11) was whether a corporation would benefit financially from changing the identity of a product and its production process in order to favour the environment and customer needs. This was determined by analysing the results from the stated questions 1 to 4 on page 13 in the problem statement (Refer to Annexure A).
Question 1: What should a corporation base its corporate objectives and decisions upon: economic prosperity, social equity or environmental protection, or a combination of all three? This question determines whether consumers would like to see corporations driven according to the integration of economic prosperity, social equity and environmental protection, and not merely according to financial targets.

![Business Objective](image)

Figure 2: Business Objective

Figure 2 shows that 80% of respondents believe that a corporation should base its corporate objectives and decisions upon a combination of all three factors, i.e. economic prosperity, social equity or environmental protection. The TBL indicates that a corporation should give equal consideration to social equity, environmental responsibility and economic prosperity. Therefore, the majority of respondents who answered this question already believe in the basics of the TBL. Therefore, if a corporation is looking at satisfying a customers needs and increasing product demand the corporation should consider economic prosperity, social equity or environmental protection when producing and displaying a product. Meeting customer needs, for recycled paper, for instance, and increasing product demand can therefore financially benefit corporations. The results of question 1 from Issue 1, show that a corporation can grow sustainably and financially if it gives equal consideration to the environment, society and the financial aspects of the corporation during short and long-term business planning. As stated in the literature review, corporations should be concerned with environmental management for one fundamental reason: poor environmental results will eventually decrease the value of the
business activity and undermine competitive advantage, thereby lessening financial returns (Hawken, 1993).

**Question 2:** When purchasing a single product and being faced with numerous brands, would a customer be swayed to purchase a brand that was labeled as being environmentally friendly over other products? This question was posed to determine whether the environmental branding of a product could be used to increase its product demand, protect the environment and satisfy social needs, thereby promoting the implementation of the TBL.

![Environmental Branding](image)

Figure 3: Environmental Branding

Figure 3 illustrates that 55% of the respondents believe that if a brand were labeled as being environmentally-friendly it would sway their decision to purchase that product over the rest. Therefore, if a product is labeled as being, dolphin-free tuna, for instance, then according to the results of question 2 from issue 1, 55% of the respondents would be swayed to purchase that product over alternatives (non-dolphin free tuna), thereby increasing product demand and, in turn, sales. The producer or corporation could therefore benefit financially. This would then favour environmental and social needs as well as the financial requirements of the corporation, thereby promoting the implementation of the TBL. Society would now be content that fewer dolphins were being caught in tuna nets; the environment (dolphins and associated ecosystems) would be preserved; and the producer of the dolphin-free tuna would experience an increase in demand for sales owing to the products competitive branding. The results of question 2
from Issue 1, show that the environment can be used as an integral part of the TBL, through effective environmental branding or green marketing. Green or Environmental Marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment (Shearer, 1990). Therefore environmental branding or green marketing can be used as an effective method in meeting financial targets.

**Question 3:** When purchasing a single product and being faced with numerous brands, would a customer be swayed to purchase a product involving a production process, which was environmentally friendly over other products? As in the previous question, this question determined whether the process that was used to produce the product could be used to increase the demand for the product, protect the environment, and satisfy social needs. If the responses were positive the TBL could be implemented without any reservations.

![Process of production](image)

Figure 4: Process of Production

Figure 4 illustrates that 66% of the respondents believe that if the product’s production process were environmentally-friendly, for instance, a potential customer would be swayed to purchase that product over the rest. Therefore, for instance if sustainable forests (forests that are not depleted in area with time during logging periods) were felled, then according to the results 66% of the respondents would be swayed to purchase that product over the alternative (timber resulting from sustainable tree felling). Thus product
sales would be increased with the result that the producer or corporation could benefit financially. In this case, the financial bottom line, as well as social and environmental needs would be satisfied, thus justifying the implementation of the TBL. The results of question 3 from issue 1 indicate that the environment can be used as an integral part of the TBL if corporations take into consideration a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising (Polonsky 1994).

**Question 4:** When purchasing a single product and being faced with numerous brands, would, a potential customer be swayed that the origin of all the product’s ingredients and the packaging were from an environmentally-accredited corporation? This question was posed to investigate whether the sub-contractors and affiliated corporations working with the producer of the product should be as environmentally-accredited as the producer. This would merely re-enforce the previous question, (Question 3 from Issue 1), regarding the importance of integrated and connected environmental, social and financial responsibility.

![Product Origin](image)

Figure 5: Product Origin

Figure 5 indicates that 67% of the respondents believe that if the source of a product’s ingredients and packaging were from environmentally-accredited corporations, the respondents would be swayed to purchase that product over other competitive products. Therefore, if, for instance, corporations were forced to become accredited with a recognised environmental standard of compliance for operation (e.g. ISO 14001), the
market suppliers would be forced to consider the needs of the environment when selling their products to a producer. In this case, social, environmental and financial needs would be met. Corporations might therefore, be forced, in the future to conduct business only with other environmentally-accredited corporations otherwise they might lose out on business ventures. Thus the environment can be seen as a key element in fulfilling the financial and social needs of a corporation, and in constituting an important part of the TBL.

Issue 1 (Refer to Section 2 page 13) determined, from questions 1 – 4, that a corporation can benefit financially from changing a product’s identity and its production process to favour the needs of the environment and the customer. In response to anthropogenic impacts to the environment, corporations must begin to make changes to their products, their claims, packaging, and manufacturing processes in order to offer consumers a cleaner and safer environment (Anon, 2003b). Thus the TBL incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising (Polonsky 1994).

The first main issue was investigating whether a corporation can benefit financially from changing a product’s identity and its production process to favour the needs of the environment and the customer. The results for Issue 1 (Question 1-4) indicated that the customer would want a corporation to base its objectives and decisions upon economic prosperity, social equity and environmental protection. The customer also favoured product branding and the process of production, which was environmentally friendly. Furthermore the customer believed in the environmental accreditation of products and corporations. The conclusion to be drawn from the research pertaining to Issue 1 is that a corporation can benefit financially from changing a product’s identity and its process of production to favour the needs of the environment and the customer. This would satisfy the financial, as well as the environmental and social, bottom line, thereby showing that the environment can play an integral role in justifying the implementation of the TBL into business practices.
5.2. Issue 2: The Competitive Market

The second issue that was investigated (Refer to section 2 page 14) was whether changing the appearance of a product and its process of production, to favour the environment, could promote it in a competitive market? For example, if a product is portrayed as being CFC free, this action may satisfy the need of the consumer to have the ozone layer protected, and perhaps increasing the products competitive advantage in the market place. This was determined by analysing the responses to questions 1 – 6 on page 14 in the problem statement (Refer to Annexure A).

**Question 1:** Would a potential customer purchasing a single product find that there are multiple options / brands for that single product? This question was posed to determine whether there are multiple brands for a single product thereby indicating that a new marketing niche could be used to highlight a single product amongst numerous competitive products.

![Multiple Brands](image)

Figure 6: Multiple Brands

Figure 6 indicates that 68% of the respondents believe that as potential customers, they do find that when purchasing a single product there are numerous options / brands to choose from. The results indicate that generally the market is flooded with purchase options and that there might be a possible need and gap in the market for a new
alternative method of advertising (e.g. green marketing). Green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising (Polonsky 1994). If green marketing were used to highlight a single product in a competitive environment, then the natural environment would be used to increase product sales and in turn, might justify its incorporation in the TBL.

**Question 2:** If a potential customer answered “Yes” to question 2 of Issue 2, would this make it more difficult for the customer to make a final choice on which product to purchase? This question was used to determine the degree of difficulty experienced in purchasing a product when faced with numerous options in a highly competitive environment. This question was important for highlighting to corporations that, perhaps, current marketing strategies are not profound enough and that a new marketing niche, such as environmental marketing, could be a more effective method of marketing whereby a product's competitive advantage could be increased.

Figure 7: Difficult Choice

Figure 7 illustrates that 65% of the respondents believe that numerous options do make it more difficult to make a final choice on which product to purchase. These results indicate that purchasers have too many options, or no profound options, in terms of the products which they choose to buy. Therefore this could indicate that there is a gap in the market to attract consumers to products with specific highlighted traits. In the total tuna offering
at a general retail store, for instance, one brand may stand out as being dolphin free and if this trait was a need of society then this trait could highlight it from the rest thereby increasing product sales. The highlighted trait would have to be one that society is aware of and for which it experiences a demand. If consumers are attracted to products with specific environmental traits, then this could increase product sales; satisfy environmental and societal needs, thereby justifying the implementation of the TBL in business practices.

**Question 3:** If you answered “Yes” to question 2 of Issue 2, would it be easier to purchase a product that was clearly marketed as being environmentally friendly? This question was posed to determine whether an answer to society (e.g. to protect the environment), was adequately displayed on a product, whether this would increase the product’s competitive advantage, thereby protecting the environment, satisfying societies needs and financial requirements and justifying the TBL in the business strategy of a corporation.

![Bar chart showing easier environmental purchase](image)

Figure 8: Easier Environmental Purchase

Figure 8 illustrates that 58% of the respondents believe that it would be easier to purchase a product that was clearly marketed as being environmentally friendly. The results show that 58% of the respondents believe that specific environmental traits (e.g. recycled paper), could attract the consumer to purchase that product. If consumers were attracted to such a product, then the demand for and the sales of this product would increase,
thereby possibly increasing financial gains. As stated previously, this trait would have to be one that society or the market had demanded. Such a scenario could result in a greater competitive advantage for that product. Satisfied social and environmental needs, as well as a greater competitive advantage, would increase sales and in turn realise the financial targets set by the corporation. It is also true that a corporation, which is not socially or environmentally sustainable in the long term, is unlikely to be financially sustainable in the long term (Anon, 2000). Thus the environment could form an integral part of the TBL.

**Question 4:** When purchasing a single product and being faced with numerous brands, would a potential customer be swayed to purchase a product where the packaging was labelled as being more bio-degradable than its competitors over the rest? This question was used to determine whether a product’s competitive advantage could be increased by using an environmental trait and thus its justification for being incorporated in the TBL. The TBL incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising (Polonsky 1994). Therefore, a change in a product’s production process (e.g. increased biodegradability), could increase the product’s competitive advantage. This would then increase product sales, protect the environment from non-biodegradable products and satisfy human’s needs to have the environment protected.
Figure 9 illustrates that 71% of the respondents believe that if a product’s packaging is more bio-degradable than an equivalent product, this would sway their decision to purchase that product over the rest. Corporations that find ways of reducing or even eliminating pollution, waste and energy consumption can bring about important cost savings and thus be more competitive (Anon, 1995a). The results indicate that respondents would look at purchasing the more bio-degradable product, thereby benefiting the environment, satisfying the social needs of having the environment protected, and creating a product that has a competitive advantage. In this case the environment is used as an integral part of the TBL.

**Question 5:** When purchasing a single product and being faced with numerous brands, would a potential customer be swayed to purchase a phosphate free product over the rest? This question was posed to determine if by using an environmental trait, (e.g. the product being phosphate free), could increase the products competitive advantage as the justification for its incorporation in the TBL. Phosphate free products have less of an impact on the environment than products containing phosphates. Therefore if consumers purchased products which were all phosphate free the need for protecting the environment would be satisfied. Societal needs would also be satisfied as the
environment in which humans exist would be protected, and the product’s competitive advantage over other products containing phosphate would be increased.

![Phosphate Free](image)

Figure 10: Phosphate Free

Figure 10 indicates that 46% of the respondents believe that if a product is phosphate free it would not sway their decision to purchase that product over the rest. The results of question 5 from issue 2 indicate that there is some degree of uncertainty owing to the fact that 37% of the respondents said that they were not sure if they would consider a phosphate free product. A reason for this could be that these respondents were not sure of the effects that phosphate could have on the environment. Therefore, if a corporation wants its product to have a competitive advantage owing to its traits, these traits should be clear to the consumers. If the consumer understands that phosphates have an impact on the environment, the consumer may opt to purchase a phosphate free product, thereby satisfying the environmental needs for protecting the environment. At the same time, the consumer will be satisfying the needs of society by protecting its environment, and the producer or corporation will benefit financially from an increase in competitive advantage. Thus there is justification for incorporating the environment in the TBL.

**Question 6:** When purchasing a single product and being faced with numerous brands, would a potential customer be swayed to purchase a product that is CFC free over the
rest? This question was posed to determine whether by using an environmental trait, (e.g. CFC free product), could the products competitive advantage be increased. Thus, if consumers purchased products which were all CFC free, this would satisfy environmental needs by protecting the environment (ozone layer). It would also satisfy societal needs by protecting the environment in which humans exist and increase the products competitive advantage over other products containing CFC’s.

Figure 11: CFC Free

Figure 11 illustrates that 77% of the respondents believe that a product being CFC free would sway their decision to purchase that product over the rest. When compared to the previous graph there has been a 66% difference in positive answer. This could be due to the fact that most of the market and the respondents understand what CFC free means. The results show that 77% of respondents would favour a CFC product thereby increasing the product’s competitive advantage and thereby meeting financial requirements of the corporation. The environmental, social and financial requirements are fulfilled, thus showing how the environment can be justified as constituting an integral part of the TBL.

**The second issue investigated whether changing the appearance of a product and its production process, to favour the environment could promote it in a competitive market. The results for Issue 2 indicated that there is a flooded market of product**
options. It would make the choice of purchase easier if a product was highlighted with obvious traits (e.g. environmental traits). The results of Issue 2 showed that the customer would prefer to purchase products if he/she understood and were aware of environmental traits such as bio-degradable and CFC products. The conclusion for the second issue was that the environment could be utilised to raise the competitive advantage for some products. This could satisfy the financial as well as the environmental and social, bottom line, thereby showing that the environment can form an integral part of the TBL and thus play an important role in the justifying the implementation of the TBL. For example: In the past century little attention was given to the high levels of CFC’s that were being pumped into the atmosphere. Over the past 20 years, however, people have come to understand the damaging affects that CFCs have on the ozone layer of the earth’s atmosphere.

5.3. Issue 3: Environmental Awareness through green marketing

The third issue to be investigated (Refer to section 2 page 15) was to determine if marketing a product as being “green” (Green Marketing) could promote environmental awareness. Could this environmental awareness promote a product, which was labeled as being green? The answer was determined by questions 1 – 2 of issue 3, as stated on page 16 in the problem statement (Refer to Annexure A).

**Question 1:** Would a potential customer consider environmental concerns when purchasing a product? This question was posed to determine whether consumers consider environmental concerns when purchasing a product.
Figure 12: Environmental Concerns

Figure 12 illustrates that 65% of the respondents believe that as potential customers, they do not consider environmental concerns when purchasing a product. These results show that either the consumer is not aware of the fact that some production processes are actually harmful to the environment or they are simply not interested in the environment, and purchase products for other reasons. Question 1 of Issue 3 investigated whether a consumer could be made aware of the fact that if some of the aspects of the production process could be altered to favour the environment, this would alter his/her perception, thereby increasing the demand for the product through heightened awareness. If such a scenario occurred this would in all probability satisfy social and environmental needs as well as raising competitive advantage, which would increase sales and in turn reach financial targets set by the corporation. Thus the environment could constitute an integral part of the TBL.

**Question 2:** A display in a shopping centre explains that if customers purchase tuna not labeled as being “dolphin friendly” there is a good chance that this tuna could contain traces of dolphins caught through unsatisfactory fishing methods. Would a potential customer on seeing this display become aware of new criterion when purchasing tuna and, in preference opt for dolphin friendly tuna? This question was posed to determine
whether a potential consumer would be made aware of certain actions of the producer, good or bad, (e.g. the killing of dolphins, during tuna catches), so that the consumer could make an informed decision when purchasing a product.

Figure 13: Environmental Awareness

Figure 13 illustrates that 90% of the respondents believe that if the aforementioned environmental awareness display was initiated, the demand for a particular product could increase. This would satisfy societal and environmental needs by protecting the natural environment (dolphins) as well as increase product sales and in turn satisfy financial targets. Thus the environment can form an integral part of the TBL. In this case, environmental awareness is able to increase the sale of a product as the respondents believe that they would change their buying patterns to support a dolphin free tuna product.

The third issue investigated whether green marketing could promote environmental awareness and thereby increase product demand. The results showed that consumers are not particularly driven to purchase only products that favour the environment but if made aware or educated on specific environmental impacts or concerns relating to the production of a product, the customer would demand a product that favoured this
specific environmental trait. Environmental awareness can effectively be used to educate people to be more selective when purchasing a product. This awareness could influence spending patterns of a potential consumer, which could increase a product's competitive advantage. The end result could be greater sales, protection of the environment and fulfillment of new awareness standards set by the consumer. The results concluded that effective environmental awareness could raise a product's market demand thereby satisfying social, economic and environmental requirements. In this case the results showed that the environment can be considered to be an integral part of the TBL.

5.4. Issue 4: The Polluter Pays Principle

The fourth issue to be investigated was whether the implementation of the “polluter pays” principle could justify the implementation of the TBL. This was determined by questions 1 – 2 of Issue 4 on page 16 in the problem statement (Refer to Annexure A).

**Question 1:** Would a potential customer be willing to pay slightly more for a product if the customer knew that the product was environmentally friendly? This question was used to investigate how willing a consumer would be to support a concept such as the “polluter pays” principle, which generally requires that a slightly higher price be asked in the case of the cheaper competitors. According to literature, the “polluter-pays” principle is the requirement that the corporation responsible for the production of a product should bear the costs of pollution for causing the pollution and the consequential costs (Moutondo, 1999). This question was also posed to test whether a potential consumer would be willing to purchase a slightly higher priced product with the intention of protecting the environment from a societal and environmental perspective (i.e. the implementation for the TBL).
Figure 14 shows that 58% of the respondents believe that, as potential customers, they would be willing to pay slightly more for a product if they knew that the product was environmentally friendly. The results (Refer to question 1 of Issue 4) also show that the consumer would be willing to pay more if the consumer knew the environment would be, for example, protected due to a slightly inflated price. This inflated price could be used to cover the costs involved in the protection of the environment during the production of that product. Thus the producer would not necessarily reduce his profit margin on sales of the product on account of the higher price, the environment would be protected, the members of the society would be assured that they were paying for an environmentally approved product. It was important to determine whether the consumer would pay for the inflated price, as polluters generally have to pay for:

- the cost of pollution abatement,
- the costs of environment recovery and,
- the compensation costs for victims of damages if any, due to pollution (Moutondo, 1999).

Thus, the fact that the consumer would pay a slightly higher price for a product if aware that it was environmentally friendly substantiates claim that the environment can form an integral part of the TBL.
Question 2: Do consumers agree with the new government legislation enforcing South Africans to pay for their plastic shopping bags? This question was posed to determine the reaction of the consumers to paying additional costs for plastic packaging so that the propensity this packaging to be recycled can be improved.

Figure 15: Polluter Pays Principle

Figure 15 illustrates that 67% of the respondents support the new government legislation enforcing South Africans to pay for their plastic shopping bags. This example reflects and indicates the polluter pays principle in action (Refer to question 2 of Issue 4). South African consumers have had to alter their spending habits to incorporate the cost of a plastic bag. As a result the polluter pays principle has protected the environment, covered the cost of environmental protection and increased the value of a plastic bag. With an increased value, a plastic bag is now considered an expense by the consumer and therefore will not be discarded as often and will to a certain degree, be used more than once. In this case, social, environmental and financial needs are met, thereby reflecting the integration of these three components in the TBL. The environment can thus be regarded as an integral part of the TBL.

The fourth issue investigated whether the implementation of the polluter pays principle could justify the implementation of the TBL in business practices. The results showed that the customer would, even at a higher price, still be interested in purchasing a
product if that product and its production process were environmentally friendly. This principle shows consideration for environmental and social needs and forces the polluter to pay, thus saving money in the long run. Therefore, in conclusion the polluter pays principle can be used as an effective marketing tool to increase product demand and satisfy potential financial requirements of a corporation. This would also satisfy social and environmental requirements relating to the product and its production. Again the results show that the environment can be used as an integral part in the implementation of the TBL.

5.5. Issue 5: The “Cradle to Grave” Concept

The fifth issue to be investigated was whether the “cradle to grave” concept could contribute to the implementation of the TBL? The cradle to grave concept determines the environmental impacts of products, processes or services, through production, usage, and disposal. This was determined by questions 1 – 2 of Issue 5 on page 17 in the problem statement (Refer to Annexure A).

**Question 1:** When purchasing a single product and being faced with numerous brands, would a potential customer be swayed to purchase a product, the paper packaging of which was derived from sustainable forests (forests that are not depleted in area with time during logging periods), over its competitors? This question was posed to determine whether the environment was considered throughout the life cycle of a product and whether this product would then be favoured by the consumer. If so then the products competitive advantage could increase and simultaneously protect the environment and satisfy societies needs to have their environment protected.
Figure 16 shows that 68% of the respondents believe that if a product’s paper packaging is from sustainable forests, it would sway their decision to purchase that product over the rest. This would result in an increased competitive advantage for that product, thereby possibly increasing potential sales and meeting financial targets. Therefore, the cradle to grave concept, for example sustainable forests (forests that do not deplete in area with time during logging periods), shows consideration for the social, environmental and economic needs, and justifies the implementation of the TBL. The “cradle to grave” concept is a concept that is used to determine the environmental impacts of products, processes or services, through production, usage, and disposal. Many economists contend that a root cause of environmental degradation is the simple fact that many aspects of the environment are not properly valued in economic terms (Middleton, 1996). In the aforementioned example of sustainable forests the environment will be protected, societal needs such as clean air from forests will be protected and a corporation can use the slogan “sustainable forests” as a marketing ploy to increase the competitive advantage of a product. Therefore the environment could form an integral part in the implementation for the TBL.
**Question 2**: Would a potential customer like a corporation to consider the life cycle of a product and how would it impact on society, the environment and the financial sector? This question was posed to determine whether customers support the “cradle to the grave” concept.

![Public Environmental Concerns](image)

Figure 17: Public Environmental Concerns

Figure 17 shows that 85% of the respondents believe that as potential customers, they would like a corporation to consider the life cycle of a product and how it may impact on society, the environment and the financial sector. Therefore the environment could constitute an integral part of the TBL.

*The fifth issue investigated was whether the “cradle to grave” concept could contribute to the implementation of the TBL. This “cradle to grave” concept shows consideration for environmental and social needs and forces the producer to consider the life cycle of a product. The results show that a customer would be interested in ensuring that a resource such as wood, for instance, did in fact originate from a sustainable cyclical source. The customer would also want corporations to consider the life cycle of a product and its impacts through various stages on society, the environment and the financial sector. Thus the environment can be perceived as forming an integral part of the TBL.*

The following section concludes, in general, on all the findings thus far.
6. CONCLUSIONS

The main aim of this study was to investigate how the natural environment could play an integral part in the implementation of the TBL. Five main issues were then formulated, in the problem statement, each issue being investigated from the perspective of how the environment could possibly play an integral role in the implementation of the TBL. Each issue was broken down into sub-questions that would assist in finding answers for each main issue (Refer to section 2 page 12). These sub-questions formed the basis of a questionnaire (Annexure A) that was designed to investigate whether the environment could form an integral part in the implementation of the TBL.

The recognition that corporations are embedded within their surrounding environment has profound implications for the way their operations are conducted. No longer are the actions taken within the corporation considered separate from the external environment, and no longer are events unfolding outside of the corporation considered to be unimportant internally. In recognition, smart corporations have initiated social and environmental practices (Anon, 2002a), i.e., the TBL. The TBL was designed to promote the objectives of sustainable development (Elkington, 2003). Because sustainable development involves the simultaneous pursuit of economic prosperity, environmental quality and social equity, organisations that aim for sustainability need to perform not against a single, financial bottom line but against the TBL or economy, society and environment. It is also true that a corporation, which is not socially or environmentally sustainable in the long term, is unlikely to be financially sustainable in the long term (Elkington, 2003).

It appears that all types of consumers, both individual and industrial, are becoming more concerned and aware about the natural environment (Azzone & Manzini, 1994). In a 1992 study of 16 countries, more than 50% of consumers in each country, other than Singapore, indicated that they were concerned about the environment (Ottman, 1996c). A 1994 study in Australia found that 84.6% of the sample believed all respondents had a responsibility to care for the environment. A further 80% of this sample indicated that
they had modified their behavior, including their purchasing behavior, due to environmental reasons (EPA-NSW, 1994). Given these figures, it can be assumed that corporations marketing goods with environmental characteristics will have a competitive advantage over corporations marketing non-environmentally responsible alternatives. There are numerous examples of corporations who have striven to become more environmentally responsible, in an attempt to better satisfy their consumer needs. For example most deodorants these days are labeled as being CFC free. From a marketing perspective this creates a “gap” in the market and if exploited could effectively lower the adverse effects of human activities on the environment, satisfy societies needs, increase revenue and in turn satisfy the TBL (Gifford 1991, Hume 1991).

Corporations are beginning to realize that they are members of the wider community and therefore must behave in an environmentally responsible fashion. This translates into corporations that believe they must achieve environmental objectives as well as profit related objectives. This results in environmental issues, such as high effluent pollution levels, being integrated into the business's corporate culture. Corporations in this situation can take two perspectives (Bridger, 2002):

- Corporations can use the fact that they are environmentally responsible as a marketing tool; or
- Corporations can become responsible without promoting this fact.

There are examples of corporations adopting both strategies. Organisations like the Body Shop heavily promote the fact that they are environmentally responsible. While this behavior is a competitive advantage, the corporation was established specifically to offer consumers environmentally responsible alternatives to conventional cosmetic products.

Corporations should be concerned with environmental management for one fundamental reason: Poor environmental results will eventually decrease the value of the business activity and undermine competitive advantage (Hawken, 1993). The sustainable corporation will have a competitive advantage in the 21st century and sustainability itself will increasingly be delivered by the market.
7. REFERENCES

Advertising Age. 1991: Spurts and Starts: Corporate Role in '90s Environmentalism

Anon, 2003a: Triple bottom Reporting.
http://www.btplc.com/Betterworld/Aboutthereport/Triplebottomlinereporting/

Anon, 2003b: Who is the green consumer.
http://www.essaymill.com/free_essays/inmers/m888.htm

Anon, 2003c: Investment Opportunities
http://www.sfrica.info/doing_business/investment/opurrunities/gauteng.htm

Anon, 2003d: Questionnaire Implementation.
http://www.economics.ltsn.ac.uk/handbook/questionnaires/21.htm

Anon, 2002a: Integrating Corporate Social Responsibility with Strategic Management.
http://www.cicr.net/Maximizing.html


Anon, 2002d: Destinations.


Anon, 2000: Triple Bottom Line:
http://www.davidrisstrom.org/100GreenAchievements/100GA-TripleBottomLine.html


http://www.cicr.net/EMS.html


http://www.greenmarketing.com/articles/ama_aug98.html

http://egj.lib.uidaho.edu/egj02/polon01.html


Walmsley, B. 2002: The triple bottom line: Going over the top.  
http://www.esi.co.za/last/ESI_1_2002/ESI12002_040_1.htm

http://www.users.bigpond.com/mansol/wshop_011.html

Appendix A: Questionnaire template
THE NATURAL ENVIRONMENT AS AN INTEGRAL PART IN THE TRIPPLE BOTTOM LINE

**Issue 1**

1. What should a corporation base its business objectives and decisions upon (tick 1 only):

<table>
<thead>
<tr>
<th>1. Economic Prosperity</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2. Social equity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Environmental protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Combination of 1,2,3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. When purchasing a single product and being faced with numerous brands would a brand that was labeled being environmentally friendly sway a consumers decision to purchase that product over the rest?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

3. When purchasing a single product and are faced with numerous brands would a product who’s process of production was environmentally friendly sway a consumers decision to purchase that product over the rest?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

4. When purchasing a single product and are faced with numerous brands would knowing that the origin of all the products ingredients and packaging were from environmentally accredited corporations sway a consumers decision to purchase that product over the rest?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
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</table>

**Issue 2**

1. Would a potential customer find that when purchasing a single product there are numerous options / brands for that single product?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</thead>
</table>
2. If answered Yes to question 1 of issue 2, does this make it harder to make a final choice on which product to purchase?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</table>

3. If answered Yes to question 2 of issue 2, would it be an easier purchase if a product stood out as being environmentally friendly?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
</table>

4. When purchasing a single product and are faced with numerous brands would a product who’s packaging was more biodegradable than the rest sway a consumers decision to purchase that product over the rest?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</table>

5. When purchasing a single product and are faced with numerous brands would a product that is phosphate free sway a consumers decision to purchase that product over the rest?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</thead>
</table>

6. When purchasing a single product and are faced with numerous brands would a product that is CFC free sway a consumers decision to purchase that product over the rest?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</table>

**Issue 3**

1. Would a potential customer consider environmental concerns when purchasing a product?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
</table>

2. If a banner was placed in a shopping centre explaining that if a consumer purchased tuna that is not labeled as being “dolphin friendly” there is a good chance that the consumers tuna could possibly contain traces of dolphin from poor fishing methods. Would a potential customer become
aware of a new criteria when purchasing tuna and preferably opt for dolphin friendly tuna?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</table>

**Issue 4**

1. Would a potential customer be willing to pay slightly more for a product if the consumer knew the product was environmentally friendly.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
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</table>

2. Would a potential customer agree with the new government legislation enforcing South Africans to pay for their shopping bags.

<table>
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<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
</table>

**Issue 5**

1. When purchasing a single product and are faced with numerous brands would a product who’s paper packaging was from sustainable forests sway a potential customers decision to purchase that product over the rest?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</thead>
</table>

2. Would a potential customer like a corporation to consider the life cycle of a product and how it may impact on society, the environment and the financial sector.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
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</table>